BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
ENGINEERING BRANCH
PLANNING BRANCH
TECHNICAL & SUPPORT BRANCH
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

JUL 21 2001

RECEIVED
'01 JUL 24 P1:24
OFC. OF ENVIRONMENTAL
QUALITY CONTROL

TO: Honorable Genevieve Salmonson, Director
Office of Environmental Quality Control

FROM: Gilbert Coloma-Agaran, Chairperson
Department of Land and Natural Resources

SUBJECT: **Finding of No Significant Impact (FONSI) for Job No. 40-HB-2, Kailua-Kona Wharf Improvements, Kailua Village, North Kona, Hawaii**

The Department of Land and Natural Resources has reviewed the comments received during the 30-day public comment period, which ended on May 8, 2001. The Department has determined that this project will not have a significant environmental effect and has issued a finding of no significant impact. Please publish this notice in the next OEQC Bulletin.

We have enclosed a completed OEQC Bulletin Publication Form and four (4) copies of the Final Environmental Assessment. If there are any questions on this matter, please contact Mr. Andrew Monden, Chief Engineer at extension 70230.

Encl.

90

** FINAL **
ENVIRONMENTAL ASSESSMENT

2001-08-08-HI-FEA

JOB NO. 40-HB-2
KAILUA-KONA WHARF IMPROVEMENTS
KAILUA VILLAGE, NORTH KONA, HAWAII

TMK: 7-5-06: 39

A PROJECT OF THE
STATE DIVISION OF BOATING & OCEAN RECREATION

CONSULTING STRUCTURAL ENGINEERS
NISHIMURA, KATAYAMA and OKI, Inc.
826 Kaheka Street, Suite 302
Honolulu, HI 96814
Phone: (808) 947-2808

PREPARED FOR:
ENGINEERING BRANCH
LAND DIVISION
DEPARTMENT OF LAND & NATURAL RESOURCES

Prepared by:
ARNOLD T. OKUBO & ASSOCIATES, INC.
94-529 Ukee Street, Suite 107
Waipahu, HI 96797
Phone: (808) 671-5184

JULY 2001

* * **FINAL** * *

ENVIRONMENTAL ASSESSMENT

JOB NO. 40-HB-2
KAILUA-KONA WHARF IMPROVEMENTS
KAILUA VILLAGE, NORTH KONA, HAWAII

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JULY 2001

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Drwg 3c: County Zoning Map

Drwg 4: New Loading Docks

Drwg 5: Detail of Bulkhead Construction

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Appendix B: Botanical List

Appendix C: Fauna Survey

Appendix D: Marine Survey

Appendix E: Noise & Vibration Study

Appendix F: Alternative Pier Construction

A SUMMARY:
KAILUA-KONA WHARF IMPROVEMENTS PROJECT

The State Division of Boating and Ocean Recreation proposes to repair the Kailua-Kona Wharf pier at Kailua Village in North Kona. Due to its presence in a marine environment, the structural integrity of the steel bulkhead has been undermined by corrosion. A portion of the pier was recently repaired under an emergency declaration. Another section of the pier has been declared unsafe and closed to public use.

The project is essentially a repair project, albeit its cost is estimated to be $4,000,000. The pier has an area of 62,109 square feet. Steel sheet piling with the top section encased in concrete will be used to enclose the existing bulkhead. The present pier was built in 1952 replacing an older wharf facility.

Impacts affecting water quality (ocean), air quality, noise levels, and possible vibration from pile-driving will be temporary arising from construction activities. Mitigation measures are expected to reduce such impacts. The work is scheduled to be carried out in stages. This is to ensure some pier area is available for use.

In repairing the pier, attention will be given to complying with new health regulations and provisions of the Americans with Disability Act.

The pier is heavily used by the community for recreational, cultural and tourist-oriented business uses and is of great economic importance to the Kona community. The project is estimated to take one year to complete.

SECTION 1
PROPOSING AGENCY & ACCEPTING AUTHORITY

APPLICANT FOR PROJECT:

The applicant for this project is the Engineering Branch of the Land Division acting for the State Division of Boating and Ocean Recreation, Department of Land and Natural Resources. The address is:

Department of Land & Natural Resources
Land Division, Engineering Branch
1151 Punchbowl Street, Room 221
Honolulu, HI 96813

The contact person for this agency is:
Andrew Monden, P.E., Engineering Branch Chief
Phone: (808) 587-0230

APPROVING AUTHORITY:

The approving authority is the Chairperson, Board of Land and Natural Resources. The address is:

Chairperson
Board of Land & Natural Resources
Kalanimoku Building, Room 130
1151 Punchbowl Street
Honolulu, HI 96813

SECTION 2
SITE DESCRIPTION

In earlier times, Kailua Bay was also known as Kamakahonu Bay. This is also the name of the home of King Kamehameha which probably was located on land where the King Kamehameha's Kona Beach Hotel now stands. A National Historic Registration marker attests to this feature. Two small sandy beaches are situated on the east side of the Kailua-Kona wharf hereafter referred to as the Wharf. One is located at the land-end of the pier where it accesses Alii Drive. The other sandy beach is located on the far eastern end abutting the Hulihe'e Palace property. On west side of the pier is a small cove which features a prominent and popular sandy beach that fronts the King Kamehameha's Kona Beach Hotel. It was at this beach site that the New England missionaries were purported to have stepped ashore in 1820. **DRAWING 1a** is a general location map. **DRAWING 1b** is a Tax Map plat of Kailua Village. **DRAWING 2a** is a U.S.Geological Survey map showing the general area of Kailua Village. **DRAWING 2b** is a navigation map of Kailua Bay.

Kailua Bay, like other sections along the Kona coast, is subject to seasonal high waves from the west and southwesterly direction. These waves usually arrive during the winter months. At times, the high seas cause damage to structures- roads and homes- near the shoreline. To protect the shoreline and the shops along Alii Drive, a new seawall, replacing a masonry rock wall, was constructed by the State Transportation Department at the east side of the Wharf. Appropriately, this seawall was dedicated in honor of the highway district engineer for the island at that time, Edward "Blue" Kaaua, in the early 1960s.

From what was once called a "sleeping village", Kailua has become a thriving business community due to its importance as a tourist destination. Major commercial and business enterprises have been started in the Kailua area. In recent times, the international role of its airport has been fulfilled with the landings at Ke-ahole International Airport by direct flights from the mainland and Japan.

The trade winds from the northeast occur about 70% over the Hawaiian Islands archipelago. The other 30% of the winds are estimated to be equally distributed (10% each) from the northwest, southwest and southeast quadrant. While the Kona districts are synonymously associated with a mild languorous climate of warm sunshine and light winds, storms from the southwest or south-southwest have been labelled Kona storms. This is based on the Hawaiian word "Kona" which mean leeward. These stormy rain-laden winds which can cause heavy damage are infrequent and are erroneously referred to the Kona districts instead of its directional connotation. The term "Kona weather" is used to refer

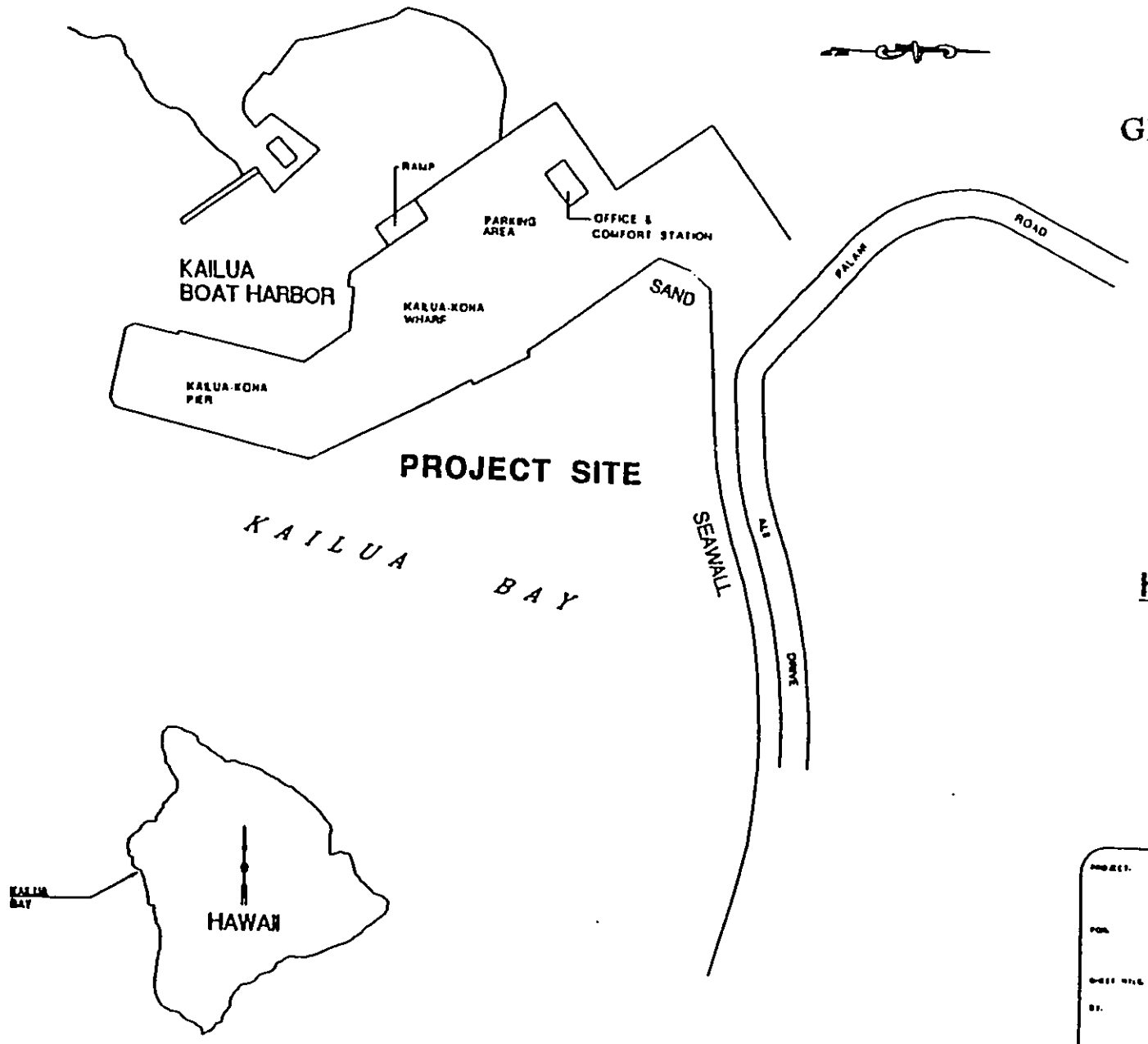
to a period of a near windless and hot humid weather. Here again, the direction of what little breeze that occurs from the leeward or Kona side, provides the name of this rather uncomfortable weather.

The mild climate of Kona is a favored attribute of this area; a magnetic quality that draws visitors to its shores. The protective nature of the Big Island's mountains, especially the two towering mountains of Mauna Kea and Mauna Loa shield the western side of the island from the prevailing northeast trade winds. Generally speaking, the area from Ke-ahole to Manuka (South Kona) is sheltered and subjected to light and variable winds to about 40 miles off shore.

Rainfall is light and ranges between 20 to 30 inches per year in the Kailua Village vicinity. On the average, the rainfall is spread rather evenly throughout the year with slightly heavier rains occurring during the summer months. Temperature in the lower sections of the Kona coast has a mean of 70° to 76° F.

The Wharf is in the State Urban District and is zoned open by the County of Hawaii. The waters of Kailua Bay are classified "AA" by the Department of Health. The County has designated this area as a Special Design District. State Land Use, County General Plan and Zoning maps are delineated in ***DRAWINGS 3a, 3b, and 3c.***

DRAWING 1a
GENERAL LOCATION MAP



KAILUA-KONA WHARF

DATE OF PHOTO: SEPTEMBER 23, 1988
TAX MAP KEY: 7-5-6

100 50 0 100 200

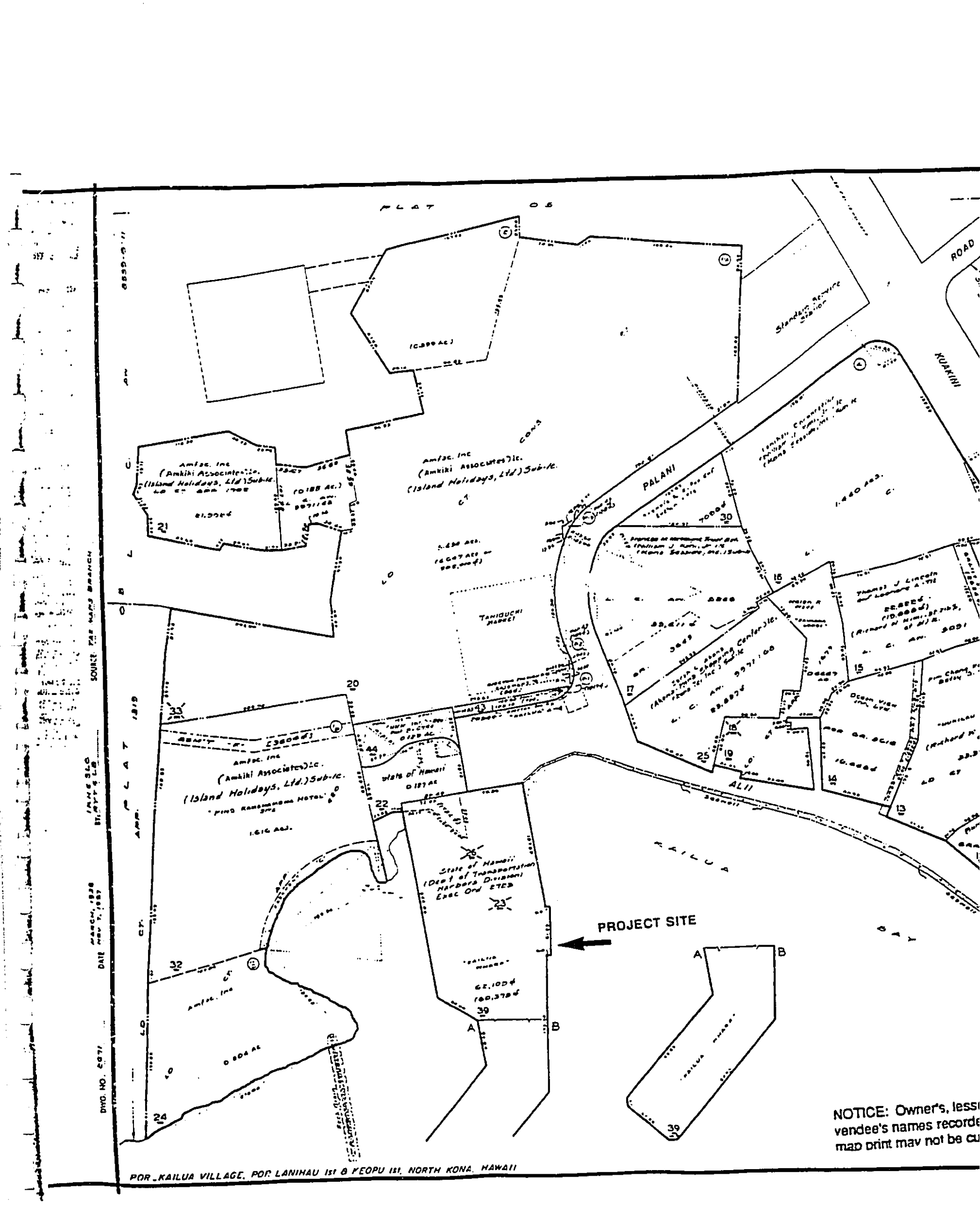
PROJECT: DOCUMENTATION OF FACILITIES FOR BOATING PROGRAM TRANSFER TO THE DEPARTMENT OF LAND AND NATURAL RESOURCES

FOR: STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
HARBORS DIVISION

SHEET TITLE: KAILUA-KONA WHARF, ISLAND OF HAWAII

BY: RMTC
R.M. TOWILL CORPORATION
420 Waiakamilo Rd. Suite
Honolulu, HI 96817-4941

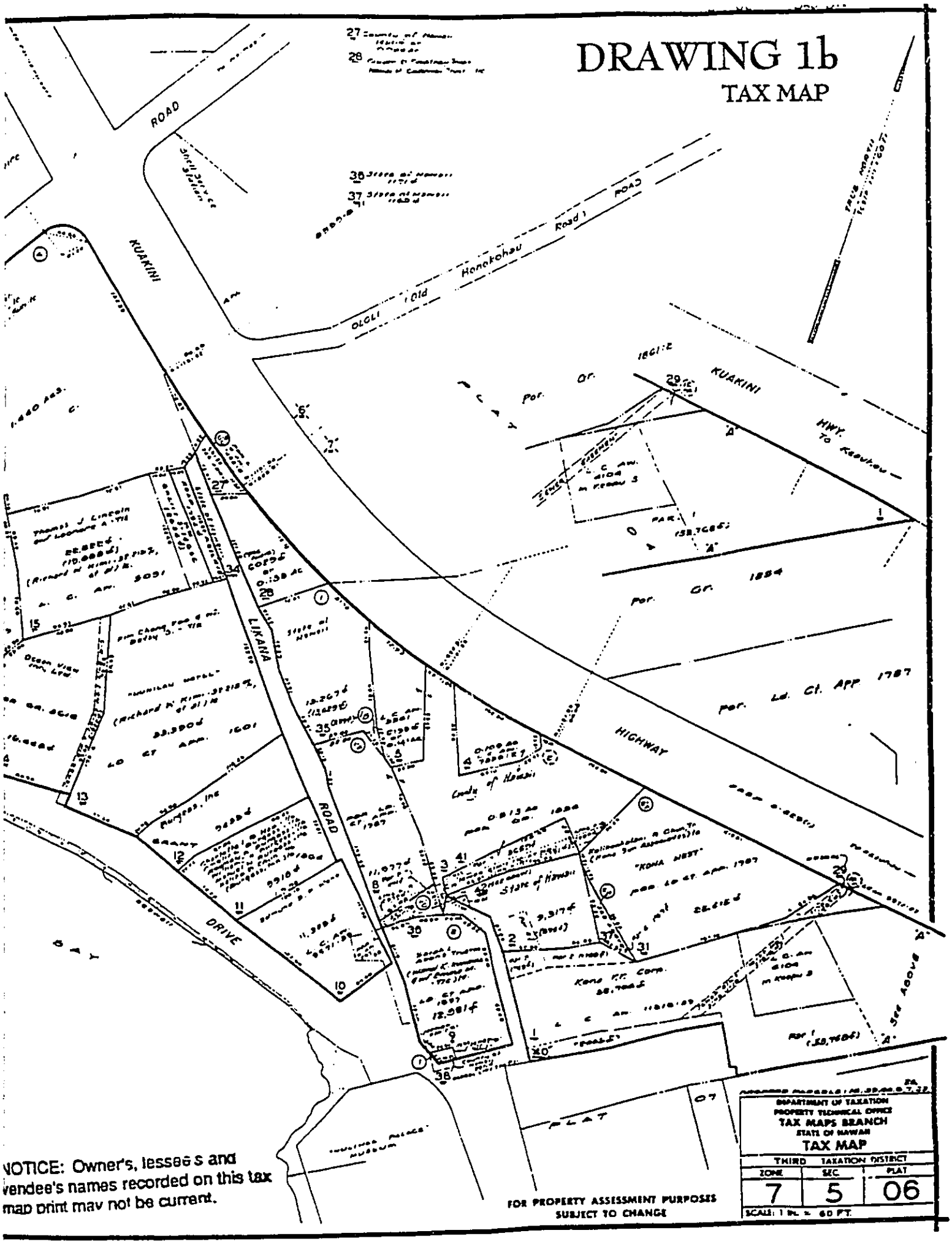
August 1991



NOTICE: Owner's, lessu
vendee's names recorde
map print may not be cu

DRAWING 1b

TAX MAP

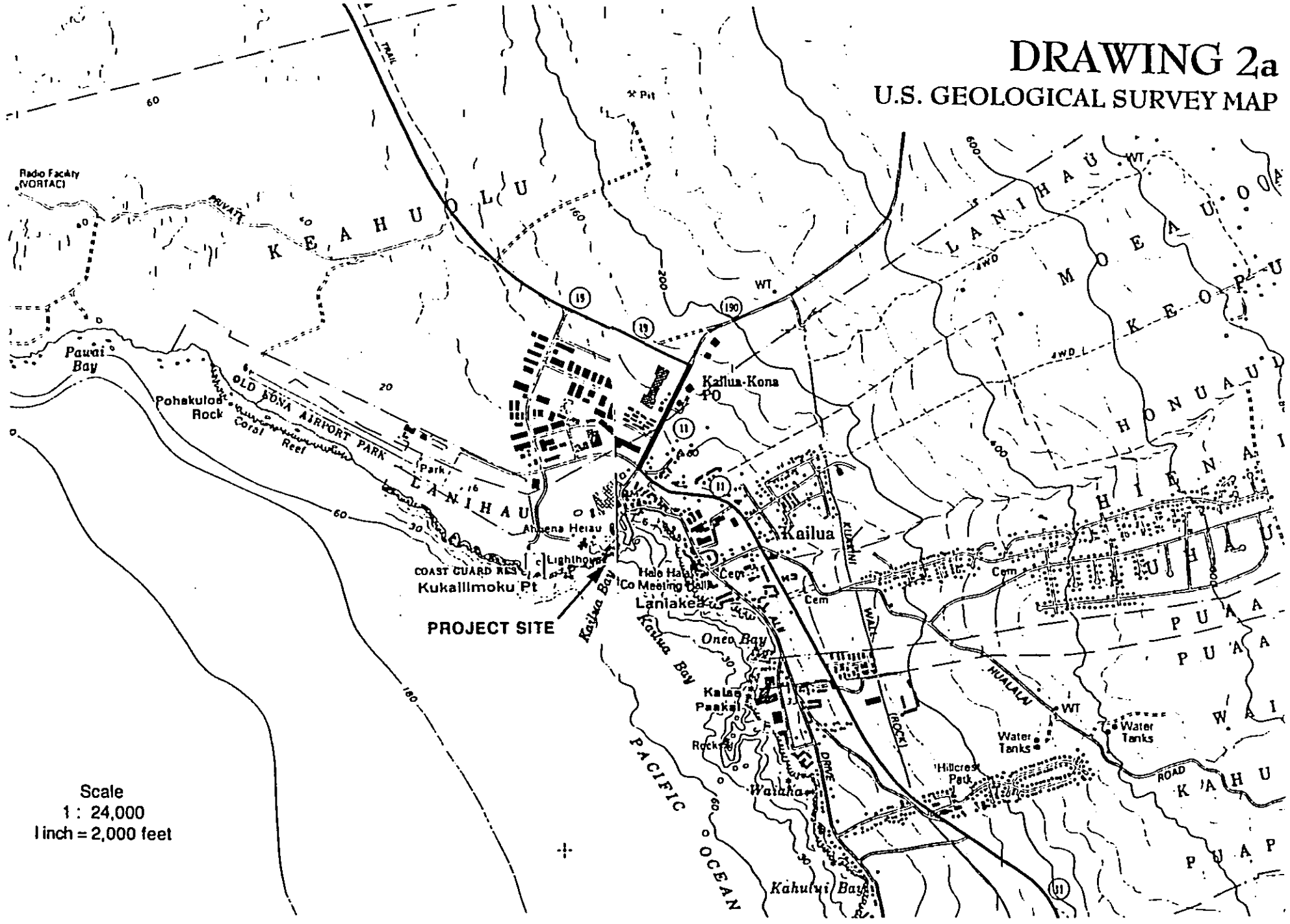


NOTICE: Owner's, lessees and vendee's names recorded on this tax map print may not be current.

FOR PROPERTY ASSESSMENT PURPOSES SUBJECT TO CHANGE

DRAWING 2a

U.S. GEOLOGICAL SURVEY MAP



Scale
1 : 24,000
1 inch = 2,000 feet

KONA AIRPORT (Abandoned)

LOGARITHMIC

1 2 3 4 5 6 7

To find SPEED, place one point of dividers on distance run (in any un
right point on 60 and left point will then indicate speed in units per hour.

TIDAL

Place Name	(LAT./LONG)	He Mean High
Kailua Kona	(19°39'N/156°00'W)	

(290)

RADAR REFLECTORS

Radar reflectors have been placed on many floating aids to navigation. Individual radar reflector identification on these aids has been omitted from this chart.

RED SECTOR

GREEN SECTOR

KAILUA

Foul

Kukuilimoku P

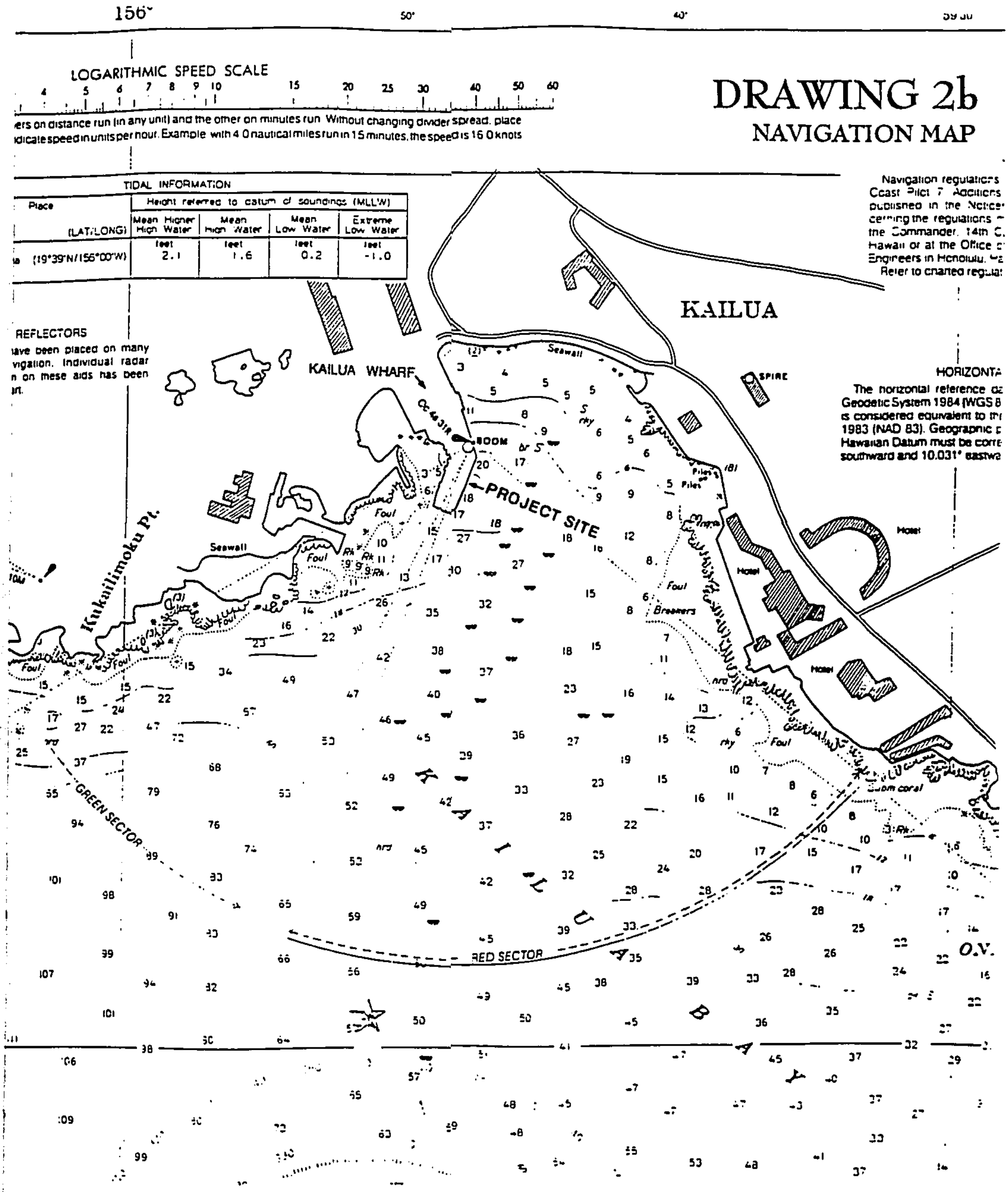
SOUNDINGS IN FEET

Yards

600 500 400 300 200 100 0 50 100

(HART 1932)

DRAWING 2b
NAVIGATION MAP

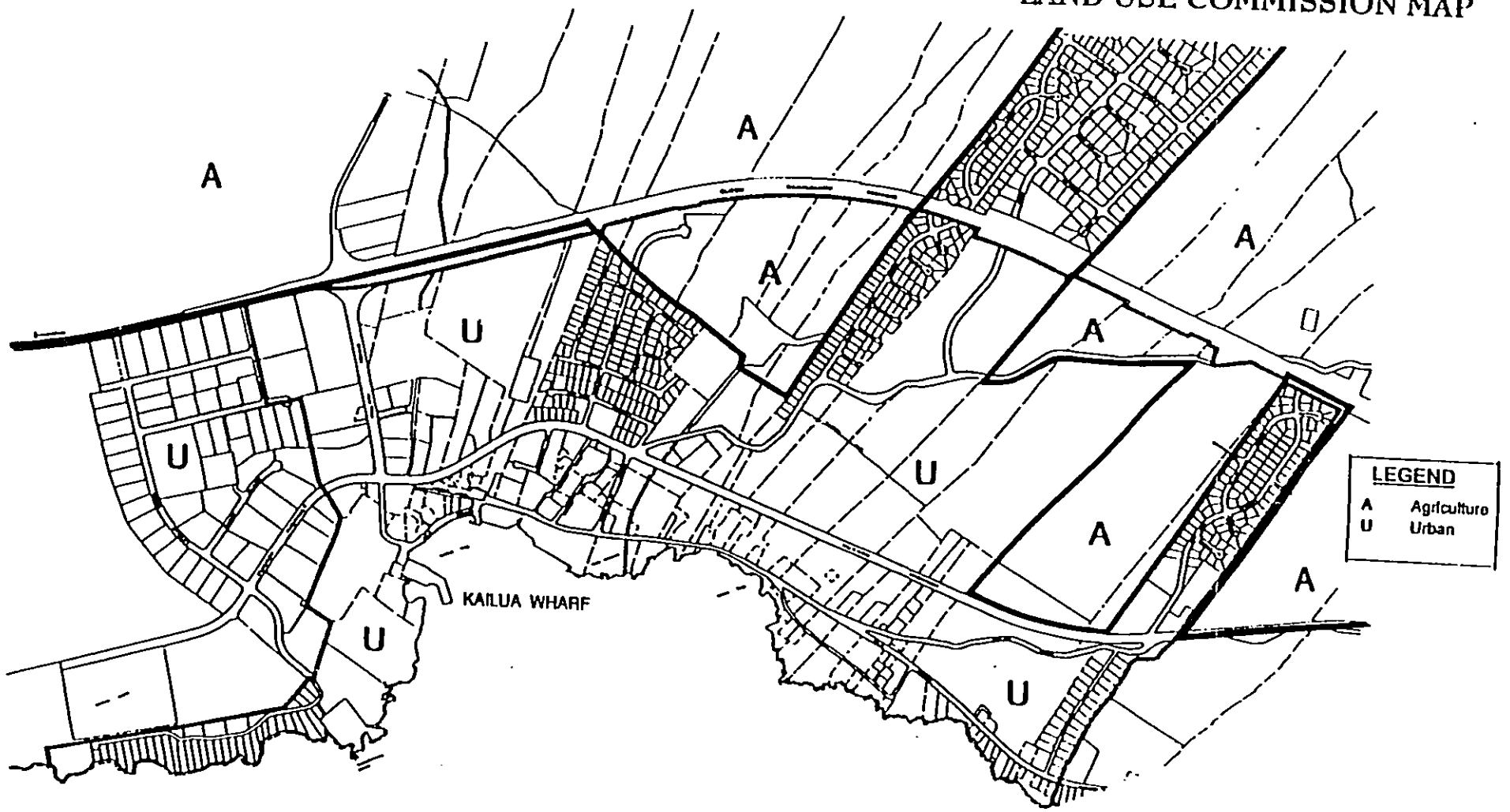


LOGARITHMIC SPEED SCALE
ers on distance run (in any unit) and the other on minutes run. Without changing divider spread, place
dicate speed in units per hour. Example: with 4.0 nautical miles run in 15 minutes, the speed is 16.0 knots
TIDAL INFORMATION
REFLECTORS
ave been placed on many
vigation. Individual radar
n on these aids has been
rt.
KAILUA WHARF
BOOM
PROJECT SITE
KAILUA
SPIRE
Seawall
Foul
Breakers
Hotel
Kukailimoku Pt.
GREEN SECTOR
RED SECTOR
KAILUA BAY
Navigation regulations
Coast Pilot 7. Additions
published in the Notices
cerning the regulations
the Commander, 14th C.
Hawaii or at the Office of
Engineers in Honolulu, Ha
Refer to charted regula
HORIZONTA
The horizontal reference da
Geodetic System 1984 (WGS 8
is considered equivalent to th
1983 (NAD 83). Geographic p
Hawaiian Datum must be corre
southward and 10.031" eastwa

Place	Height referred to datum of soundings (MLLW)			
(LAT/LONG)	Mean Higher High Water	Mean High Water	Mean Low Water	Extreme Low Water
	feet	feet	feet	feet
(19°39'N/156°00'W)	2.1	1.6	0.2	-1.0

DRAWING 3a

LAND USE COMMISSION MAP



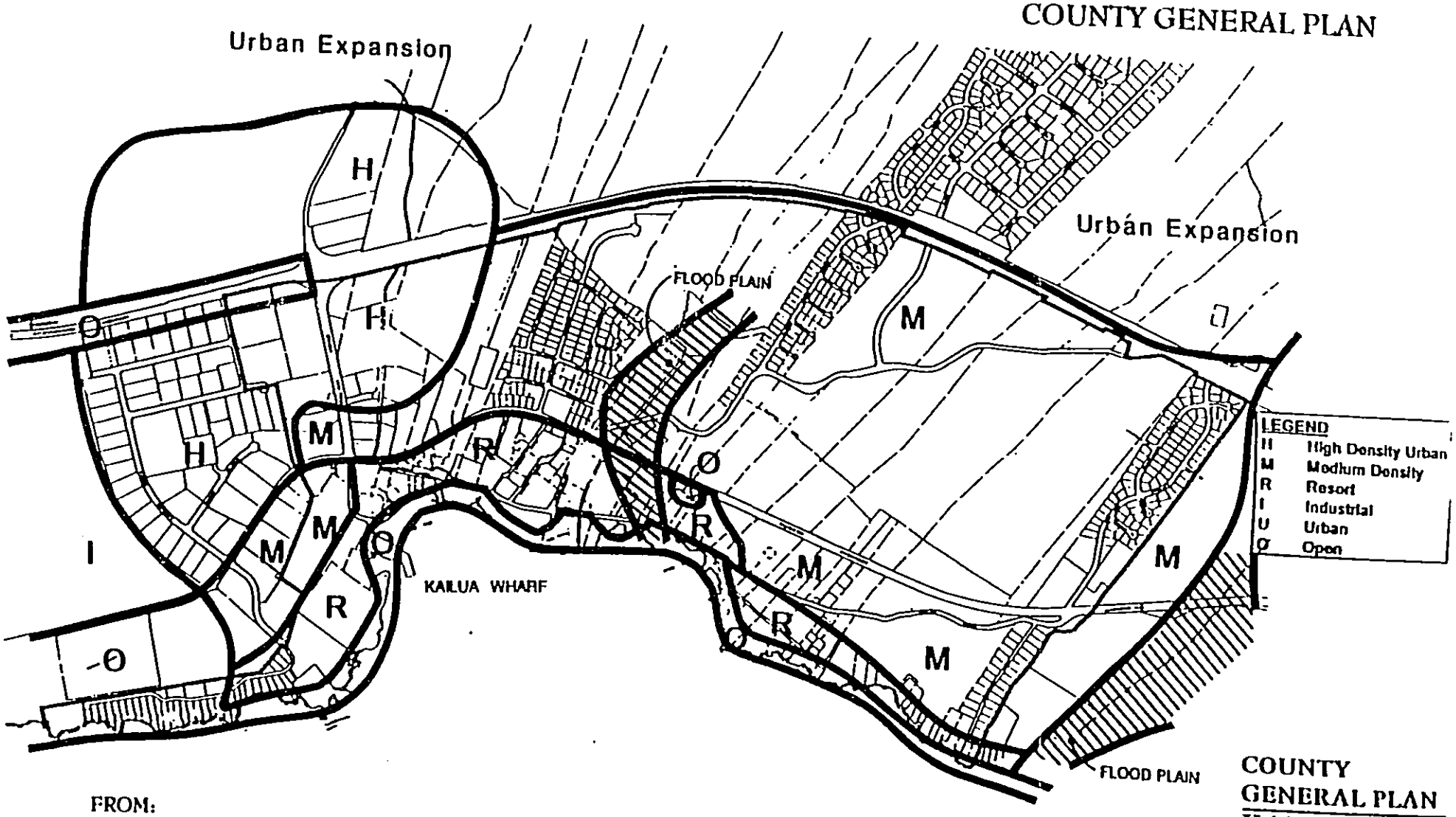
FROM:
County of Hawaii
MASTER PLAN FOR KAILUA-KONA
1994

STATE LAND USE

KAILUA • KONA
MASTER PLAN

DRAWING 3b

COUNTY GENERAL PLAN

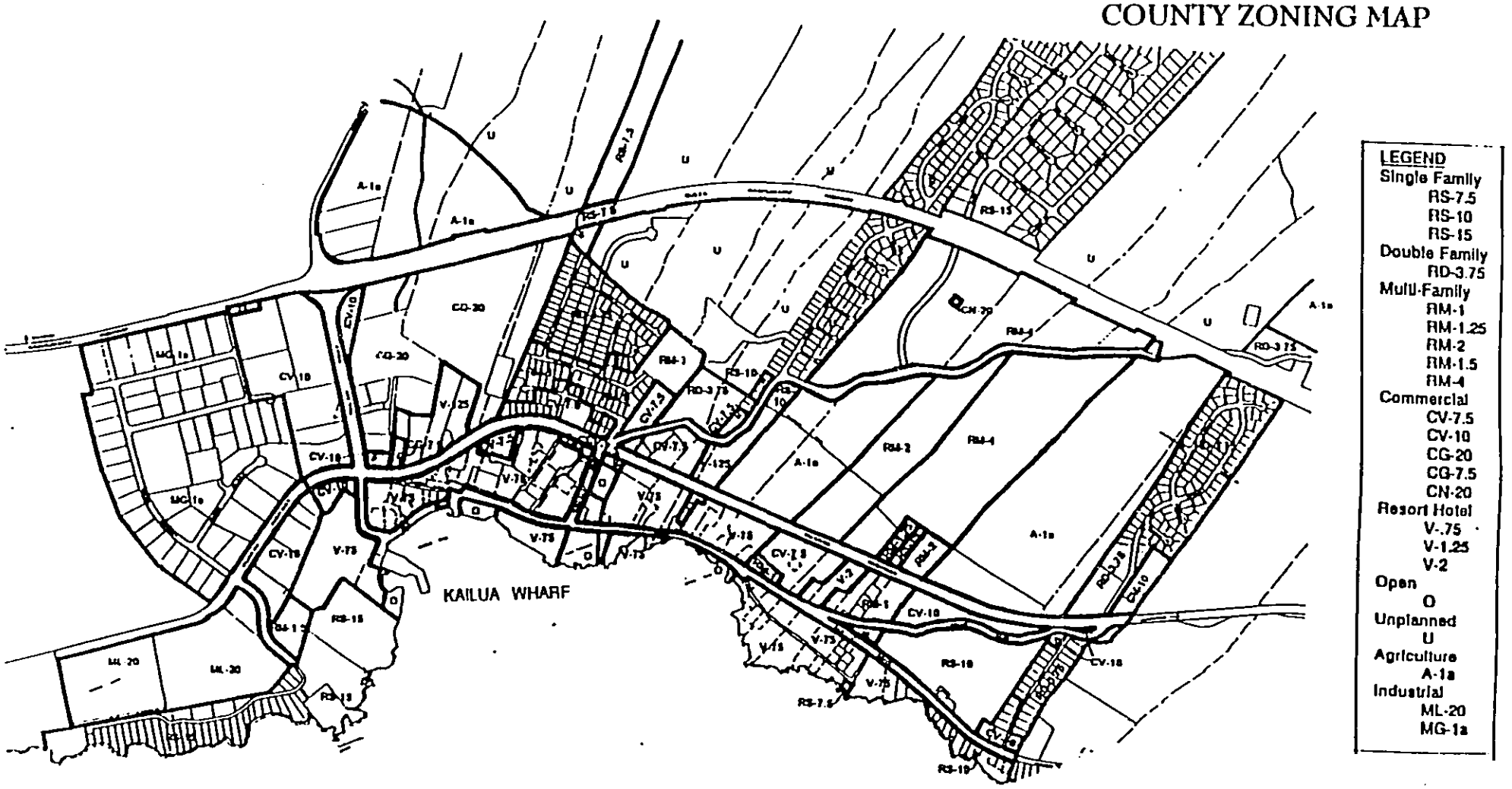


FROM:
County of Hawaii
MASTER PLAN FOR KAILUA-KONA
1004

COUNTY
GENERAL PLAN
KAILUA • KONA
MASTER PLAN

DRAWING 3c

COUNTY ZONING MAP



FROM:
County of Hawaii
MASTER PLAN FOR KAILUA-KONA
1994

COUNTY ZONING

KAILUA • KONA
MASTER PLAN

SECTION 3
PARTIES CONSULTED OR TO BE CONSULTED

Various agencies, organizations and individuals were contacted or will be provided with a draft environmental assessment for review and comment. These include:

Office of the Mayor
County Council Member Nancy Pisicchio
County Council Member Curtis Tyler
County Planning Department
County Planning Department- Kona Office
Kailua Village Design Commission
County Parks & Recreation Department
County Department of Public Works
County Department of Research & Development
County Department of Water Supply
Hawaii Police Department
State Department of Land & Natural Resources
- Historic Preservation Division
- Aquatic Resources
- Conservation & Resources Enforcement
- Land Division

Dr. Fred Holschuh
State Department of Health, Environmental Management Division
State Department of Business, Econ. Dev. & Tourism
State Department of Transportation
Office of Hawaiian Affairs
State Department of Hawaii Homes Lands
Senator Lorraine Jitchaku
Senator Russell Kokubun
Representative Paul Whalen
Representative Jim Rath
U.S. Corps of Engineers
U.S. Geological Service
U.S. Department of Interior, FW&S
National Marine Fisheries Service
Natural Resources Conservation Service
National Park Service
King Kamehameha's Kona Beach Hotel
Hawaii Hotel Association, Big Island Chapter
Kona Charter Skippers Association
Hawaii International Billfish Association
Ironman Triathlon
American Hawaiian Cruises
Atlantis Submarines
Kai Opua Canoe Club
James S. Greenwell (Kona Village Improvement Association)
Kona-Kohala Chamber of Commerce
Hawaii Leeward Planning Conference
Mokua'aikaua Church

(Continued next page)

(Continuation ...)

Hulihe'e Palace (Daughters of Hawaii)
Chamber of Commerce of Hawaii
Hawaiian Civic Club (Kona Chapter)
Save Kona Bay: Benno Brenninkmeyer
Ms. Mikahala Roy: Kulana Huli Honua
Stephen J. Arnett

Copies for public viewing sent to the Kona libraries at:
- Kailua
- Holualoa
- Kealakekua

AGENCIES, ORGANIZATIONS AND INDIVIDUALS WHO RESPONDED
(See COMMENTS AND RESPONSES)

County of Hawaii:
- Department of Public Works
- Department of Research and Development
- Department of Water Supply
- Department of Planning

State of Hawaii:
- Department of Land & Natural Resources:
  - Division of Aquatic Resources
  - Land Division
  - Division of State Historic Preservation
- Department of Hawaiian Homes Lands
- Office of Hawaiian Affairs
- Department of Transportation
- Office of Environmental Quality Control

Federal:
- U.S. Army Engineers

Kulana Huli Honua: Ms. Mikahala Roy
Hawaii Leeward Planning Conference
Save Kona Bay
Kai Opua Canoe Club
Robin Krueger
Kevin R. Seiter
Stephen J. Arnett

SECTION 4
ENGINEERING DESIGN & CONSIDERATION

The Wharf is under the jurisdiction of the State Department of Land and Natural Resources. Its management and operation is by the Division of Boating and Ocean Recreation. The division's Hawaii District Manager is responsible for the operations and maintenance of the facility.

The objective of the Kailua Wharf Improvements project is to ensure safety for users of the existing Wharf. The lure of the ocean still prevails in this community. Over the years, the steel bulkhead installed in 1952 has progressively deteriorated. The integrity of the pier is in jeopardy today. A section of the pier has been declared off-limits due to its hazardous condition. Emergency repair was made to a section of the pier in order to provide a safe passenger loading and unloading dock from ferry boats and sight-seeing crafts.

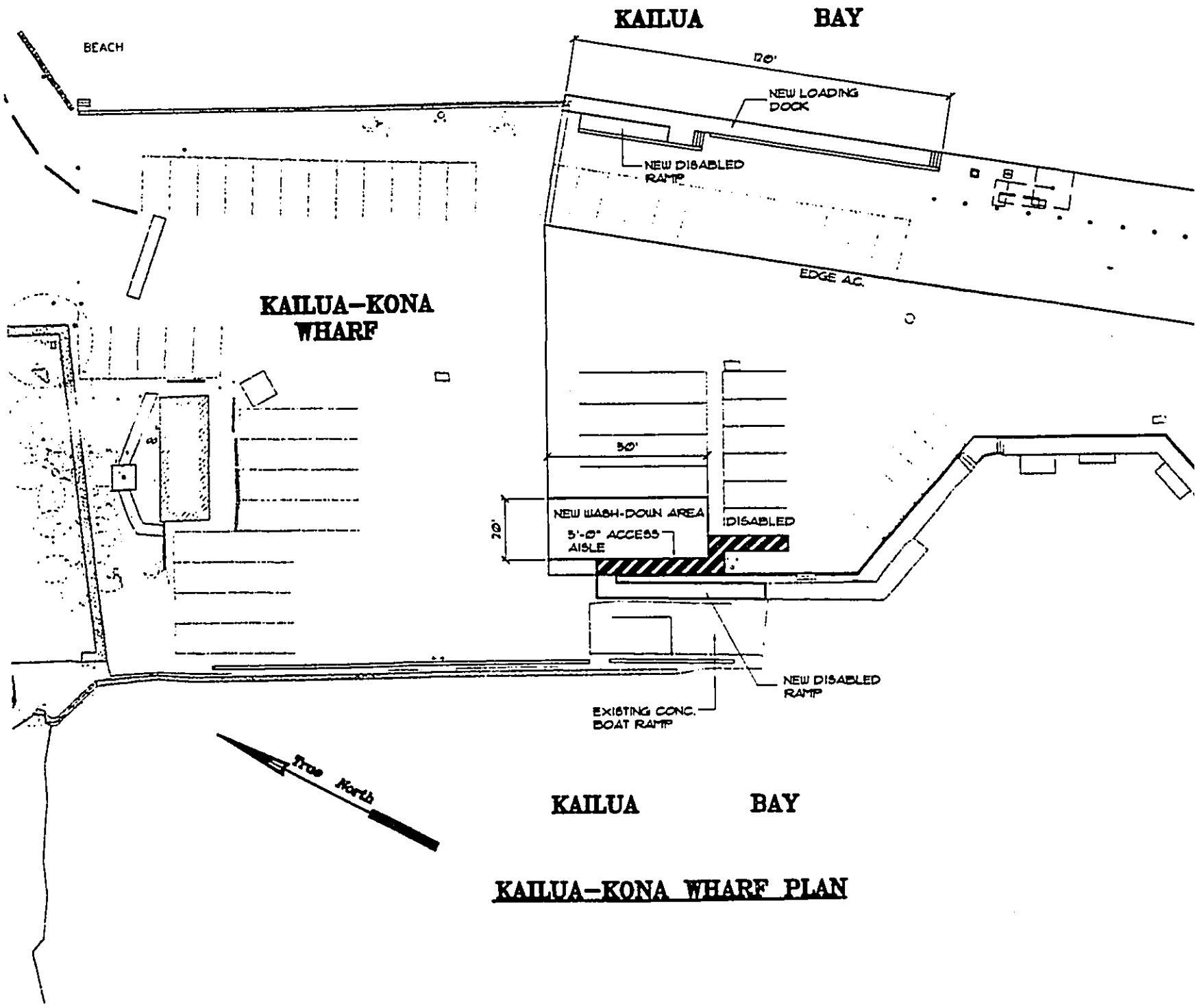
The repairs to the deteriorated wharf are the chief concerns of this project. Since repairs will necessitate removal of old sections, ancillary improvements will be made. These involve replacing the waterlines, cleats, bull rail, fish jib hoist, jib crane, lighting and pavements. Three new docks are also proposed. **DRAWING** 4 is a plan for the loading docks proposed. Compliance with the Americans with Disability Act (ADA) will be met for the loading docks and elsewhere as required.

In evaluating the engineering aspects of the project, it was decided that steel sheet piling capped with a concrete beam would best serve the needs of the project. It would be physically impossible to remove the existing deteriorated steel bulkhead without severe damage to the marine environment and added expense. Since steel sheet piling has a limited useful life in a corrosive marine environment as evidenced by inspection of the pier, it was not a valid consideration for use again on this project without some protective system. The choice of steel sheet piling with the top portion of the piling encased in concrete is a more viable method. The top portion of the steel piling which is subject to wave action which makes it prone to corrosion will be encased with concrete to prolong the life of the sheet piling bulkhead. It provides the protection of concrete to combat corrosion and allows the faster driving of the piling.

While cathodic protection could be used in conjunction with a steel bulkhead, it would be expensive to operate and maintain. This type of protective system for wharf installations has not been used on State projects for the reasons stated. Other agencies in the State have used cathodic protection system in a very limited manner.

The contractor, prior to starting his work, will be required to file a working plan and schedule; and submit an approved Best Management Practice (BMP) plan to maintain water quality. The contractor will also be required to monitor pile driving operations effect on nearby structures to ensure that pile driving will not cause any damage to these structures.

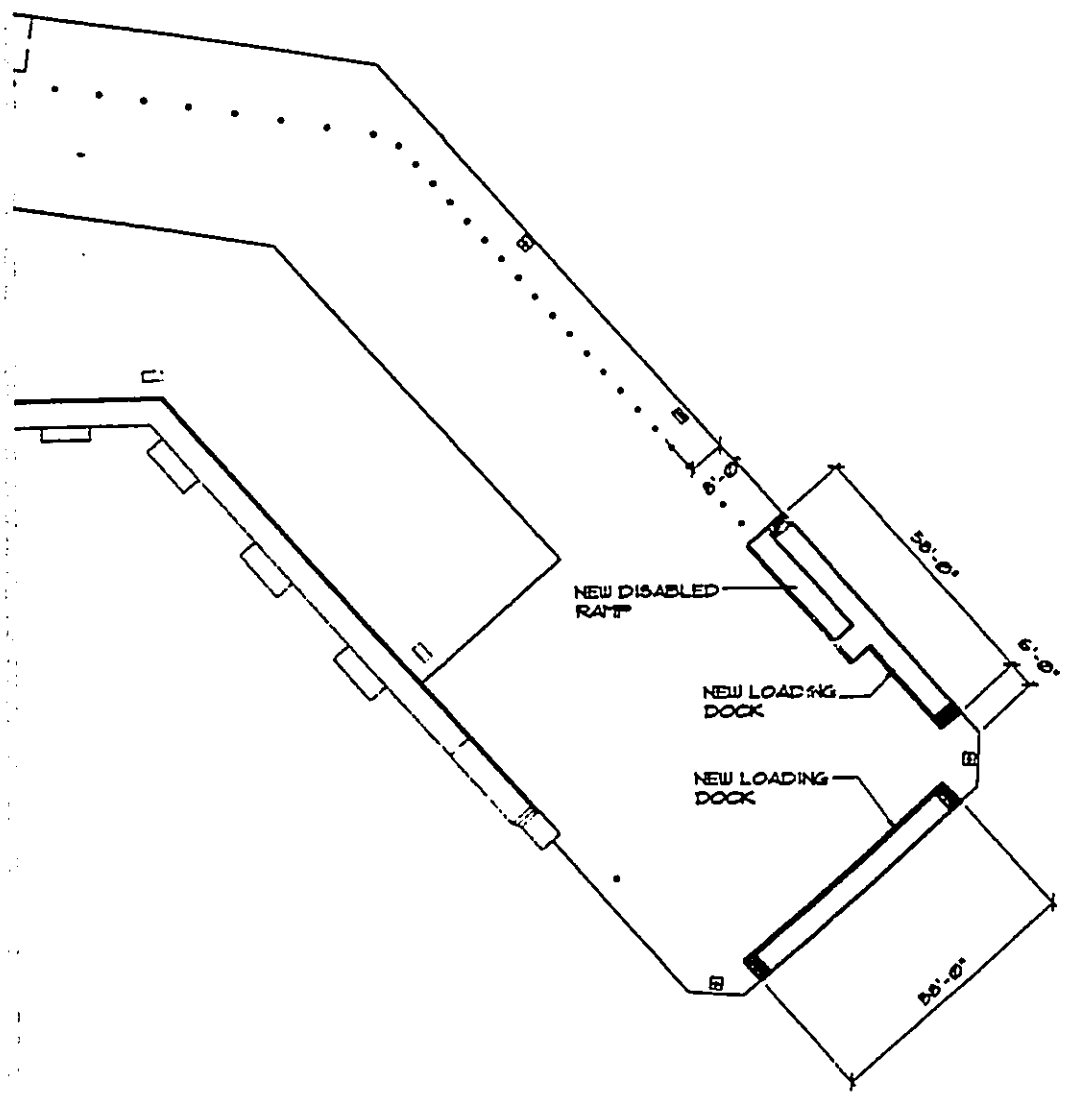
The project is expected to require one year to complete after a contract has been awarded. At present, the draft EA is nearing completion and will be forwarded to the Office of Environmental Control Quality for public notificaion after a determination has been made by the Land Division, Engineering Branch. Thereafter, applications for approval/permit to the respective regulatory agencies will be submitted.

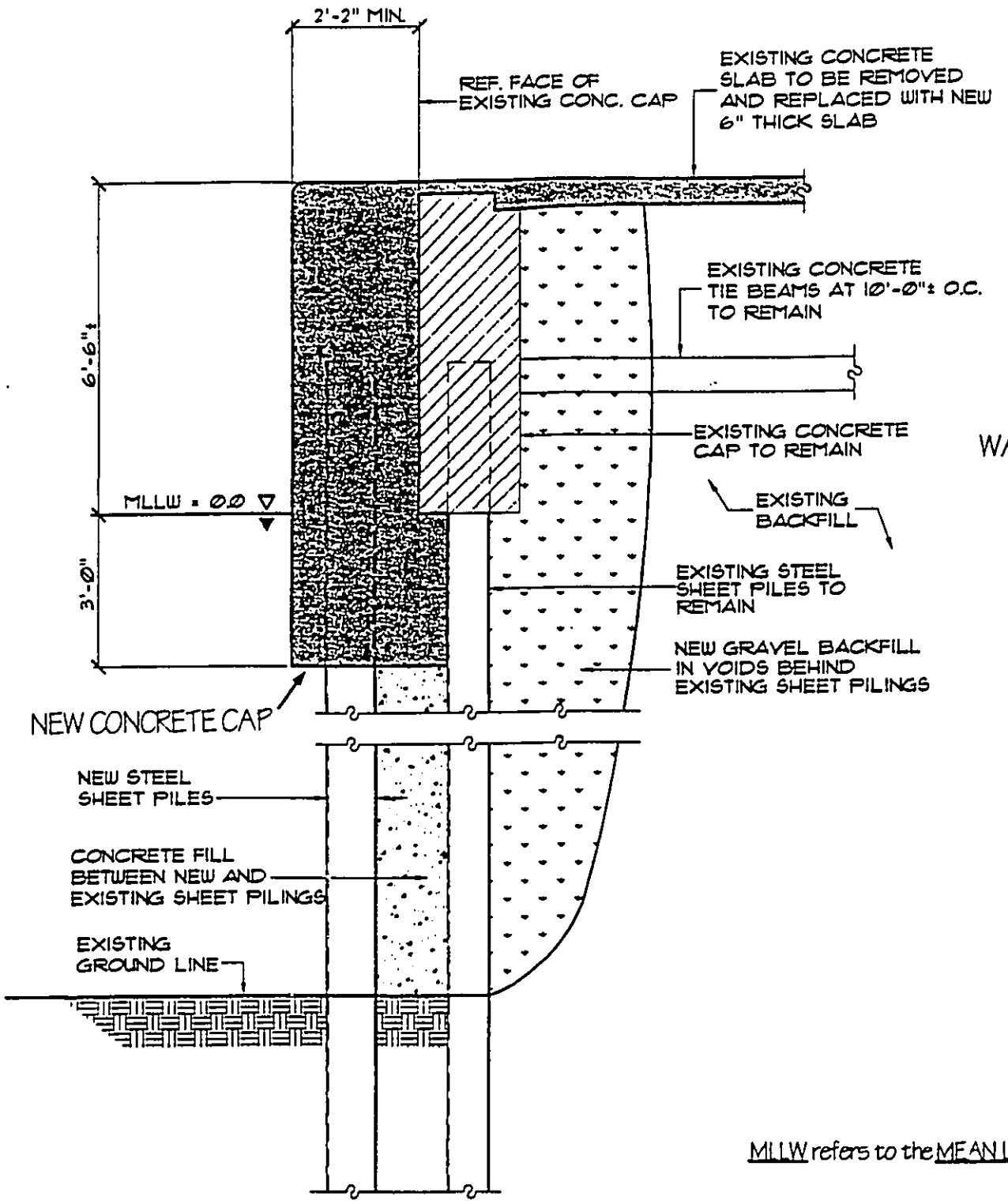


KAILUA–KONA WHARF PLAN

DRAWING 4
NEW LOADING DOCKS

(REVISED: JUNE 2001)





WATER SU

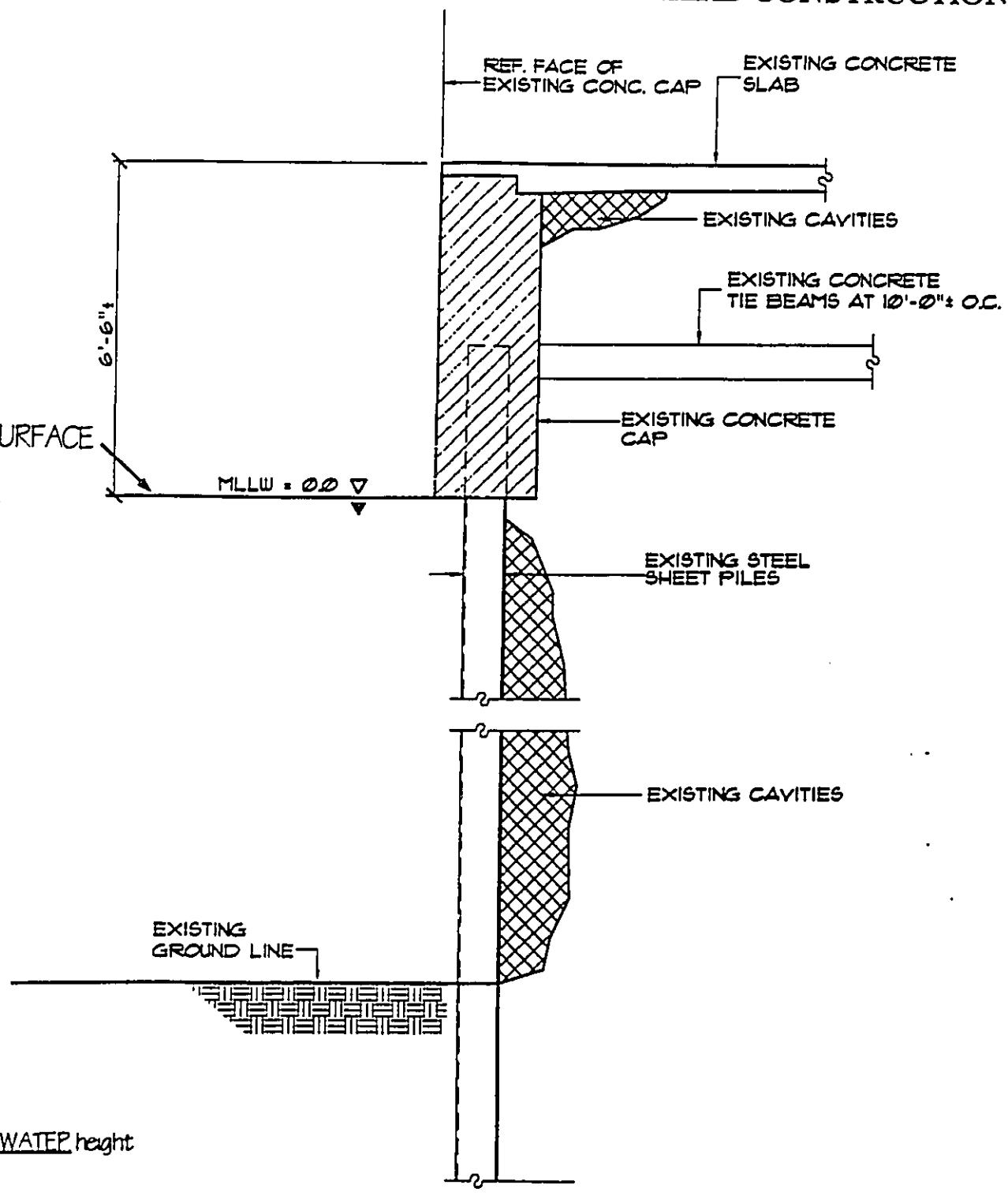
MLLW refers to the MEAN LOW LOW W

TYPICAL SHEET PILE BULKHEAD SECTION

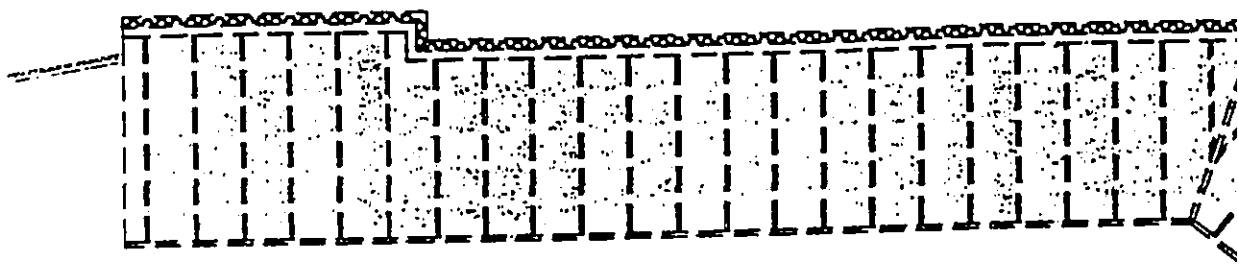
1

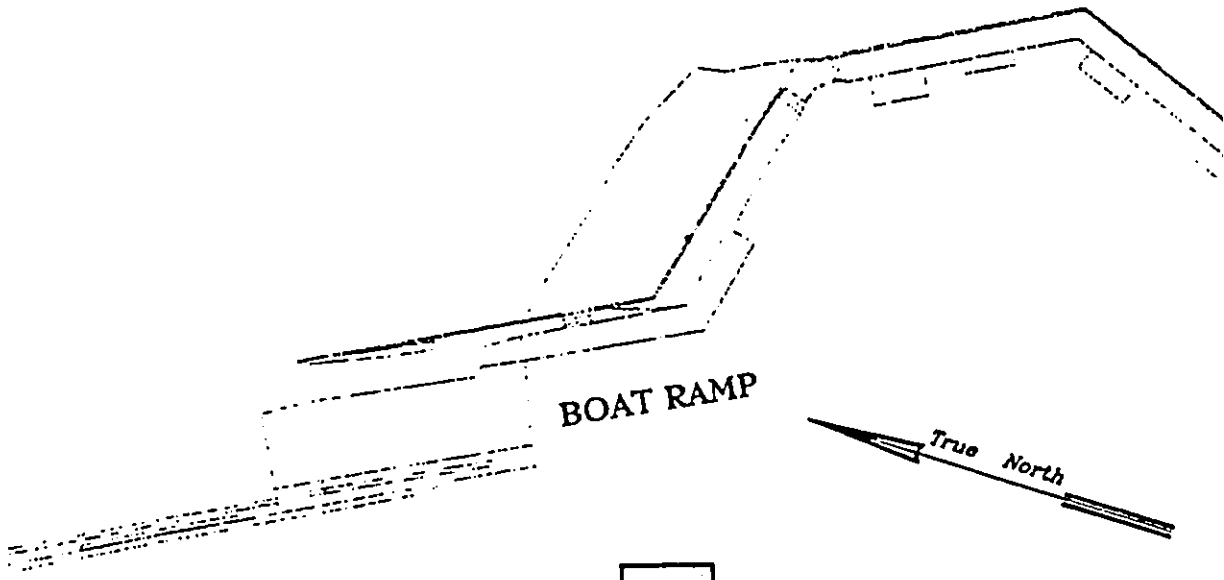
DRAWING 5

DETAIL OF BULKHEAD CONSTRUCTION



EXISTING SHEET PILE BULKHEAD SECTION

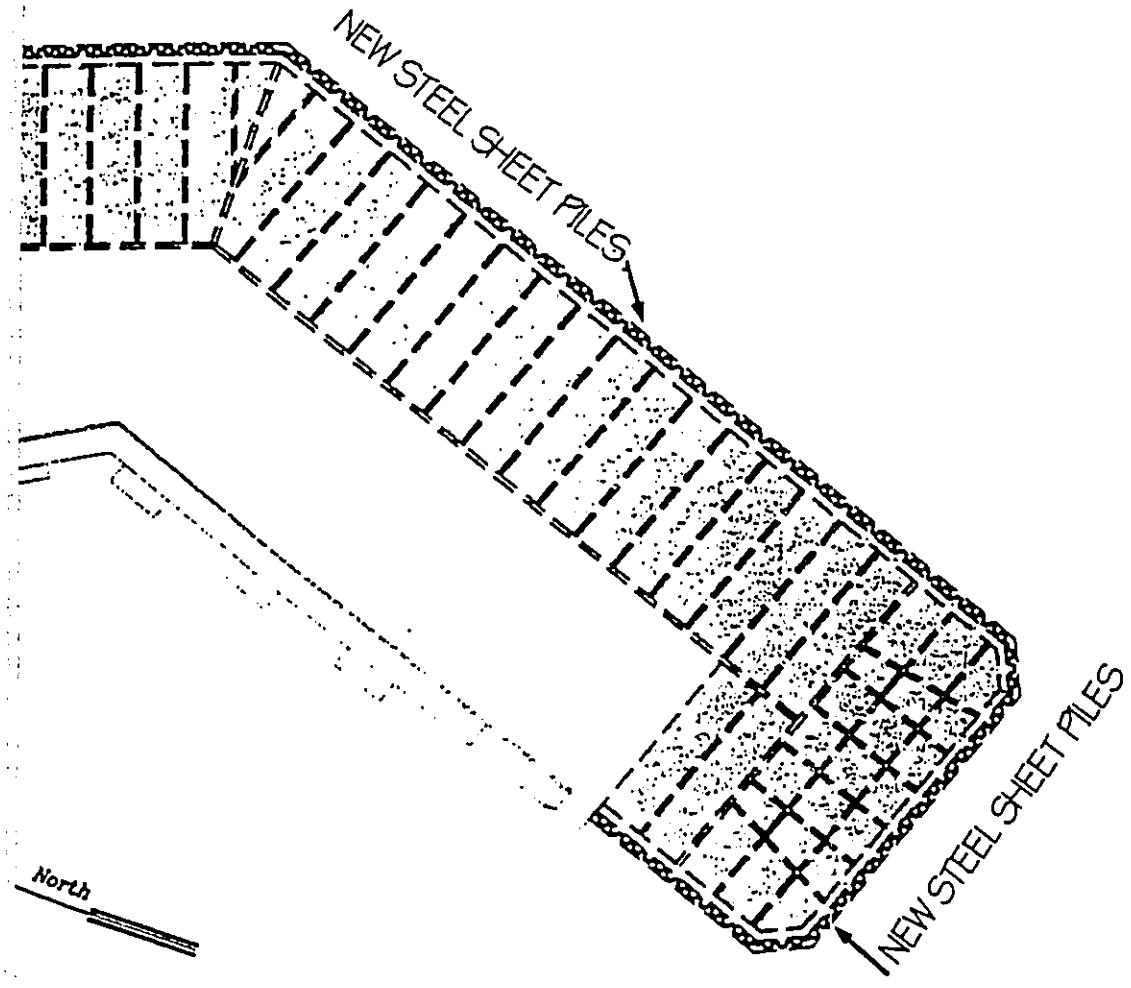




STRUCTURAL REPAIR AREA

PLAN FOR STRUCTURAL REPAI

DRAWING 6
STRUCTURAL REPAIR WORK



AREA

URAL REPAIR WORK

SECTION 5
SOCIAL AND CULTURAL ASPECTS

There have been great changes to the character of Kailua Village as well as the Kona districts as a whole. Since Statehood this area has exhibited a remarkable period of growth accelerated by key government projects. The development of a dependable water source laid the basis for growth. The construction of the Ke-ahole International Airport and the Queen Kaahumanu Highway opened the door to the visitor industry. The focal point of this growth has been Kailua Village. The increased and foreseeable population growth has led to Kona getting its second high school. A community college within the University of Hawaii system has also been started in Kona. The increase in population of North Kona can be seen in **TABLE 1.**

TABLE 1. POPULATION
NORTH KONA: 1960 TO 1994

YEAR	NUMBER OF RESIDENTS
1960	4,451
1970	4,832
1980s	13,748
1990	22,284
1995	25,447

The marked increase in population has drastically altered the ethnic groups of the district as noted in **TABLE 2**, shown on the next page. The job characteristics for the district are shown in **TABLE 3**, a marked departure from its former agrarian background to one that reflects the tourist industry with all its supporting services. These two tables highlight the changes for the North Kona district population ethnic make-up and employment categories.

TABLE 2. POPULATION - ETHNIC GROUPS
NORTH KONA - 1980s and 1990

RACE	NUMBER OF PERSONS 1980s	1990
White	7,202	13,124
Black	48	92
American Indian	69	140
Eskimo	-	7
Aleut	2	7
Chinese	210	409
Filipino	1,031	1,686
Japanese	1,698	2,328
Asian Indian	5	10
Korean	78	135
Vietnamese	6	14
Thai	-	30
Other Asian	-	49
Hawaiian	2,991	3,655
Samoan	36	111
Tongan	-	37
Other Polynesian	-	19
Guamanian	8	14
Other Micronesian	-	14
Melanesian	-	2
Pacific Islander (unspecified)	-	8
Other race	364	393
TOTAL:	13,748	22,284

TABLE 3: JOB CHARACTERISTICS
NORTH KONA- 1980s and 1990

OCCUPATION (Persons over 16 years of age)

TYPE OF JOB	NUMBER OF PERSONS 1980s	1990
Executive, etc.	818	1,569
Professional specialty	647	1,368
Technicians, etc.	73	191
Sales occupations	1,069	1,801
Adminis. support, clerical	806	1,236
Private household jobs	47	44
Protective services	130	195
Service - except household and protective	1,309	1,898
Farming, forestry, fishing	491	664
Precision prod., craft and repair	839	1,512
Machine operators, etc.	108	194
Transportation and material moving	264	506
Handlers, equip. cleaners helpers, laborers	315	374
TOTAL:	6,913	11,552

INDUSTRY (Persons over 16 years of age)

BRANCH OR BUSINESS	NUMBER OF PERSONS 1980s	1990
Agriculture, forestry, fisheries & mining	430	640
Construction	777	1,485
Manufact'g, nondurable goods	34	137
Manufact'g, durable goods	69	196
Transportation	415	630
Communications & other public utilities	89	216
Wholesale trade	130	301
Retail trade	1,628	2,366
Finance, ins. & real estate	597	857
Business and repair services	331	748
Personal services, entertainment & recreation services	1,433	1,931
Health service	148	527
Educational services	331	462
Other professional & related services	312	659
Public Administration	189	397
TOTAL :	6,913	11,552

In 1994, the County of Hawaii completed the "Master Plan for Kailua-Kona. (Draft)". concerning the Wharf, the plan states:

> "1. Create a cul-de-sac that efficiently allows vehicles to drive to the pier area and out again.
>
> 2. Provide convenient access and circulation for boat trailer and uses related to the ramp. Parking limited to trailer parking only.
>
> 3. Relocate Administration building to center of pier, and provide a landscaped pedestrian treatment for the end of the pier. Add limited landscape plantings near building and pedestrian areas. Palms which are very hardy accent plants are recommended. Service vehicle can be allowed.
>
> 4. Add light structures/trellis etc. for shelter from sun in a manner the will not obstruct views of the Village.
>
> 5. Use paving treatments to differentiate between vehicular and pedestrian areas.
>
> 6. On the pier edge facing Kailua Village continue the shoreline promenade development around to the end of the Pier. Limit private and commercial boating activities to the area makai of building."

The above recommendations, for the most part, are not applicable to this project which is essentially a repair task with limited funding. No new structures are proposed. The future beautification of the pier should be handled under the operations of the Division of Boating and Ocean Recreation pier management with consultation of the village residents. Parking stalls will be clearly marked for use by boaters and those of ADA accessible parking stalls.

The draft master plan further analyzes the pier/seawall and states:

> "Often considered as a coherent entity, the pier/seawall area is a focal point of activity and community image. This is in part due to the activities that occur: the pier as an arrival point for tourists, commercial activities, and use by locals for recreation. The seawall and adjacent Alii Drive provide the vantage point for "what's happening." This area of Alii Drive is also a relative dead spot due to a closed off restaurant structure and residential use, i.e., they do not provide the pedestrian/visual interaction the rest of the area has. The pier is a point of controversy as some blame it for destroying the beach and others hail it as an essential ingredient in the Village. Regardless, it is there and under State jurisdiction, which limits local control. All are concerned about the appearance of the pier, and the conflict

between vehicles and other activities."

The above analysis shows the divergent views held by users of the pier and those concerned with aesthetic values. The built up area around the pier has a high land value and any move to expand parking for pier-related activities would come at a high cost.

The report goes on to define pier concepts/alternatives:

> "1. Provide cosmetic improvements to enhance use by pedestrians, e.g., planters, trellis or other shade devices, pedestrian walkway along the edge.
>
> 2. Remove all parking and provide for drop-off and boat launching only. Major areas would be open to pedestrian use only. Use items in (a) to improve appearance.
>
> 3. Reduce parking and increase pedestrian use and improve appearance. Note that removing any parking from the pier would mean that alternative parking would need to be provided, since present demand exceeds available space. Regardless of the options, the pier is a valuable asset to be enhanced for the benefit of the community and the visitor.
>
> 4. Reconstruction of the pier on piles has been suggested as a way to improve water circulation and sand retention."

The above proposals: (1) of beautification efforts involving planters, trellises and such will conflict with those favoring the open space vista accorded by the pier; (2) of banning parking on the pier is a future consideration which may be required by environmental regulations; (3) of reduction of parking on the pier will require alternative parking as noted in the analysis; and (4) of reconstruction of the pier on piles is not within the scope of the present project. However, due to community interest in re-constructing the pier on piles, a brief examination of this suggestion has been added to the draft EA. This is shown as **APPENDIX F: ALTERNATIVE PIER CONSTRUCTION.**

The State Historic Preservation Division reports that historic sites once covered much of Kailua-Kona. With the urbanization of the area this pattern has changed. Historic preservation laws did not come into place until the early 1970s. Development prior to that time was focused in the core of Kailua-Kona from what used to the King Kamehameha Hotel to beyond the Kona Hilton, and mostly seaward of Ali'i Drive. This development proceeded without archaeological survey. Many historic sites were destroyed in these years, with records being only the brief survey work (Stokes' turn of the century study of heiau, Reinecke's 1930 coastal survey, Kekahuna's 1952 study of some heiau). Since the early 1970s, most developments have been preceded by

archaeological surveys, and in the late 1980s these increased in number and quality with a resurgence of development. Only a few areas in Kailua-Kona lack survey at this point.

Kailua Village is rich in ancient and historic sites. A summary list of important historic and cultural features as reported by the State Division of Historic Preservation follows:

- Kamakahonu — A National Historic Landmark. This site was the residential compound of Kamehameha I from 1813 until his death in 1819. It had previously been the residence of a high chief, and it was undoubtedly a residential area back into the centuries prior to European contact. During Kamehameha's use of this compound, reportedly 11 house structure were present. These included his sleeping house, houses for his wives, a large men's house, storehouses, and 'Ahu'ena heiau. Upon Kamehameha's death, a mortuary house was built, which held his remains until they were taken and hidden away. After Liholiho's departure from Hawai'i Island in 1820, the high chief Kauakini, who served as Governor of Hawai'I for many years, resided here until 1837, when he had Hulihe'e built and moved there. By the late 1800s, Kamakahonu was abandoned and in the early 1900s H. Hackfield & Co. Purchased the land, and its successor American Factors used the site as a lumberyard and later for the King Kamehameha Hotel. Today, three remnant structures are present on the seaward beach of the property (all reconstructed in the 1970s and recently refurbished) -- 'Ahu'ena heiau, the mortuary house's platform, and an additional structural platform. These structures are set aside in a covenant agreement between the State's Historic Preservation Division and the current hotel owners., Other remains of the compound may be present (e.g., subsurface deposits on the beach and under the front lawn -- burials have been found in the sand; and portions of the wall on the west side may be old).

  As the residential area of Kamehameha for a number of years, this site is extremely significant. Indeed, it is a National Historic Landmark.

- 'Ahu'ena Heiau. This heiau was a hale o Lono heiau used by Kamehameha. It was an important heiau concerned with success of crops, and it was also used for the training of Liholiho as a future heir and for many political purposes. Nearby is Hale Pua 'Ilima, the mortuary house of Kamehameha. The restoration of 'Ahu'ena heiau under the direction of David Mauna Roy and a non-profit corporation 'Ahu'ena Inc. adds to the visual significance of the site. Unfortunately, the current Kailua Pier visually impinges upon the site. Any future alterations to this pier should attempt to reduce visual impacts to the site. The heiau was restored in 1975

and was recently repaired.

- Pa o 'Umi. This is a traditional cultural place -- a historic property. It is the name for a point of land located between Kamakahonu and Hulihe'e Palace. Its name indicates that this was he residential spot of the ruler 'Umi, who moved the royal court from Waipi'o to Kailua, circa A.D. 1600-1620 (using a genealogical count of 20 years per generation). Its location is shown on an 1880 map of "Kailua Town and Vicinity" by Emerson and Kanakanui. As part of the Corps of Engineers' improvements to the seawall fronting Kailua Bay, the Corps has agreed to place an interpretive marker of this historic property along the wall -- above the location where the property is buried today.

- Hulihe'e Palace. This structure was built in 1838 by Kuakini, a high chief and Governor of Hawai'i under Kamehameha II and III (and also the brother of Ka'ahumanu, one of Kamehameha's wives, and the regent during the early years of Kamehameha III's reign). It is a two story wood-frame building with a stone basement, built in Western style. Kuakini used this house as his main dwelling until his death in 1844. His heirs -- Leleiohoku (his adopted son, who died in 1848) and his wife Princess Ruth Keelikolani (Governess of Hawai'I from 1855-1874, who died in 1884) -- King Kalakaua (who acquired the house in 1884) used the house more as a summer palace. The house has been restored in 1927 and in 1953, and is currently State property under the care and operation of the Daughters of Hawaii by a lease.

- Mokua'aikaua Church - This church was built in 1836. Known as the "First Christian Church of Hawaii." Mokua'aikaua Church is closely associated with the first efforts of Christian missionaries arriving in the Hawaiian Islands. The present building, as the first stone church in the Islands, became an example that other missionaries would imitate.

Supplementing these State HPO descriptions is an archaeological report by Lloyd Soehren. Both historic/archaeological reports are shown in **APPENDIX A.**

Since the Kailua-Kona Wharf Improvements project is essentially a repair/replacement undertaking, no significant changes in social and cultural practices will result from this project. The use of the Wharf by various cultural groups would be adversely affected without the repairs to the Wharf. Activities and events associated, one time or another, with the Wharf includes: Hawaii International Billfish Tournament, the Ironman Triathlon, Kona Coffee Festival, Hawaiian canoe racing, swimming, Bon dances, tourist sight-seeing departure point, fishing charter pick-up site, cruise ship passengers entry into Kona, etc.

SECTION 6
ECONOMIC ASPECTS

The growth of tourism has led to a dramatic rise in hotel construction for the West Hawaii region. The only tourist oriented hotel in this region prior to the 1940 was the once-famous Kona Inn, now converted in a shopping mall. There were small hotels in the mauka, or upper, area which mainly served salespersons or workmen on temporary assignments. However, today class hotels line the West Hawaii coast from Keauhou in North Kona to the sparkling sand beaches in South Kohala.

Kailua Village with its old-style charm continues to draw tourists. The Kailua Wharf continues to play an important role in accommodating the local fishermen and boating enthusiasts. It has gained a new and wider part in providing tourists with attractive diversions to enhance their stay. Charter boats sail from Kailua Wharf with tourists who are interested in sports fishing. Larger boats take visitors for viewing the underwater sea life from glass bottom boats and to snorkel at State's underwater park at Kealakekua Bay. New thrills await the adventurous for viewing the ocean bottom in submarines. Kailua Wharf is a choice stop-over for the cruise ships which ply our State waters from Honolulu to Nawiliwili-Kahului-Hilo-Kailua in its circuitous route.

In recent months, the expansion of cruise ships sailing in our State waters have been highlighted. The present cruise ship firm operating in State waters, American Hawaii Cruises, will add another ship to its line. Beyond this, other foreign firms have targeted Hawaii. Norwegian Cruise Line has announced plans to begin service in the year 2001. It's ship will carry 1,900 passengers.

While cruise liners will use the deep draft harbors that have berthing facilities, they plan to offer other attractions. Small boat harbors, such as the Kailua-Kona Wharf, will have even more important roles to play.

As an example, in 1997, the American Hawaii Cruises cite their experience:

· Landing at Kailua-Kona Wharf: weekly- 1,351 persons
monthly- 5,854 persons
yearly- 70,248 persons

· Dockage fees and passenger wharfage fee assessments:
Offshore dockage fees: $12,168 annually
Passenger wharfage fees: $15,924 annually (est.)

· Economic impact of American Hawaii Cruises doing business in 1996 was $45,372,349.

Based on these figures, there will be an economic surge in the communities supporting small boat harbors. This is described in a report prepared for the Harbors Division, State Department of Transportation. The report by Leo A. Daly, published in January 1999, assessed the potential growth of the cruise market for Hawaii and what would be needed to accommodate this market. Projections range up to over 500,000 passengers by the year 2020. These are based on making full use of the existing berthings ports: Oahu- Honolulu Harbor; Maui- Kahului Harbor; Kauai- Nawiliwili Harbor and Port Allen; Molokai- Kaunakakai Harbor; and Hawaii- Hilo Harbor and Kawaihae Harbor. The small boat harbors, termed as anchor ports, are also figured in this cruise ship market: Maui- Lahaina; Kauai- Kikiaola and Hanalei; Lanai- Manele; and Hawaii- Wailoa and Kailua-Kona.

Kailua Wharf is described in the report as being highly congested due to the many activities associated with this small boat harbor. To facilitate the cruise ship passengers entry into the community, a summary of the recommendations include:

- Repair the existing pier.
- Provide additional berths for the ship tenders.
- Construct accessible ramp.
- Evaluate traffic pattern.
- Evaluate location of information tent.
- Evaluate off-site passenger loading/unloading in conjunction with a floating pier concept.
- Evaluate extending or re-configuring the present pier.

A suggestion to facilitate ground transportation will require purchase of additional land or extending the pier. The first will be infeasible due to the high use of lands adjoining the pier. Enlarging the pier would be difficult in terms of funding and community acceptance.

The report included an economic analysis. If proper investment in improving the port facilities are made, the State could realize more than $1.6 billion annually and generate an additional 10,500 jobs. This would require expenditures by the State of $97.1 million within the next 20 years.

The annual Ironman Triathlon World Championship economic statistics list the following out-of-State visitors:

- Athletes: 1,420 and estimated 10-day stay.
- Companions of athletes: 5,840 and 8-day stay.
- Media workers (out-of-State): 400
- Other visitors attracted to the event: 2,500

· The dollar value is broken down into:

Total sales:	$25,420,000
Total household income:	$ 9,210,000
State & County taxes:	$ 1,570,000

(State Department of Business, Economic Development and Tourism)

The increasingly popular Hawaiian canoe racing events throughout the State includes the sponsoring clubs on the Big island. The Kai Opua Canoe Club of Kailua-Kona reports that the *Queen Lili'uokalani Long Distance Outrigger Canoe Races* event attracts paddlers from other islands as well as out of State. These races are purported to be the world's largest long distance outrigger canoe races. In year 2000, the event drew 1,452 men and women paddlers and 78 coaches and assistants. This included 1,215 off-island paddlers and followers. The off-island participants stayed for 4 to 5 days in Kona from arrival to departure. This was a boost to the local economy especially to hotels, car rentals, restaurants and business shops. The economic value of this Hawaiian outrigger event matches that of the Ironman Triathlon.

A world premier event centered in Kona is the Hawaii International Billfish Association annual billfish tournament which attracts many out-of-State competitors. This event will also bring economic returns rivalling the Ironman Triathlon.

Another attraction is the undersea exploration with submarines such as offered by Atlantis Submarines Hawaii. It is estimated that 40,000 to 50,000 persons annually take in this underwater excursion.

Whale watching is another industry with great potential. A study for the Hawaiian Islands Humpback Whale National Marine Sanctuary in 1999, estimated that the total economic impact from maritime activities on the Big Island was $26.1 million. These interesting statistics for the Big Island follows:

Tour type	Direct revenues	Total Econ. Impact	Jobs
Whale watching:	$ 1.6 million	$ 2.8 million	40
Snorkeling:	10.1 million	17.2 million	247
Dinner Cruises:	2.1 million	3.6 million	52
Sunset Cruises:	1.5 million	2.5 million	36
	15.3 million	$26.1 million	375

(Valuing Hawaii'i's Humpback Whales: "The Economic Impact of Humpbacks on Hawai'i's Ocean Tour Boat Industry" by Dan Utech)

This enlightening report is based on the supposition that there will be no negative impact on the whales that frequent our State waters from the Navy's underwater sonar testing.

The Kailua-Kona Wharf and small boat harbor plays a role in all these marine activities: charter boat fishing, whale watching, undersea exploration, cruises, snorkeling and other pastimes. It also plays a small or supporting role for events like the international billfish tournament, Ironman Triatholon and Hawaiian outrigger canoe racing.

Of importance, too, is its value to the local fishermen for sport and subsistence fishing. While Honokohau small boat harbor is far away the leader for the fishing industry, the Wharf has been the launching site for some local fishermen. Of interest is the statistics presented by the State Aquatic Resources Division:

Commercial Marine Port Landings for the Kailua-Kona Area
By Calendar Year

Year	Pounds Caught	Value
1994	1,827,300	$ 2,685,386
1995	1,407,251	1,752,720
1996	1,658,753	2,316,100
1997	1,252,956	1,547,420
1998	1,601,691	2,129,835

These statistics are for the entire Kailua-Kona area including Kailua-Kona Wharf and *Honokohau*.

The direct flights into Ke-ahole Airport from the West Coast and Japan attests to the appeal of Kona to tourists. This means that there will be increasing pressure on services to accommodate these visitors to reap the economic reward of this growth. For the Big Island and especially West Hawaii, tourism and its related need for services is at the top of their economic ladder. It can favorably affect the sale of agricultural products and crafts and stimulate the construction, tour, hotel and restaurant industries.

SECTION 7
ENVIRONMENTAL CHARACTERISTICS

Kailua Bay has been a focal point for the Kona districts since ancient times. This was a favorite spot of King Kamehameha who spent his last years at Kailua. He died here at his home, Kamakahonu, on May 8, 1819. Other Hawaiian royalty lived here at different times. The first congregationalist missionaries to come to Hawaii sailed from Boston and landed in Kailua Bay in 1820. These historic events attest to the importance of Kailua and its surrounding areas due to its choice location: the sea with a navigable bay, an excellent climate and land capable of sustaining a sizeable population. **DRAWING 7** shows Kailua Bay and Kailua Village with its shops, hotels, historic features, etc.

Kailua Bay, which is located on the western side of the Island of Hawaii in the district of North Kona, lies at the foot of the 10,000-ft high volcanic mountain known as Hualalai. Its only recorded eruption occurred in 1800-1801. There were two lava flows from this eruption, one over-ran Kaupulehu near Kiholo Bay and the other was towards Ke-ahole Point. The bay has been used since ancient days for landings because it was one of the few spots along the long rugged Kona coast suitable for such purposes.

The original Kailua-Kona Wharf was constructed in 1915 by the Territory of Hawaii. This wharf was used primarily by ferries which serviced lighters (open barges) that transported inter-island cargo. The Wharf had a berthing length of 157 feet and a water depth of three to five feet. The wharf area was 10,755 square feet and had a shed which covered an additional area of 9,508 square feet and a fuel storage facility. One of the primary usage of the wharf was for the shipment of cattle. The method of loading cattle was very primitive. Cattle from the nearby area ranches were herded into the surf by paniolas (cowboys) to a waiting lighter where they hoisted on deck and shipped to Honolulu for processing. and driven out to sea by the paniolas (cowboys) to a waiting ship. They were then hoisted to the ship's deck and shipped to Honolulu for processing. By 1944, the wharf was under the control of the Board of Harbor Commissioners and had an area of 11,608 square feet. The last shipment of cattle from Kailua occurred in the early 1950s. This marked the end of an area. This colorful but inefficient method of shipping cattle became obsolete when improvements were made to the Kawaihae Wharf located 30 miles to the north.

A historically famous facility located at the end of the Wharf was the American Factors shed where dried Kona coffee beans in bags were stored for sale to customers from nearby areas and for shipment for processing.

The wharf at Kawaihae, which was built in 1937, had a

berthing length of 60 feet. From the early 1950s, the nearby area ranchers shipped their cattle out from Kawaihae in a manner similar to that used at Kailua-Kona. In 1950, the U.S. Congress authorized funds for dredging of the harbor and the construction of a protective breakwater. The construction was completed in 1959 enabling inter-island steamers and lighters to dock at the wharf. Cargo and cattle could now be loaded directly from the wharf on to the lighters. The improvements at Kawaihae Harbor made it the main commercial port servicing West Hawaii in the same manner as the Hilo Harbor is the main commercial port for East Hawaii.

The addition to the Kailua-Kona Wharf was completed in 1952 and increased the wharf area to 62,109 square feet. The addition was constructed by driving steel sheet piles into the bed of the bay, backfilling behind the sheet piles and placing a concrete pavement on the surface. This is the present state of the Wharf.

With the completion of improvements to Kawaihae Harbor in 1959, the use of the Kailua-Kona Wharf became uneconomical and all cargo handling was moved to Kawaihae. The use of the Wharf became sport fishing oriented. As sport fishing and other visitor interests grew, it became apparent that the Wharf was too small to service all interested parties.

In 1972, the State Department of Transportation started work on the Honokohau Small Boat Harbor facility. The major work was constructed in 1978 to alleviate the crowded conditions at the Kailua Wharf. Berthing slips were added in 1989. The Wharf then became more geared towards the visitor industry and has increased in importance in providing service to visitors.

In the 1980s damage to the Wharf's steel bulkhead were discovered and repairs were made. In the early 1990s, underwater inspections revealed addition damage to the Wharf bulkhead, some of serious structural concerns, and the Kailua-Kona Wharf Improvement project was funded and initiated.

In spite of improvements at Kawaihae Harbor and an additional small boat harbor at Honokohau, a wharf facility at Kailua Bay is still an essential stimulus for tne economy of Kona. Fisherman, sportsmen and providers of visitor services require the Wharf to meet their specific needs. Kailua Village and its relation to the sea is part of the "Kona way of life," a characteristic that has endured. The present wharf enlarged in 1952, has mooring facilities, though limited, as well as a boat ramp. The present facility can best be described as a finger pier jutting out into the bay.

Since the project site is a man-made concrete/steel facility jutting out into the sea, no terrestrial fauna or flora species are affected. However, a flora survey to assess the surrounding

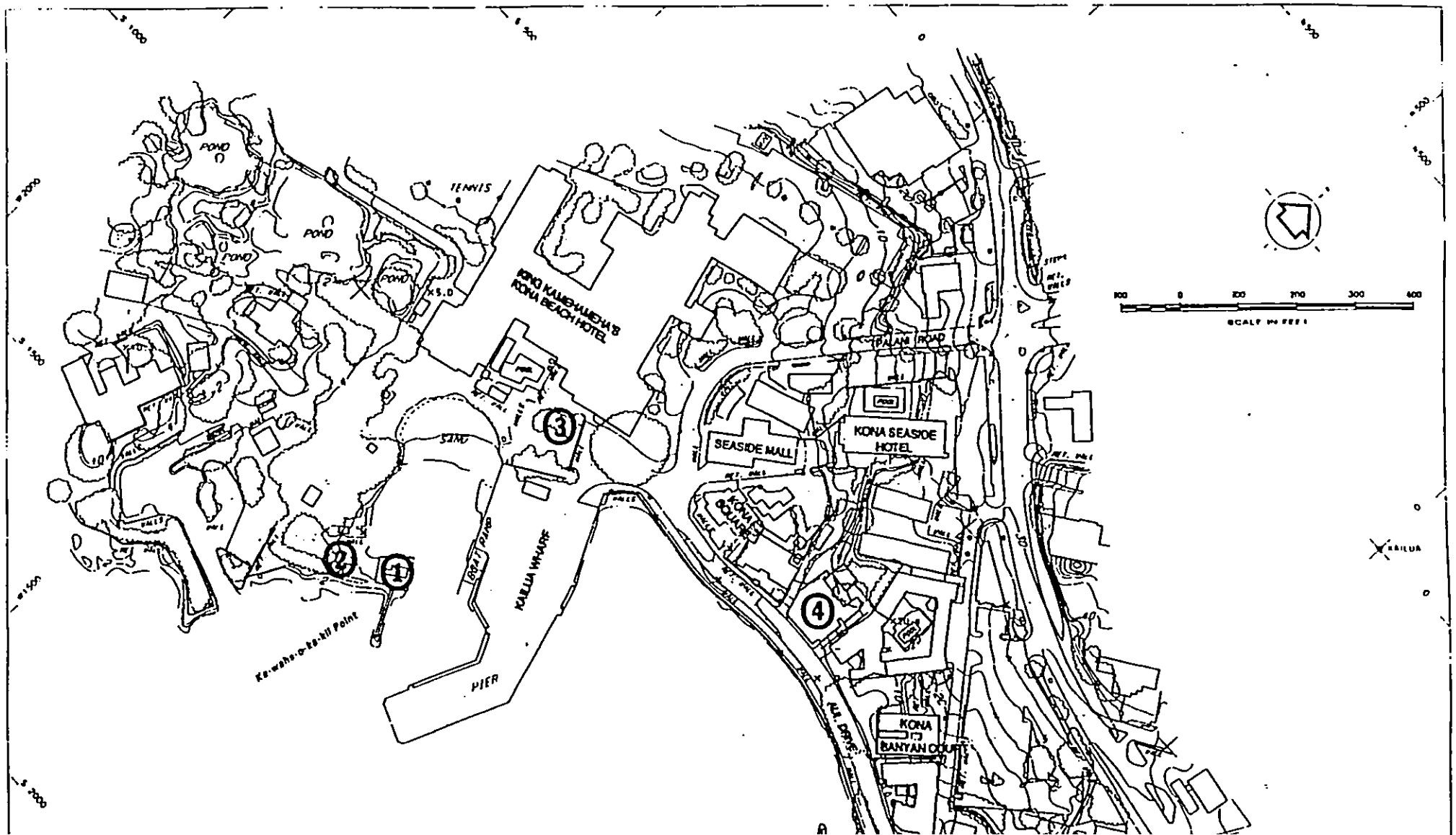
environment is shown in **APPENDIX B.** The village appearance is dominated by large banyan trees, African tulip trees, kamani trees and coconut palms while other plants add to its tropical motif. While this is not a habitat for any animal, rare or otherwise, a fauna survey was made to confirm this. This survey and its result are shown in **APPENDIX C.**

Being in a marine environment, an underwater survey was conducted. **APPENDIX D** shows the results of the survey surrounding the pier. Sea life was found to be typical of a nearshore Hawaiian marine community exposed to seasonal, moderately high energy surf. While some rare species of seaweed and fishes were observed, none are listed as threatened or endangered. It is expected that when construction is underway, fishes will migrate to other areas.

Inasmuch as this is primarily a repair/replacement project, no new facility or expansion of the wharf is proposed save the minor protrusion necessitated by the installation of the new bulkhead. Improvements outside of repairs or replacements have been dictated by safety concerns and compliance with the ADA regulations.

Impacts from the project will be of temporary nature. These are construction associated impacts such as noise from pile-driving, equipment *movement*, air quality from exhaust pipes, disruption of traffic by the contractor's equipment and trucks, and scenic disturbance from the storage of materials. Full use of the pier will be curtailed during the construction period.

The presence of the green sea turtles have been noted in Kailua Bay and Honokohau Small Boat Harbor. This far ranging reptile is an endangered species protected by law. The contractor on this pier repair project will be required to observe the U.S. Fish and Wildlife Service Endangered Species regulations.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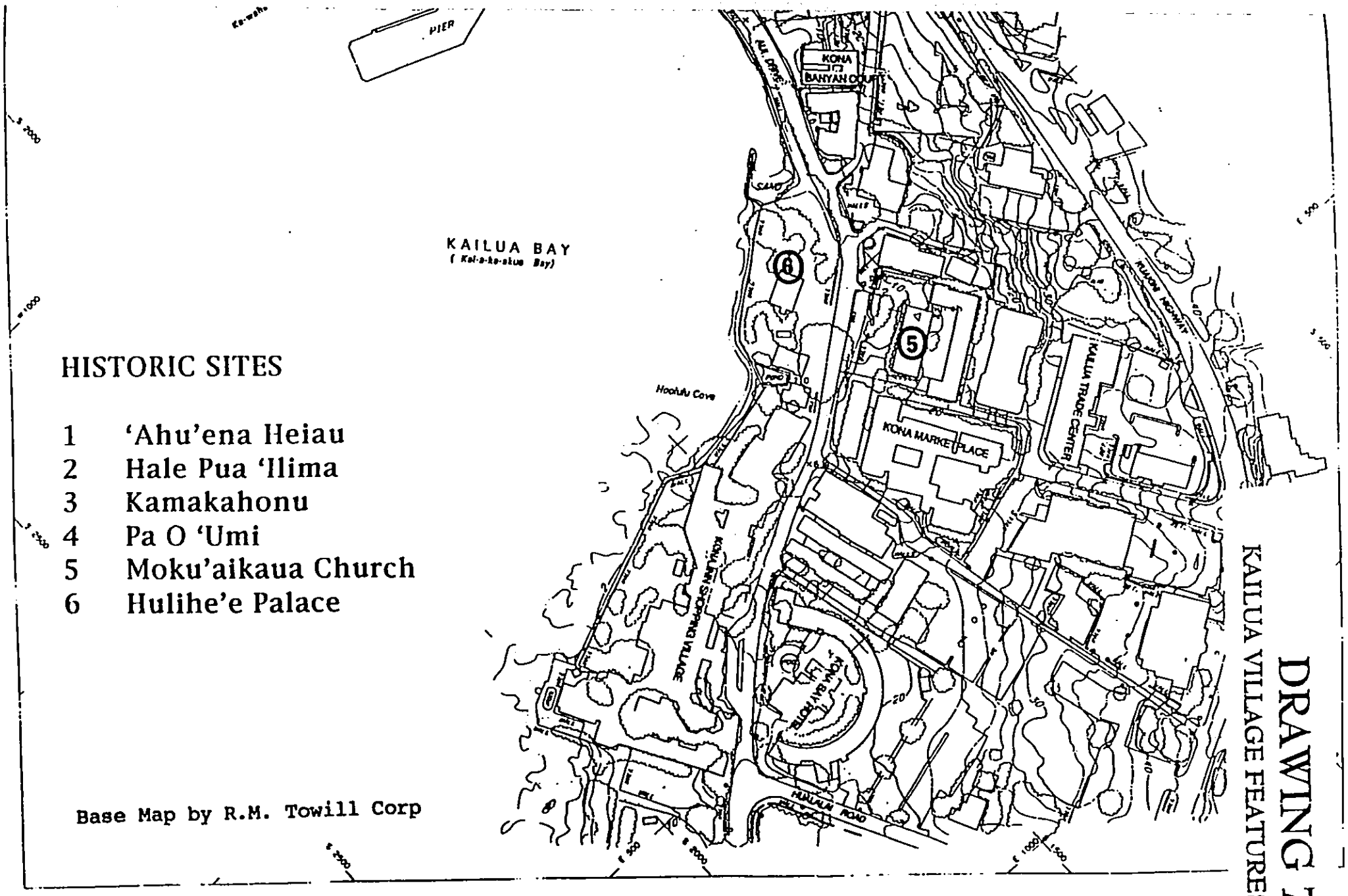


KAILUA VILLAGE FEATURES
with Historic Sites

SECTION 8
PROBABLE IMPACTS & MITIGATION MEASURES

The noise factor commonly associated with pile driving is probably the single most adverse factor. This rhythmic pounding cannot be eliminated; it can be lessened to a degree. The contractor will be required to provide a cushion or cap to protect the top of the pile during driving operations. While this will not abate the noise completely, it will moderate the sound somewhat.

Noise levels are expected to range between 98 dB at 100 feet distance to 78 dB at 1,000 feet distance. The noise levels at the at the closest commercial establishment, King Kamehameha Kona Beach Hotel, is likely to be between 87-90 dB. The noise levels will probably drop to 80-81 dB at Hulihee Palace and Mokua'aikaua Church.

The ambient day-time noise levels measured were between 50-65 dB levels– moderately loud. The following table lists various noise levels from different sources:

- quiet wilderness area, 20-30 dB(A)
- quiet suburban residence, 48-52 dB(A)
- business office, 50-60 dB(A)
- noisy urban area, 80-90 dB(A)
- adjacent to freeway, 90 dB(A)
- jet airplane at 100 feet (120-130 dB(A)

(From Department of Energy publication)

The contractor will be required to comply with provisions contained in the State Department of Health, Administrative Rules, Title 11, Chapter 43 - Community Noise Control for Oahu. All equipment shall have mufflers to minimize noise. Pile driving operations shall be confined to the period between 9:00 a.m. and 5:30 p.m., Monday through Friday. No pile driving will be permitted on weekends or on legal State and Federal holidays.

A comprehensive analysis of the impact of noise generated by the pile driving operations is presented in **APPENDIX E.**

Another impact arising from pile driving operations is ground vibration. However, monitoring of the initial pile driving operations will be conducted to ascertain the that damage to nearby structures, such as Ahu'ena Heiau, will not result. Additional attention will be given to the concern for the historic structures such as Hulihe'e Palace and Mokua'aikaua Church. The adverse effects of pile driving on these structures is expected to be attenuated by their distance from the vibration producing source. No adverse effect is foreseen upon these two structures. Of note is the fact that both structures were unaffected by steel sheet pile driving in 1952 for construction of the existing wharf. The construction contractor will be required to provide continuous monitoring of nearby structures during pile driving.

The proximity of the Ahu'ena Heiau site and the King Kamehameha Kona Beach Hotel to the Kailua-Kona Wharf necessitates close monitoring of these two structures. This monitoring will permit a more accurate evaluation of the probable risks caused by vibrations and remedial action if necessary. A detailed analysis of the impacts and their mitigation measures are reported in **APPENDIX E.**

The entire Kailua-Kona Wharf is to be considered a construction area under control by the contractor. The contractor will schedule his work in four (4) phases. This is shown in **DRAWING 8.** There will be dislocation of certain users of the pier caused by construction operations. To allow the contractor sufficient space to carry out his work and for safety reasons, sections of the Wharf will be closed to the public. This coordination between the contractor and users of the pier will be arranged by the Boating and Ocean Recreation officials after a contractor has been selected. The least disruption of the contractor's operations will result in a faster deliberate completion process of the project. During the construction period, where possible or feasible, some activities will be expected to utilize or relocate to Honokohau Small Boat Harbor which lies about 3 miles north of Kailua Village off Queen Kaahumanu Highway.

To minimize disruption to traffic, the contractor will be required to consult with the local police. This will be of particular importance during movement of heavy equipment and transportation of supplies and materials on to the pier.

The contractor will have to secure the project area during non-working hours. This is to protect his equipment and supplies, and to prevent accidents from occurring to the general public. Adequate signs will be posted and deterrents to trespassing will erected. Safety for the public will be foremost at all times.

No dredging is contemplated. All noxious substances transported to the project site, such as fuel and grease for construction equipment, paints, solvents, asphaltic compounds, dry cement mixes and other similar materials to be used on or incorporated in the job, will be controlled and secured as will be described in the job specifications. The contractor will be required to maintain a silt curtain or similar barrier during pile driving operations. This will also serve as a precautionary measure should an accidental spill occur. A safety plan to control accidental spills will be submitted by the contractor prior to commencement of his operations for approval by the authorities. The contractor is expected to utilize Best Management Practice (BMP) at all times.

No additional land (shore) space will be required by this project. The finger pier will retain its present shape with only an insignificant widening (twenty six inches) due to the engineering necessity caused by the installation of the steel piling partially encased in concrete as described in **SECTION 4.**

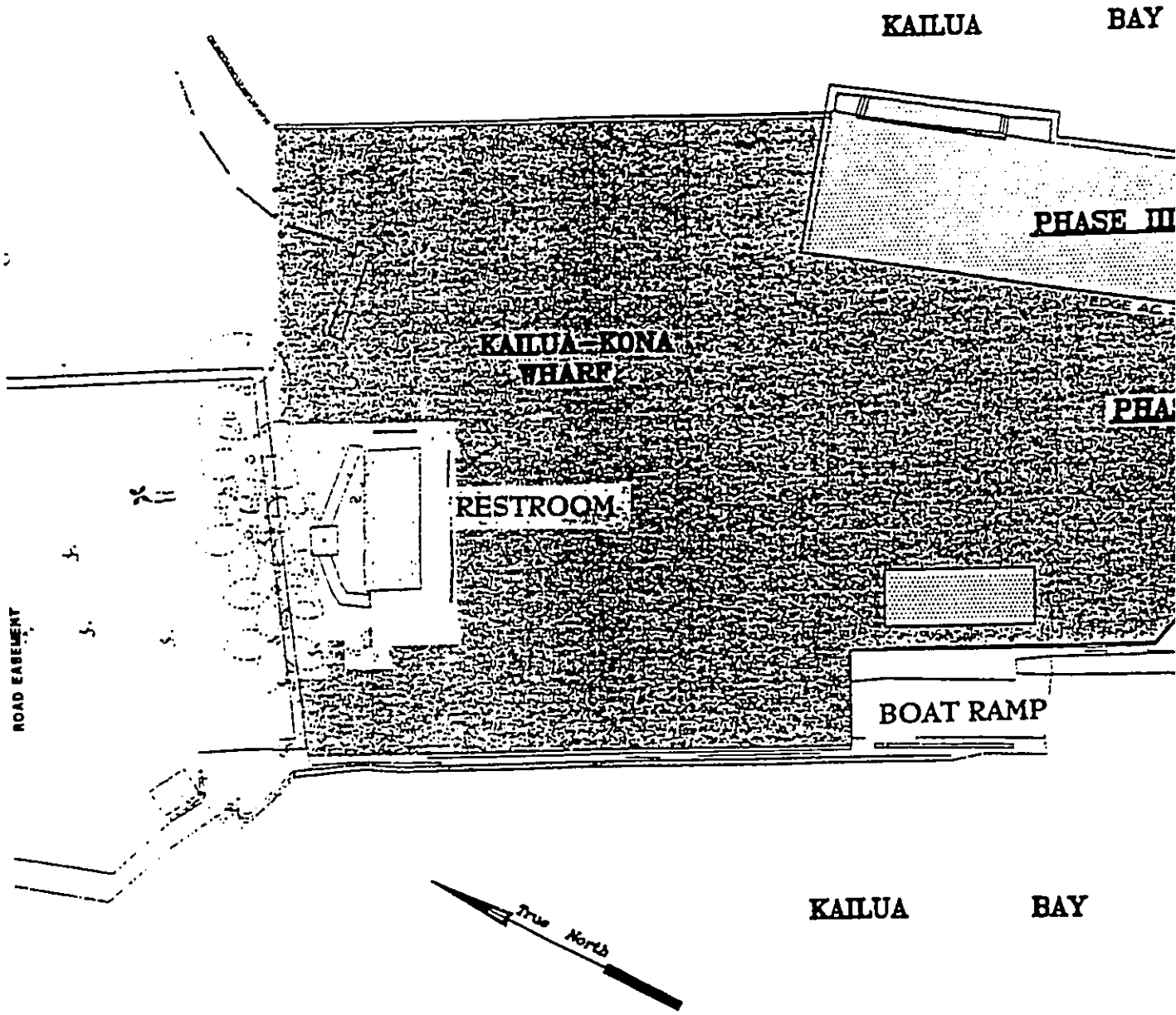
It is expected that fishes in the project area will migrate to other sites as a result of disturbance from construction activities. This is not a natural marine habitat. The openings in the rusted steel sheet piling has allowed marine life to seek refuge. Since no endangered species have been found in this marine environment, no special measures are necessary. Further, a major consideration not to remove or disturb the existing steel bulkhead is to prevent aggravation of the quality of the bay waters from bottom sediment rising upward. The bay waters are classified "AA" by the Department of Health,

Kailua Bay is sectioned off by buoys and markers delineating the swimming area from the boat lanes. This is to prevent accidents between swimmers and boats. A similar marked-off division separating bathers from boat lanes is also in effect for the cove fronting King Kamehameha's Beach Hotel. These safety zones for swimmers will remain in force while construction is under way.

The launching and recovery of boats using the existing ramp will require a wash-down facility to be in compliance with Clean Water Act regulations if such activity is to continue. The waste water from wash-down of boats must be captured in a sump and properly disposed to prevent pollution of the adjacent waters.

The presence of vehicles on the pier will require the containment and proper disposal of surface run-off water under proposed Clean Water Act regulations. This run-off must be prevented from directly entering and polluting the bay waters. Provisions for treatment or a disposal system will have to be developed to assure conformity with future regulations.

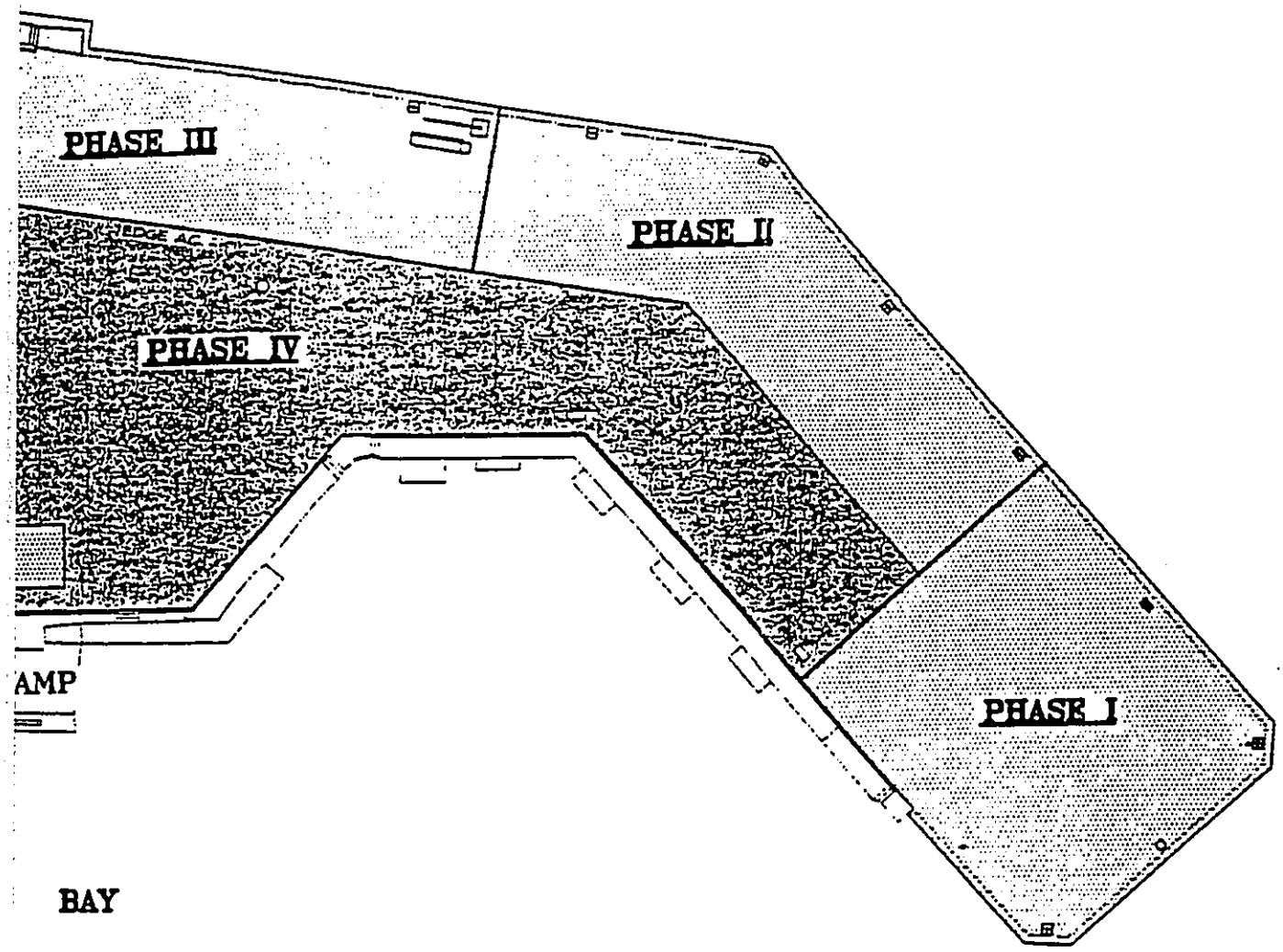
Other impacts of temporary nature will be dust which will be mitigated by water-sprinkling and the odor of asphalt during repaving work which can be mitigated by checking wind patterns.



KAILUA-KONA WHARF PL

CONSTRUCT

DRAWING 8
CONSTRUCTION PHASES



WHARF PLAN

NSTRUCTION PHASES

SECTION 9
DETERMINATION BY AGENCY

To determine compliance with the State Administrative Rules, Section 11-200-12, a study was made to evaluate the significance criteria as set forth in said Section:

1. Involves a loss or destruction of any natural or cultural resource:
   Mitigation measures to be taken will ensure no loss or destruction of any natural or cultural resource. As this project is essentially a repair activity, no resource will be lost. The objective of this project is to restore the existing pier structure for safety reasons and to enable business, cultural and recreational activities to continue.

2. Curtails the range of beneficial uses of the environment:
   The objective of this project is to restore the pier to its full use. During construction, some activities will be affected or relocated; upon completion, the beneficial uses of the pier will be fully available once again to the community.

3. Conflicts with the State's long-term goals or guidelines as *expressed in Chapter 344, HRS*:
   This project is in compliance with the State's long term goals, particularly with regards to ocean-oriented activities.

4. Substantially affects the economic or social welfare of the community or State:
   The pier, in its present unsafe condition, curtails or decreases the use of the pier. If not repaired, imminent collapse of sections of the pier will result. This will adversely affect business, recreational and cultural activities associated with this site.

5. Substantially affects public health:
   With mitigation measures included in the project in compliance with applicable health and safety regulations, no adverse impact to the public health is anticipated.

6. Involves substantial secondary effects, such as population changes or infratructure demands:
   As this is a repair project, no substantial effects on population and infracture needs are expected.

7. Involves a substantial degradation of environmental quality:
   The mitigation measures included in this project will ensure that temporary impacts during construction are just that-temporary.

8. Is individually limited but cumulatively has considerable effect on the environment, or involves a commitment to larger actions:

This is not applicable to this project which is a repair (or maintenance) action.

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

Being a man-made structure, the project site is not a habitat for nor will it affect any endangered species.

10. Detrimentally affect air or water quality or ambient noise levels:

Whatever impacts associated with air and water quality, or noise levels will be due to construction activity and of temporary nature. Adherence to applicable regulations and specified mitigation measures will reduce such impacts.

11. Affects an environmentally sensitive area, such as a flood plain, tsunami zone, erosion prone area, geologically hazardous land, estuary, freshwater area, or coastal waters:

The project design takes into account the perils- tsunami, high waves- of being in a coastal area.

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

The project is to repair the existing pier. There is no structure on the pier and none are planned under this project to impair the present open vista. Suggestions for some landscaping have been made; however, this is not within the scope of the repair project.

13. Requires substantial energy consumption:

The project requires no new energy consumption outside of that required to complete the project.

Determination:

The Kailua-Kona Wharf Improvement project is essentially an overdue maintenance activity. No expansion of the pier is proposed save for an insignificant perimeter widening due to construction necessity rather than by design. Additional work to the pier is dictated by health regulations and the Americans with Disability Act provisions. This project will have no significant impact on the human environment. The objective of the project is to restore use of the pier for business, recreational and cultural uses. In this respect, a Finding Of No Significant Impact is determined to be reasonable and relevant.

SECTION 10
APPROVALS REQUIRED

This project will be reviewed and processed through the following government agencies for permits or endorsement.

Conservation District Use Application: clearance from the Department of Land and Natural Resources.
Corps of Engineers: for work in coastal waters.
Department of Health: for Water Quality Control.
State Planning Office: Coastal Zone Management compliance.
County of Hawaii Planning Department: Comply with Special Management Area and Shoreline Setback regulations.
Kailua Special District Design Committee: review for endorsement.
County Water Department: water service approval.
Disability and Communication Access Board: ADA Compliance

The following contributed to this report:

- W. Y. Thompson, P.E., Coordinator
- Paul Breese, Wildlife Biologist
- Bunichi Usagawa, Forester/Landscaper
- Michael Childers, Marine Biologist
- Lloyd Soehren, Archaeologist
- Y. Ebisu & Associates

REFERENCES

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COMMENTS and RESPONSES

Harry Kim
Mayor

Dennis Lee
Chief Engineer

Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii

DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 · Hilo, Hawaii 96720-4252
(808) 961-8321 · Fax (808) 961-8630

December 29, 2000

'01 JAN 03 AM 10:25 WATER & LAND

Mr. Andrew Monden, Chief Engineer
Land Division/Engineering Branch
Department of Land and Natural Resources
P.O. Box 373
Honolulu, HI 96809

Subject: Draft Environmental Assessment for the Kailua-Kona Wharf Improvements
Job No 40-HB-2, Kailua Village, N. Kona, HI
TMK: 7-5-6:39

We reviewed the subject draft assessment and have the following comments:

Traffic
We request that consideration be given for A.D.A. "accessible" vehicular parking and the parking of bicycles.

Building
A building permit is not required for the proposed improvements.

Solid Waste
Information on the proper handling and disposal of solid waste can be obtained by calling our Solid Waste Division at 961-8339.

If you have any questions regarding the above, feel free to Kiran Emler of our Engineering Division, Kona office at 327-3530.

Galen Kuba, Division Chief
Engineering Division

KE
c: TRF
BLD
SWD
ENG-HILO

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
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STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR - 7 2001

Mr. Dennis Lee, Chief Engineer
Department of Public Works
25 Aupuni Street, Room 202
Hilo, Hawaii 96720

Attn: Galen Kuba, P.E.

Dear Mr. Lee:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for reviewing and providing comments on the draft Environmental Assessment relating to the Kailua-Kona Wharf Improvements project. As to your statements:

1. Traffic: Your request relating to accessible parking, in conformity with applicable A.D.A. requirements, will be included in the final plans and specifications.

2. Building: Thank you for informing us that a building permit is not required for this project.

3. Solid Waste: The District Harbor Manager will make suitable arrangements with the County's Solid Waste Division for handling and disposal of solid wastes as part of the pier operation. We appreciate your calling this to our attention.

Sincerely,

GILBERT COLOMA-AGARAN

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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DEPARTMENT OF LAND AND NATURAL RESOURCES
P O BOX 621
HONOLULU, HAWAII 96809

JUN 29 2001

Mr. Dennis Lee, Chief Engineer
Department of Public Works
24 Aupuni Street, Room 202
Hilo, Hawaii 96720-4252

Attention: Kiran Emler, P.E.

Dear Mr. Lee:

Draft Environmental Assessment (DEA)
Kailua-Kona Wharf Improvements
Kailua-Kona, Kailua Village, North Kona, Hawaii

On March 7, 2001, we wrote a response to your comments regarding the Kailua-Kona Wharf Improvements project. Our interpretation of the comments relating to traffic was based only on ADA requirements. According to Mr. Kiran Emler of your Kona office, the parking for bicycles was a new item and not ADA related.

As stated throughout the DEA, this project is a maintenance activity to repair the pier. Where health and ADA regulations are applicable, such corrections or changes will be made where necessary. However, new items are not part of the scope of the instructions given to our consultants. Therefore, parking of bicycles, such as racks, are not included in this project. Your suggestion will be forwarded to the Division of Boating and Ocean Recreation for consideration as part of their pier operations.

Should you have any questions regarding this matter, please call Mr. Andrew Monden, Chief Engineer of the Engineering Branch, in Honolulu at (808) 587-0230.

Sincerely,

GILBERT COLOMA-AGARAN

c: Kiran Emler, DPW (Kona)
Division of Boating and Ocean Recreation
Nishimura, Katayama and Oki, Inc.
Arnold T. Okubo & Associates, Inc.

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Harry Kim
Mayor

County of Hawaii

DEPARTMENT OF RESEARCH AND DEVELOPMENT
25 Aupuni Street, Room 219 • Hilo, Hawaii 96720-4252
(808) 961-8366 • Fax (808) 935-1205
E-mail: chresdev@interpac.net

'01 JAN 02 AM08:44 WATER & LAND

December 27, 2000

To: Mr. Andrew Monden
Chief Engineer

From: Raymond Carr and Margarita L. Hopkins

Re: Draft Environmental Assessment for the Kailua-Kona Wharf Improvements, Job No. 40-HB-2, Kailua Village, North Kona, Hawaii

The following are our comments to the above-mentioned document.

1. Per page 2 of Appendix E, Noise and Vibration Study, the following should be stated in the main body of the report:

"The State will advise the community of the probable period of pile driving activities prior to award of the contract due to the disruptive nature of the repair work. A mutually acceptable work schedule shall be arranged between the (King Kamehameha) hotel and the Contractor to minimize noise and economic impact on the hotel and its guests."

2. An estimate of the duration of the project should be stated in the report to give the business community an opportunity to plan for the disruption in their business activities.

3. What provisions are in place to accommodate the cruise ships during the construction period.?

4. Although precutionary measures will be exercised to avoid structural damage to structures within 300 ft. of the piles however, in the event that these structures sustained structural damage, will the project pay for such damage?

5. Making the Kailua-Kona Wharf safe expeditiously as possible will enhance the economic opportunities of the area in particular and the Big Island in general. It will also relieve the burden that DLNR is currently facing for possible legal action resulting from potential accidents happening in the area.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

MAR - 7 2001

Department of Research and Development
25 Aupuni Street, Room 219
Hilo, Hawaii 96720

Attn: Mr. Raymond Carr and Ms. Margarita L. Hopkins

Gentlemen:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the proposed Kailua-Kona Wharf Improvements project. As to your comments, we wish to clarify the points you have called to our attention:

1. Noise/Vibration Study: Your recommendation on advising the community of the activities of the contractor will be included in the project specifications. Since APPENDIX E is the work of the noise/vibration consultant, we do not wish to alter his submission; the project specifications is the proper document for guiding the contractor's activities.

2. Project Duration: The repairs will take one year to complete. This item has been added to SECTION 4 of the draft Environmental Assessment. SECTION 8 mentions the four (4) phases of construction, which are designed to minimize disruption for business users of the pier.

3. Provisions for Cruise Ships: As stated above, the contractor will handle the repair work in four (4) phases, which will allow the cruise ship operators and others use of some portions of the pier.

4. Damages: This contract, as with all State contracts, will have a performance/ liability bond to handle unexpected problems. By careful monitoring of the work, prevention of property damages will be averted.

5. Wharf Safety: Priority has been given to get the repairs to the pier underway and make it safe once again for the public and users of the facility. We appreciate your statement on the economic value of the Wharf.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAII
25 AUPUNI STREET • HILO, HAWAII 96720
TELEPHONE (808) 961-8660 • FAX (808) 961-8657

December 26, 2000

'00 DEC 29 AM 09:04 WATER & LAND

Mr. Andrew Monden, Chief Engineer
State of Hawaii
Department of Land and Natural Resources
Land Division, Engineering Branch
P.O. Box 373
Honolulu, HI 96809

DRAFT ENVIRONMENTAL ASSESSMENT FOR
THE KAILUA-KONA WHARF IMPROVEMENTS
JOB NO. 40-HB-2
SITUATED AT KAILUA VILLAGE, NORTH KONA, HAWAII
TAX MAP KEY: 7-5-006:039

We have reviewed the subject draft environmental assessment and have the following comments.

For your information, there are two meters that service the subject parcel (a 5/8-inch meter and a 2-inch meter). Consumption for both meters is below their allotment.

With the proposal for three new docks, and therefore, additional water usage, we request that water use calculations, prepared by an engineer registered in the State of Hawaii, be submitted for Departmental review and approval.

We do not need to approve the construction drawings since the limits of the proposed project affect only the private consumer or onsite waterlines and not the Department's water system. Should the project limits change and the Department's water system is affected by the project, the Department must then approve that portion of the work that will affect the Department's system before that work is performed.

Should there be any questions, please call our Water Resources and Planning Branch at 961-8665.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

BCM:gms

copy – Arnold T. Okubo & Associates, Inc.

... Water brings progress ...

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR - 7 2001

Mr. Milton D. Pavao, Manager
Department of Water Supply
25 Aupuni Street
Hilo, Hawaii 96720

Dear Mr. Pavao:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the draft Environmental Assessment for the Kailua-Kona Wharf Improvements project.

The water usage is expected to remain stable.

A standpipe system for fire and other probable uses will be installed as part of this project. The fire system will be served by a salt water pump facility not connected to your Department's water system. As you note, the pipelines beyond the water meters are private property. In this respect, approval of the construction drawings will not be required.

We appreciate your Department's assistance.

Sincerely,

GILBERT COLOMA-AGARAN

cc: Division of Boating & Ocean Recreation
NKO- Consulting Engineers

Harry Kim
Mayor

Christopher J. Yuen
Director

County of Hawaii

PLANNING DEPARTMENT
25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

January 22, 2001

'01 JAN 29 AM 8:52 LAND

Mr. Andrew Monden
Chief Engineer
Land Division/Engineering Branch
Department of Land and Natural Resources
P.O. Box 373
Honolulu, Hawaii 96809

Dear Mr. Monden:

Draft Environmental Assessment for the Kailua-Kona Wharf Improvements
TMK: 7-5-006: 039; Lanihau, North Kona, Hawaii

Thank you for your letter dated December 12, 2000, transmitting a copy of the above-described draft environmental assessment (DEA)for our review and comments. We have completed our review and offer our comments for your consideration. We apologize for our delay in responding to your submittal:

1. *Section 5* – Social and Cultural Aspects (Page 11): The DEA outlines the recommendations of the *Master Plan for Kailua-Kona* (1994) for improvements to the pier. However, the DEA needs to assess these recommendations against the improvements being considered by this proposed project. We understand that the proposed project is essentially a repair/replacement project to ensure the continued safety of its users, but discussions are needed to analyze how the proposed project will complement or implement the recommendations of the plan.

2. Section 10 – Approvals Required (Page 26): DEA notes that a Special Management Area "clearance" and Shoreline Setback Variance for the proposed project is required from the County of Hawaii. We would prefer that this section be restated to specify that the project will comply with the Special Management Area (SMA) and Shoreline Setback requirements of the County of Hawaii. Both the SMA and Shoreline Setback regulations for the County of Hawaii contain provisions that may allow the repair and maintenance of existing structures without the need to secure new permits or variances. However, we will defer a decision on this matter pending our receipt of the Final Environmental Assessment and Notice of Determination.

3. Please provide information regarding the location of the shoreline as certified by the State Board of Land and Natural Resources. The location of the certified shoreline will determine applicability of our Shoreline Setback requirements.

4. Section 10-Approvals Required: The repair of the pier structure will require the review of the Kailua Village Design Commission (KVDC), prior to the issuance of proper approvals and/or permits by the Planning Department. To facilitate the review of the proposed project by the Kailua Village Design Commission, we would appreciate receiving a minimum of 12 copies of any materials that the applicant may wish to present to the KVDC. These materials may also include copies of the Final Environmental Assessment for this project.

Thank you for providing our office with the opportunity to comment on the draft environmental assessment. Please feel free to contact Daryn Arai of our West Hawaii Office at 327-3510 should you have any questions.

Sincerely,

CHRISTOPHER J. YUEN
Planning Director

DSA:rld
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xc: Kailua Village Design Commission
West Hawaii Office
OEQC

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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CHAIRPERSON
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DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR -7 2001

Mr. Christopher J. Yuen, Director
Department of Planning
25 Aupuni Street, Room 109
Hilo, Hawaii 96720-4252

Dear Mr. Yuen:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the draft Environmental Assessment (EA) for the Kailua-Kona Wharf Improvements project . We appreciate your comments and would like to respond to the points you cited:

1. Social and Cultural Aspects: The recommendations contained in the *Master Plan for Kailua-Kona* were listed to show that we are aware of the community opinions regarding the Kailua-Kona Wharf. We have added to this section (SECTION 5) our observations on conformity with the master plan recommendations. A copy of the revised portion of SECTION 5 is enclosed for your review.

2. Approvals Required: We have amended SECTION 10 to incorporate your statement relating to the Special Management Area and Shoreline Setback. A copy of SECTION 10, with this correction, is enclosed for your review.

3. Shoreline Certification: A shoreline certification is being processed and will be included in our application for the SMA and Shoreline Setback permit.

4. Review by Kailua Village Design Committee: Copies of the draft EA were transmitted to the Kona planning office branch and to the Chairperson of the Kailua Village Design Committee (KVDC) in December 2000 for their consideration. We recently made inquiry as to a personal presentation of this repair project to the KVDC. We would like to acquaint the members with

the scope of this project and to answer questions to expedite the review process. If a meeting with the KVDC is arranged, we will provide 12 or more copies of the revised draft EA to the KVDC, as recommended prior to the meeting.

We appreciate the assistance of your staff. Please be assured of our full cooperation to complete this long-awaited repair work to the Kailua pier.

Sincerely,

GILBERT COLOMA-AGARAN

Enc.

c: Planning Office, Kona Branch
Division of Boating and Ocean Recreation
NKO- Consulting Engineers

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

TIMOTHY E. JOHNS
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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AQUATIC RESOURCES
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COMMISSION ON WATER RESOURCES MANAGEMENT
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF AQUATIC RESOURCES
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

December 28, 2000

MEMORANDUM

TO: Mr. Andrew Monden, Chief Engineer
Department of Land and Natural Resources
Land Division, Engineering Branch

FROM: for William Devick, Administrator- Aquatic Resources WD

SUBJECT: Draft EA for the Kailua-Kona Wharf Improvements
Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

We have reviewed the Draft Environmental Assessment for the Kailua-Kona Wharf Improvements and determined that significant long-term impacts adverse to aquatic resource values are not expected from the activities proposed. However we suggest the following mitigation measures to insure minimum impact to the aquatic environment.

A. Best Management Practices should be implemented to insure that water quality and marine resources are protected and preserved.

B. No construction materials should be stockpiled in the aquatic environment.

C. All construction-related materials should be placed or stored in ways to avoid or minimize disturbance to the aquatic environment.

D. All construction-related material should be free of pollutants.

E. Extreme care must be taken to ensure that no debris, petroleum products, or deleterious materials or wastes be allowed to fall, flow, leach, or otherwise enter the water.

F. Turbidity and siltation from pile driving activities should be minimized and contained in the immediate vicinity of construction through the use of effective silt containment devices and the curtailment of construction during adverse weather conditions.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P O BOX 373
HONOLULU, HAWAII 96809

MAR - 7 2001

TO: William Devick, Administrator
Division of Aquatic Resources

FROM: Andrew Monden, Chief Engineer Andrew Monden

SUBJECT: **Comments Relating to Draft Environmental Assessment**
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the draft Environmental Assessment (EA) for the Kailua-Kona Wharf Improvements project. SECTION 8 of the EA touched upon some of the pollution control measures. You may rest assured that your six recommendations (A to F), and other provisions regarding pollution control, will be included in the plans and specifications. If you wish, we will be happy to furnish you a set of the plans and specifications for your review to ensure your concerns are adequately covered.

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

NOV 29 2000

PB: TC

REF: HA-01-31

Mr. Howard B. Gehring, Acting Administrator
Department of Land and Natural Resources,
Division of Boating and Ocean Recreation
Queen Street, Suite 300
Honolulu, HI 96813

SUBJECT: Kailua-Kona Wharf Repair/Improvements, North Kona, Hawaii

Dear Mr. Gehring:

Thank you for your November 16, 2000 letter regarding the above mentioned project. We understand that the purpose of the project is for the repair and maintenance of the Kailua-Kona pier, which was constructed in 1952. The pier was set aside to the State Department of Transportation, Harbors Division by Executive Order No. 2723 and qualifies as an nonconforming use.

We have reviewed your information and have determined that the proposed repair and maintenance work may be authorized under Chapter 183C, Hawaii Revised Statutes (HRS), and Title 13-5, Hawaii Administrative Rules (HAR), as routine maintenance. Additionally, we believe the proposed project would qualify as an exempt class of action under Chapter 11-200-8, HAR under the provisions of Chapter 343, HRS.

We understand that due to engineering considerations, the pier size will have to be increased by 26 inches along its perimeter. This is an engineering necessity in order to accomplish major structural repairs to the steel sheet piling bulkhead of the pier. We believe an increase of 26 inches can be considered negligible and consequently exempt.

It is our understanding that an Environmental Assessment has been prepared and will be circulated among all the interested agencies and will be used as part of permit applications from the U.S. Army, Corps of Engineers, Hawaii County, et al.

As such, the Land Division has no objections, and hereby authorizes the proposed work subject to the following conditions:

1. The applicant shall comply with all ordinances, rules, and regulations of the federal, state, and county governments;

2. The applicant shall comply with all applicable Department of Health rules;

3. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard; and

4. The applicant shall consult with the Department's Aquatic Resources Division during plan formulation and prior to initiating construction.

Please acknowledge receipt of this authorization, with the above noted conditions, in the space provided below. Please sign two copies. Retain one and return the other within thirty (30) days.

Should you have any questions on any of these conditions, please feel free to contact Traver Carroll of our Planning Branch at 587-0439.

Aloha,

Dean Y. Uchida, Administrator
Land Division

Receipt acknowledged:

Applicant's Signature

Date 12/1/00

cc: Hawaii Board Member
Hawaii Land Agent

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT S. COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY DIRECTOR
JANET E. KAWELO

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF BOATING AND OCEAN RECREATION
333 QUEEN STREET, SUITE 300
HONOLULU, HAWAII 96813

February 2, 2001

BOR-E 0319.01

Mr. Dean Y. Uchida, Administrator
Land Division
Department of Land and Natural Resources
P. O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Uchida:

SUBJECT: Kailua-Kona Wharf Repair/Improvements, North Kona, Hawaii

This is in reference to your letter of January 24, 2001, which requested that a signed receipt acknowledging authorization of the proposed work under conditions stated in your November 29, 2000 letter be sent to your office.

Accordingly, a copy of the signed receipt is forwarded to your use.

Very truly yours,

HOWARD B. GEHRING
Acting Administrator

cc: Andrew Monden
Hiram Young
George Nishimura
William Thompson

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTIES
JANET E. KAWELO
LINNEL NISHIOKA

STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhihewa Building, Room 555
601 Kamokila Boulevard
Kapolei, Hawaii 96707

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

January 10, 2001

MEMORANDUM

LOG NO: 26779
DOC NO: 0101PM01

TO: Dean Uchida, Administrator
Land Division

FROM: Don Hibbard, Administrator
State Historic Preservation Division

SUBJECT: **Draft Environmental Assessment for the Kailua-Kona Wharf Improvements (Job No. 40-HB-2) Kailua- Kona, Hawaii Island, TMK: 7-5-06:39**

Thank you for your letter of December 12. 2000 and the opportunity to review and comment on the draft Environmental Assessment for the proposed improvements to the wharf in Kailua Harbor.

The Division of Boating and Ocean Recreation, which manages and operates the Kailua wharf, is proposing to undertake repairs to the wharf. The proposed repairs will involve pile driving operations that could have adverses effects on several important historic properties because of ground vibration. These properties include Ahu'ena Heiau, which is part of the Kamakahonu National Historic Landmark, and Hulihe'e Palace and Mokua'aikaua Church. A study undertaken by Y. Ebisu & Associates (Appendix E of the Draft EA) predicts that architectural or structural damage to the palace and church would be very low because of their distance from the project site. The predicted damage to the *heiau* is considered to be low. As a precaution the construction contractor will be required to continuously monitor pile driving operations to ascertain the effects. if any, on the historic structures in and near the project area. These findings seem reasonable, but there should be some discussion of how adverse effects would be measured, documented, and evaluated.

Also, if damage were to occur, then mitigation would be needed. If a commitment is made to fund the necessary repairs to any of these historic properties which might suffer some structural or architectural damage as a result of pile-driving, then we believe that the undertaking is likely to have "no adverse effect" on significant historic sites.

Finally. consultation should take place with the National Park Service since the *heiau* is part of a National Historic Landmark. Projects effecting these landmarks in Hawaii are monitored by the Park Service's Honolulu office.

c. Honolulu Office. National Park Service

PM:amk

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

MAR - 7 2001

TO: Mr. Don Hibbard, Administrator
Historic Preservation Division

FROM: Andrew Monden, Chief Engineer

SUBJECT: **Comments Relating to Draft Environmental Assessment**
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

We have received your comments to Mr. Dean Uchida, Administrator, Land Division, relating to the draft Environmental Assessment (EA) for the Kailua-Kona Wharf Improvements project. Thank you for your review of the draft EA and your recommendations on mitigating impacts on historic sites and structures. The mitigation measures applicable to this project will be included in the job specifications and we will be pleased to furnish you a copy for review. It is our intention to have adequate monitoring, which will include participation by local persons with cultural background.

As you may have noted in your review, we have included your earlier comments to the draft EA. We appreciate the depth of coverage made by your Historic Preservation Office. Together with the additional study by Mr. Lloyd Soehren, the draft EA provides an excellent description of the historic sites in Kailua Village.

Thank you for directing our attention to the role of the National Park Service (NPS) in reviewing historic landmarks. A copy of our draft EA will be submitted to the NPS.

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers
National Park Service

ENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

RECEIVED
LAND DIVISION

2000 DEC 21 A 9:22

RAYNARD C. SOON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

JOBIE M. K. M. YAMAGUCHI
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAII 96805

'00 DEC 22 AM 11:12 WATER & LAND

December 21, 2000

To: The Honorable Gilbert S. Coloma-Agaran, Chairperson
Board of Land and Natural Resources

Attn: Andrew Monden, Chief Engineer

From: Raynard C. Soon, Chairman
Hawaiian Homes Commission

Subject: Draft Environmental Assessment for the Kailua-Kona Wharf Improvements, Job No. 40-HB-2, Kailua Village, North Kona, Hawaii, Dated December, 2000

Thank you for the opportunity to review the subject application. The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call Daniel Ornellas of our Planning Office at 586-3836.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR - 7 2001

TO: Raynard C. Soon, Chairman
Department of Hawaiian Homes Lands

FROM: Gilbert Coloma-Agaran, Chairperson

SUBJECT: **Comments Relating to Draft Environmental Assessment**
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for reviewing the draft Environmental Assessment for the Kailua-Kona Wharf Improvements project. Should we have any question regarding your Department's role in this matter, we will contact you.

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

(808) 594-1888

FAX (808) 594-1865

GK

STATE OF HAWAI'I
OFFICE OF HAWAIIAN AFFAIRS
711 KAPI'OLANI BOULEVARD, SUITE 500
HONOLULU, HAWAI'I 96813

December 18, 2000

Mr. Timothy E. Johns
Chairperson
Department of Land and Natural Resources
P.O. Box 621
Honolulu, HI 96809

Subject: Draft Environmental Assessment (DEA) for the
Kailua-Kona Wharf Improvements
Job No. 40-HB-2, Kailua Village, North Kona, Hawai'i
TMK-7-5-06: 39

Dear Chairperson Johns:

Thank you for the opportunity to comment on the above referenced project. According to the DEA, the proposed improvements to the Kailua-Kona Wharf includes repairs to old sections of the wharf and the addition of three new docks. The Office of Hawaiian Affairs offer the following comments:

Public Land Trust (Ceded Lands)

As you may be aware, the Public Land Trust consists of those lands acquired under Sections 5(f) of the Admission Act. Chapter 10-13.5, Hawai'i Revised Statutes, states:

> "Twenty per cent of all revenue derived from the public land trust shall be expended by the office for the betterment of the conditions of native Hawaiians."

According to DLNR's inventory, the Kailua-Kona Wharf is ceded lands. Therefore, OHA is entitled to 20% of the pro rata share of the revenues generated from the operations conducted at the Wharf.

Marine Life, Beaches and Coastline Waters

According to the DEA, the proposed project involves pile driving and heavy removal work. Every effort should be made to prevent any adverse effects that may occur to abundant marine life at the proposed project area. In addition, every effort should be made to prevent any pollution the pile driving and removal work may cause to the beaches and coastline waters.

Historical and Cultural Resources

As indicated by the DEA, the Kailua-Kona area is rich with Native Hawaiian historical and cultural sites, and in the vicinity of the proposed project area. OHA suggests a mitigation plan to ensure the protection and preservation of these sites. In addition, the pile driving activities at the proposed project site "have the potential to cause architectural and structural damage to structures, and to create discomfort to those exposed to high levels of vibration." Because of the close proximity of the Ah'ena Heiau, monitoring of this site should be in effect during pile driving activities.

If you have any questions, please contact Mark A. Marararagan, policy analyst at 594-1945, or e-mail him at mmararagan@oha.org.

Sincerely,

Colin C. Kippen, Jr.
Deputy Administrator

cc: OHA Board of Trustees
Hilo CAC
Kona CAC

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 621
HONOLULU, HAWAII 96809

MAR - 7 2001

Office of Hawaiian Affairs
711 Kapiolani Blvd., Suite 500
Honolulu, Hawaii 96813

Attn: Colin C. Kippen, Jr.
Deputy Administrator

Gentlemen:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the draft Environmental Assessment for the Kailua-Kona Wharf Improvements project. In response to your comments, we wish to offer the following:

1. Public Land Trust (Ceded Lands): The revenue entitlement to OHA is a legislative matter. In this respect, this matter is beyond the purview of this EA.

2. Marine Life, Beaches and Coastline Waters: As stated in SECTION 8, mitigation measures will be required to prevent pollution of the Kailua Bay waters. Silt curtains will be installed during pile driving operations and concrete placement to contain sediment that may cause pollution. Detailed mitigation measures will be included in the contract specifications. Further, the contractor will be required to submit a Best Management Plan (BMP), which will have to be reviewed and formally approved by the Corps of Engineers and Department of Health, as part of their regulatory responsibilities.

3. Historical and Cultural Resources: Special attention will be given to preventing damage to any of the historical and cultural sites in Kailua Village. This can best be achieved by careful monitoring of the contractor's activities as mentioned

in SECTION 8. A more definitive monitoring plan will be included in the contract specifications after consultation with local cultural leaders.

Should you wish, we will submit to you, or your agency, a copy of the plans and specifications for review after they have been prepared.

Sincerely,

GILBERT COLOMA-AGARAN

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

BENJAMIN J. CAYETANO
GOVERNOR

GB

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

BRIAN K. MINAAI
DIRECTOR

DEPUTY DIRECTORS
GLENN M. OKIMOTO
JADINE Y. URASAKI

RECEIVED
01 JAN 8 A9:06
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

IN REPLY REFER TO:
HAR-EP
1537.01

January 9, 2001

TO: GILBERT COLOMA-AGARAN, DIRECTOR
DEPARTMENT OF LAND AND NATURAL RESOURCES

FROM: BRIAN K. MINAAI
DIRECTOR-DESIGNATE OF TRANSPORTATION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSEMENT FOR THE KAILUA-KONA WHARF IMPROVEMENTS, JOB NO. 40-HB-2, KAILUA VILLAGE NORTH KONA, HAWAII

Thank you for the opportunity to review the above-referenced document. We have no comment at this time.

Please call Dean Watase, Harbors Division Planner, at 587-1885 if there are any questions.

JAN18'01AM 9:20BOR DIV

BENJAMIN J CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P O BOX 621
HONOLULU, HAWAII 96809

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

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STATE PARKS

MAR - 7 2001

TO: Brian K. Minaai, Director
Department of Transportation

FROM: Gilbert Coloma-Agaran, Chairperson

SUBJECT: **Comments Relating to Draft Environmental Assessment**
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review of the draft Environmental Assessment for the Kailua-Kona Wharf Improvements project.

We appreciate your offer to have Mr. Dean Watase of your staff available to answer questions relating to the pier repair project.

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

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

REPLY TO
ATTENTION OF

January 2, 2001

Regulatory Branch

Mr. Timothy E. Johns
Department of Land and Natural Resources
State of Hawaii
P.O. Box 373
Honolulu, Hawaii 96809

'01 JAN 05 AM 11:20 WATER & LAND

Dear Mr. Johns:

Thank you for providing a review copy of the Draft Environmental Assessment (DEA) for the Kailua-Kona Wharf Improvements (Job No. 40-HB-2), Kailua Village, North Kona, Hawaii (TMK 7-5-06: 39). We have reviewed the DEA with respect to the Corps' authority to issue Department of the Army (DA) permits under Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act.

Based on the information provided in the FEA, I have determined that the project will involve work in waters of the U.S.; therefore, a DA permit is required. The applicant should contact Mr. Peter Galloway of my regulatory staff at 438-8416 (fax 438-4060) for further information. File number 200100088 has been assigned to this project.

Sincerely,

George P. Young, P.E.
Chief, Regulatory Branch

Copies Furnished:
Clean Water Branch, State of Hawaii Department of Health, P.O. Box 3378, Honolulu, HI 96801-3386
State of Hawaii, Department of Land and Natural Resources, Commission on Water Resource Management, P.O. Box 621, Honolulu, HI 96809

BENJAMIN J CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

MAR - 7 2001

Mr. George P. Young, P.E.
Chief, Regulatory Branch
Department of the Army
U.S. Army Engineer District, Honolulu
Regulatory Branch
Ft. Shafter, Hawaii 96858-5440

Dear Mr. Young:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the draft Environmental Assessment (EA) for the Kailua-Kona Wharf Improvements project. We are pleased to note that file number 200100088 has been assigned to this project.

As soon as the draft EA has been processed through the State Office of Environmental Quality Control, we will initiate an application for a Department of Army permit for the Kailua-Kona Wharf improvements project. At such time, our consultants will be in contact with Mr. Peter Galloway of your staff.

Sincerely,

Andrew M. Monden

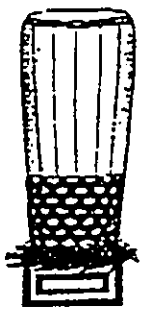
ANDREW M. MONDEN
Chief Engineer

c: Division of Boating and Ocean Recreation
Clean Water Branch, Department of Health
NKO- Consulting Engineers

Kūlana Huli Honua
Foundation For the Search of Wisdom
King Kamehameha's Kona Beach Hotel
Telephone: 327-0123; Fax: 327-9791

Facsimile

Date:	01/07/01
To:	Andrew Monden, P.E. Department of Land and Natural Resources Land Division, Engineering Branch
Fax:	808-587-0283
From:	Mikahala Roy, Vice President Kulana Huli Honua
Fax:	808-327-9791
Pages:	8 (including cover)



Kūlana Huli Honua

Foundation for the Search of Wisdom
A Non-Profit 501-C3 Organization

Mr. Andrew Monden, P.E.,
Department of Land and Natural Resources
Land Division, Engineering Branch
1151 Punchbowl Street, Room 221
Honolulu, Hawai'i 96813

January 7, 2001

Dear Mr. Monden:

Thank you for receiving calls made to your office to request the extension of a period to submit comments regarding the Draft Environmental Assessment Job No. 40-HB-2 Kailua-Kona Wharf Improvements Kailua Village, North Kona, Hawai'i. We had expected to have completed to satisfaction full comments regarding this matter, however, this is not the case at this time. In lieu of the fact that our comments have very real relevance to the subject at hand, we would hope that you would accept this information to be submitted to your office early in this coming week of January 8, 2001. Thank you very much.

Kūlana Huli Honua is a new non-profit organization with an old, established and continuing purpose. I here submit information on our organization, members of our Board and our mission for your perusal.

We're grateful to Mr. William Thompson who made sure we received a copy of the Draft Environmental Assessment by way of his observance of our participation at the number of public hearings and meetings held regarding proposed changes to the pier within past months. As Kahu for Ahu'ena Heiau, David Mauna Roy and other members of the organizations Kūlana Huli Honua and Ahu'ena Heiau, Inc. have been concerned with the active care of Ahu'ena Heiau since 1975, we request that we be immediately added to the State's list of **Parties Consulted or to be Consulted** sited on page 3 of the Draft report. How is it that Ahu'ena Heiau, Inc. was not consulted in the initial matters concerning these developments? In the future, we look forward to improved communication with the State regarding Kamakahonu and Ahu'ena Heiau.

Once again, thank you in advance for your consideration of the comments submitted on behalf of Kulana Huli Honua regarding the Kailua-Kona wharf improvements in Kona, Hawai'i.

'O Wau No Me Ka 'Oia'i'o,
(Yours Truly)

Mikahala Roy

Mikahala Roy,
Vice President, Kulana Huli Honua

(808) 327-0123 • Fax (808) 327-9791
P.O. Box 596 • Kailua-Kona, HI 96745-0596

Attached to this submittal was a descriptive and informative tract on the goals and work of the non-profit organization - **Kūlana Huli Honua.**

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

MAR - 7 2001

Ms. Mikahala Roy, Vice President
Kulana Huli Honua
P.O. Box 596
Kailua-Kona, HI 96745-0596

Dear Ms. Roy:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your comments relating to the draft Environmental Assessment (EA) for the Kailua-Kona Wharf Improvements project. We appreciate your review of the draft EA. While you have not completed your review, your comments will be welcomed at any time. Protection of the historic Hawaiian sites and structures will be a critical feature in the execution of the construction contract. Your views, and those of your father, expressed during the public informational meeting have been taken into consideration. After the job specifications have been prepared, with your permission, we would like to submit these mitigation measures for protection of those items of historical importance for your review to alleviate any concerns you may have.

While your organization was not listed in the table of the consulted parties, please be assured that you are considered as being an expert in Hawaiiana. In this respect, we certainly invite you to participate in this project as we move forward. We apologize for your omission from the list. It was an over-sight. There are others we hope to add to our consulted list as we proceed.

Incidentally, during the public information meeting the question of replacing the existing pier was raised. We promised to make an estimate as to the cost of such a change. Please review the attached copy of APPENDIX F prepared in response to the question. This will be included in the final Environmental Assessment.

Mr. William Thompson is one of the consultants assisting us on this project. Since you are acquainted with him, feel free to express your views to him. We encourage active participation by the Kona community to ensure the project receives the general approval of the public.

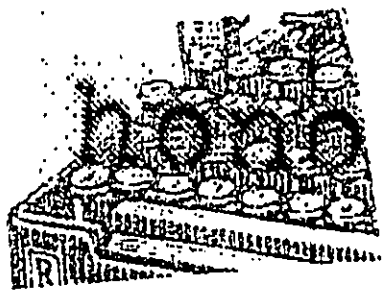
Sincerely,

ANDREW M. MONDEN
Chief Engineer

Enc. APPENDIX F
c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

TO: Nancy
OEQC
from: Mark / EPO

FYI :



Pier pressure

Kona resident **David Kahele Mauna Roy** and his daughter Mikahala filed suit in 3rd Circuit Court to halt repairs on the Kailua-Kona Pier, on the grounds that the project may affect the adjacent and historic Ahu'ena heiau.

The heiau is on a spit of land at the compound where Kamehameha lived out the last seven years of his life. The suit charges that the site could be seriously damaged by excessive ground vibration from pile-driving operations less than 100 feet away.

The Kailua-Kona Wharf Improvement, a project initiated by the state Department of Land and Natural Resources (DLNR) to repair and upgrade the pier, involves planting 187 new pairs of steel sheet piling around the perimeter of the pier.

According to the state's own Environmental Assessment, the pile-driving may exceed twice the level of ground vibration that engineers say could cause damage to the heiau. The heiau was restored and reconsecrated under the guidance of Mauna Roy in 1975.

"No mitigation has been planned in the event there is damage," said **Mikahala Roy**. "The state is not following procedures outlined in the Environmental Assessment. They have made no assessment of current cultural uses of these lands, where from the 1500s to the 1850s the kings of Hawai'i ruled this moku," she said.

"In the days of Kamehameha, this place was the capital of all the Hawaiian Islands. Still today we worship these sites and care for them on a daily basis. DLNR is required by Ka Pa'akai to make these assessments before undertaking any projects. We will not stand by as this sacred heiau is put at risk."

Ka Pa'akai refers to the Hawai'i Supreme Court ruling that established that the state must assess current cultural uses of lands and how those uses might be affected by development.

"The state has no duty to protect current uses," argued Deputy Attorney General **James Paige**, "because the heiau is on adjacent property to the actual construction site."

"The excessive noise and vibration from this project clearly affects the daily spiritual practice conducted at this heiau and may as well affect the structural integrity of the heiau itself," countered attorney **Alan Murakami** of Native Hawaiian Legal Corp. who is representing the Roys. "The state has failed in its duty."

—*Jack Kelly*

Honolulu Weekly March 26

HAWAII LEEWARD PLANNING CONFERENCE
P.O. BOX 635 • KAILUA-KONA, HAWAII 96745-0635

December 26, 2000

Mr. Andrew Monden, Chief Engineer
Land Division/Engineering Branch
Department of Land and Natural Resources
P.O. Box 373
Honolulu, HI 96809

Subject: **Draft Environmental Assessment for the Kailua-Kona Wharf Improvements**
Job No. 40-HB-2, Kailua Village, North Kona, Hawaii

Dear Mr. Monden,

Thank you for the opportunity to review and comment on the draft E.A. for the Kailua-Kona wharf improvements. We are in strong support of the plan and want to commend your agency for doing such a thorough job engaging the community in the process.

Hopefully funding can be realized to include the runoff mitigation improvements in this stage of work.

'00 DEC 28 AM 09:50 PLANNING & LAND

With Aloha,

John B. Ray
President
Hawaii Leeward Planning Conference

JBR/ls

HAWAII LEEWARD PLANNING CONFERENCE
P.O. BOX 635 • KAILUA-KONA, HAWAII 96745-0635
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GOVERNOR OF HAWAII

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STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
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MAR - 7 2001

Mr. John B. Ray, President
Hawaii Leeward Planning Conference
P.O. Box 635
Kailua-Kona, Hawaii 96745-0535

Dear Mr. Ray:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your review and comments relating to the Kailua-Kona Wharf Improvements project. We welcome the support of the Hawaii Leeward Planning Conference in moving this project ahead. The repairs to the pier are essential to restore full use of the pier once again. The pier contributes to the livelihood of many Kailua Village residents and the Kona community. In this respect, we have given it a high maintenance priority.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

c: Division of Boating and Ocean Recreation
NKO-Consulting Engineers

'00 DEC 29 PM03:55 WATER & LAND

From:
Save Kona Bay
Benno Brenninkmeyer, President
P.O. Box 390400
Kailua Kona, Hawaii 96739
Telephone #322-6533
Fax # 322-0887
Email benno@aloha.net

To:
Mr. Andrew Monden, Chief Engineer
Land Division/Engineering Branch
Department of Land and Natural Resources
P.O. Box 373
Honolulu, Hawaii, 96809
Telephone # 587-0230
Fax # 587-0283

Re:
Draft Environmental Assessment for the Kailua-Kona Wharf Improvements
Job No 40-HB-2, Kailua Village, North Kona Hawaii:

Dear Sir:

Allow me to introduce myself, I am Benno Brenninkmeyer, President of Save Kona Bay and live full time in Holualoa. I have earned a PhD in GeoMarine Sciences from the University of Southern California. I have taught Oceanography, Marine Geology, Coastal Geology and Environmental Geology at the PhD, graduate and undergraduate levels, for more than twenty years. I have written or had input on more than 30 environmental impact statements and environmental assessments within the coastal zone. I also have written the state's attorney general's opinions on three cases for the state supreme court.

The Draft Environmental Assessment for the Kailua-Kona Wharf Improvements are not complete and are sophomoric at best.

By State Law (343-2) "An Environmental Assessment means a written evaluation to determine whether an action may have a significant effect." There is very, very little in the Environmental Assessment that addresses the question of the 'significant effect.'
For Instance:
Marine Life Survey:
This survey conducted in 1997 (obviously dated) was made by a team of three "scientific divers". What are those? Divers who possess a scientific background? There is absolutely no information of what their background could be; are they qualified? They

made two dives covering a swath of 15 ft. around the pier. They did not appear to have counted anything. From their results all we read was that some species are "rare" and "uncommon". What is the difference between these two terms? The only thing that can be assumed is that some of these species are present. We also read that other species are "abundant" or "common" What is the difference between these?
This is not an assessment. It is a one time flyby. Where are the one meter grids where every creature was identified and counted? Where are the one cubic meter counts of mobile life? Where are the night dives? Even the authors admit "rare species of fish or invertebrates, especially nocturnal species, may have been missed." Nor is the question asked of how even the mobile life changes when the various ships rev their engines?
Even without the proper assessments, the authors of the report fail to mention that a special permit is needed to take, break, damage by any implement, the stony corals of the taxonomic order Madreporaria, including the Fungidae and Pocilloporadae families. Specifically listed in the Hawaii Administrative Rules Title 13, Chapter 95, Paragraph 70 subsection b are *Montipora verrucosa, Pocillipora meandrina, Porites compressa* and *Porites lobata.* The first two of these are listed in the assessment as common, the third is uncommon and the last is abundant. Any kind of expansion of the pier and burying the interior part will kill a number of these Madreporaria.
Moreover, under the Hawaii *Administrative Rules Title 13, Chapter 83, "No person shall* catch, take, kill, possess, remove..... the pearl oyster (*Pinctada mergaritifera*)". These are listed as rare, but therefore present. They cannot be killed. Any kind of expansion of the pier and enclosing the interior part will kill these pearl oysters.

For Another Instance:
The Fauna Survey:
There were no observations of any birds or any other kind of animals. No one ever went there and sat and counted. All that is presented is a previously published list of "these birds may possibly be found". Then there is a wonderful statement about mammals, "It is probable that the following list of mammals could be found at the project site." Is this indeed a Fauna Survey? The Fauna Survey is a library paper that any one entering high school could do. Besides, it is extremely peripheral at best. What was never addressed is how will the pile driving effect the birds and the mammals. What frequencies are disturbing to birds? We do know that low frequencies can be agitating to marine mammals. Was that question ever addressed?

For Another Instance:
The Vibration Study due to pile driving.
A much more detailed study which absolutely misses the point. All of their data is garnered from their figure 7, which is then translated into their figure 8. However, figure 7 shows the vibration intensity in soil velocity in inches per second relative to the energy in ft lbs in distance from the energy source (ie the pile driver.) The question is for what substrate? They only show data for wet sand, dry sand and clay. There are precious few of these sediments on the west coast of Hawaii. Where is the data for lava (both aa and pahoehoe and collapsed lava tunels) and where is the data for

consolidated coral rubble? These are the main components of the substrate in west Hawaii. The data which is presented has relatively little relation to the reality. Even the authors of the report say "when coral layers must be penetrated , vibration levels can be expected to be higher than those shown in Figure 7".

There is one aspect of the pier which has never, ever been investigated. When the pier was first constructed probably in the late nineteenth century there was at that time no question of seeing how building the pier would change the environment. It seems that before every enlargement made after the original construction, no question was asked how it would change the environment. Now the proposition is to expand the pier again and there still is not a single question on the environment.

Three points have never, ever been asked or answered. These questions must be answered before any action is even contemplated.

1. How does the pier itself influence the long shore of sand movement in the bay?
2. How does the pier itself influence the wave and therefore the water motion within the bay?
3. How does the prop wash of the vessels docked on the pier influence the sediment distribution within the bay?

1. From personal observation the beach in front of the Kamehameha Hotel is nourished with sand. A-periodically 18 wheelers bring in sand. (Why was this not mentioned anywhere in the environmental assessment? Answer. They did not do their homework.) On the other side of the pier the beach is starved for sand. This is not how it was historically. (Why was this not mentioned in the environmental assessment? Answer. They did not do their homework.) There are no Leo observations nor any comparison with any of the historical data. Nor are there any bathymetry measurements to see if and how this sand is going offshore. The environmental assessment does not even mention longshore currents and how the pier blocks these currents, The pier probably directs the sediment offshore and therefore has a direct effect of eroding the coastline. When the pier was small this effect may have been small. Now there is proposed another increase in size. This construction in all likelihood, will enhance the coastal erosion especially in light of the next mentioned item.
2. A vertical solid structure will increase the reflection of incoming waves to almost one hundred percent. This clapotis can be complete or only partial depending on the incoming wave direction. Whatever the degree of reflection there will be an increase in wave height within the bay. As you know the energy imparted by a wave is proportional to the square of the wave height. Therefore the erosional potential is also proportional to the square of the wave height. Since the significant waves in Kona in the winter come from the south and southwest and have a wave height of 2.4 m, hitting the end of the pier will give a 100 percent reflection and therefore create a wave of 4.8 m in height when the incoming wave meets the reflected wave. On the sides of the pier the standing wave height, you would think, should be less. However, Goda and Abe (1968, *Apparent coefficient of partial reflection of finite amplitude waves*, in Rep. Port Harbour Res. Inst. V.7, #3) report that the partial reflection of the waves are greater than twice

the incident wave height by 10 to 15%. That would make the significant wave heights in the winter on the side of the pier more than 5 m. In the summer, the significant wave heights are 1.9 m. Therefore the reflected waves are 3.8 m and the partial reflection are over 4 m.

The horizontal velocity of the water in shallow water created by this reflected wave is on first approximation:

$$u = HL/2Td \sin 2\pi x/L \cos 2\pi t/T$$

During the time when the significant waves occur, there is more than sufficient horizontal water velocity to cause significant erosion along the shoreline. Why has this not been addressed in the environmental assessment report? An environmental Impact Statement should address the problem of shoreline erosion caused by the pier itself and even more so with the proposed vertical additions.

3. The average sand size sediment moves when any water speed or current speed reaches about 50 cm/sec. Ship prop wash, even for moderate vessels and much more for large twin diesel ship tenders will most likely exceed that speed. No current measurements either from waves or from ships were made in the environmental assessment. In fact, they were not even mentioned. Although in several of the public meetings, several people mentioned that swimming and handling small boats becomes well nigh impossible in the ships wake. Therefore, in all likelihood, their prop wash exceeds the velocity to move sand. The boats themselves, are the likely cause of, or at least exacerbate, the beach erosion. An environmental impact statement should be made to see how the prop wash of vessels impact shoreline erosion.

The foregoing and above should indicate that the environmental assessment statement on the Kailua Pier reconstruction did very little to assess the environmental damage that the pier itself does. There were some extremely peripheral studies of trees and birds and a swim by of the aquatic fauna and a library paper of ground accelerations caused by pile drivers on sand. **There is no mention of the shore erosion caused both by the pier itself and by the users of the pier. It is imperative that an environmental impact statement be prepared.**

While preparing the environmental impact statement, look for other possible locations for the pier. A commercial pier is a definite must. But other locations have not even been considered, one that would not visually impair the historical treasures in Kona nor bury even deeper the treasures underneath the present structure.

What is virtually certain, is that the present structure and even worse the contemplated "renovations" will cause environmental harm.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
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HONOLULU, HAWAII 96809

MAR -7 2001

Mr. Benno Brenninkmeyer, President
Save Kona Bay
P.O. Box 390400
Kailua-Kona, Hawaii 96739

Dear Mr. Brenninkmeyer:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf *Improvements, Job No. 40-HB-2*
Kailua Village, North Kona, Hawaii

Thank you for responding to our request for comments on the draft Environmental Assessment (EA). Your lengthy discourse attests to your profound study of the draft EA.

We would first like to respond to your comments relating to the construction of the present pier which is a steel bulkhead with filled in subsurface. Your remark on the pier construction is beyond the scope of the assignment given to the consultants. The present pier, as stated in the draft EA, was constructed in 1952. While some repairs were made in the 1980's, the pier has provided service to the community for approximately 45 years. The present deteriorated condition resulted in an emergency repair last year to keep the pier in service. Further, closure of a portion of pier has been declared for safety reasons. As described in SECTION 4 of the draft EA: "The repairs to the deteriorated wharf are the chief concerns of this project." In addition, SECTION 4 states: "The objective of the Kailua Wharf Improvements project is to ensure safety for users of the existing Wharf." Therefore, your comments are not pertinent to the present scope of the project.

A question was raised at the public informational meeting in November 2000, relating to a change in the character or structural design of the present pier. A review of similar replacement projects has been made to provide an estimate for the cost of removing the present pier and to replace it with a structure on piles. This review will be added to the draft EA as APPENDIX F. A copy is enclosed for your information.

We do not agree with your statements on the fauna survey and the vibration/noise study. These studies were done by competent professionals and their findings are adequate for the purposes of

this draft EA. Further, the marine survey of the pier site was to disclose the existing environment. The pier was not constructed to provide a marine habitat, per se. Rather, the deteriorated bulkhead has become a haven for certain species of marine life. As indicated in the draft EA, it is expected that mobile marine species will migrate to other suitable sites when repair work starts. As to the new coral growth, this matter will be cleared with the applicable regulatory authorities.

According to information we received, there is no "periodically" nourishment of sand for the beach fronting the King Kamehameha Kona Beach Hotel. The last time this was done was about five years ago. State approval will be required for any such replenishment activity, be it periodically or otherwise.

In conclusion, you seem to indicate that the present pier and revetment require a re-examination of the construction design. We do not think that the engineers at that time would have proceeded with their plans without adequate study. Unless directed otherwise by Legislative mandate, we will proceed to carry out the repairs authorized by the Legislature and not involve ourselves in a costly and time-consuming study.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

Enc. APPENDIX F

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

kai 'opua canoe club

January 4, 2001

Mr. Andrew Monden, Chief Engineer
Land Division/Engineering Branch
Department of Land and Natural Resources
P.O. Box 373
Honolulu, HI 96809

Re: Draft Environmental Assessment for the Kailua-Kona Wharf Improvements
Job No. 40-HB-2, Kailua Village, North Kona, Hawaii

'01 JAN 12 AM 11:19 WATER & LAND

Dear Mr. Monden:

This is in response to the letter dated December 12, 2000, from Timothy E. Johns, Chairman, Board of Land and Natural Resources, which seeks comments concerning the captioned draft assessment. That letter requested our response by December 29, 2000. We received the letter in our post office box on December 15, and, with the intervening holidays, it has not been possible to provide a response by the requested date. However, we offer the within observations for whatever value they may have for you at this time.

Our comments are as follows:

1) Section 4, commencing on page 5, concerns the "Engineering Design and Consideration." Since the draft in its entirety is intended to be an environmental assessment of the consequences of implementing needed improvements to the wharf (pier), we believe that the draft should make some attempt to compare the costs and environmental considerations offered by a pier constructed on piles with the same costs and considerations for the type of repair considered in the draft.

   The draft cites extensively from the 1994 County of Hawaii draft "Master Plan for Kailua-Kona" which states, among other things:

   "Reconstruction of the pier on piles has been suggested as a way to improve water circulation and sand retention."

   However, having set out at some length the position of the County, including the desirability of reconstructing the pier on piles, the draft fails to evaluate this important and basic alternative. In fact, the only comment that the draft offers concerning this option is set out on page 5:

   "It would be physically impossible to remove the existing deteriorated steel bulkhead without severe damage to the marine environment and added expense."

   No facts or rationale whatsoever are offered in support of this summary conclusion.

We think that the public is entitled to know, as a minimum, for example, whether or not the referenced damage to the marine environment would be temporary or permanent? Further, what would be the nature and extent of the alleged damage?

If the damage would not be permanent, how would the temporary damage compare with the long-term benefits to the environment offered by a pier constructed on piles? How much "added expense" would be involved? What is the estimated cost of the proposed repairs and the estimated cost of pile construction? Such cost estimates must already be available for the public to consider, for otherwise such a positive statement in the draft about added expense could not reliably be made.

In summary, we believe that, since this matter is of major importance to the Kailua-Kona community, as related in considerable detail in the draft, there should be a cost/benefit analysis set out in the final environmental assessment considering these two approaches to pier improvement.

2) Section 6, commencing on page 15, of the Draft, sets out the economic aspects of the pier and the region surrounding it. On page 16, reference is made to the economic impact of the annual Ironman Triathlon. To the extent that such references are relevant, we believe that the final assessment should similarly include the beneficial economic effects of the *Queen Lili'uokalani Long Distance Outrigger canoe Races*, which are the world's largest long distance outrigger canoe races. These races are held every Labor Day weekend at the pier, and provide economic benefits to our Island similar to those provided by the Ironman Triathlon.

For example, last year a total of 1,452 men and women paddlers participated in the two races on Saturday, September 2, with an additional 78 coaches and assistants. Twelve hundred and fifteen of these paddlers, coaches and assistants were from other countries, the mainland or off-island. Contrary to the Ironman statistics, we have no hard data on the number of companions, although many are always in evidence. (In addition, to the 1,452 paddlers, 693 paddlers participated in the races on Sunday, September 3, but these cannot be counted in the total number as there is considerable overlap with the Saturday paddlers.) The 1,215 off-island paddlers were from eight foreign countries, five mainland states and other Hawaiian islands. Most of these paddlers flew in during the week before the races and left on the following Monday, nearly filling most of the hotels for four or five days.

The effect of the race personnel on car rentals, restaurants, grocery stores, souvenir sales and hotel occupancy is substantial and compares very favorably with expenditures made locally by Ironman participants.

3) Section 7, commencing on page 19, entitled "Environmental Characteristics" references a survey of the sea life surrounding the pier. The results of this survey are set out in Appendix D. While we recognize that the survey was submitted more than three years ago, it should have referenced the Green Seal Turtle (Chelonia mydas). For more than three years past, we have regularly observed numbers of Green Sea Turtles around the perimeter of the pier. Unless we have been miss-informed, we understand that Green Sea Turtles are an endangered species.

We appreciate the opportunity that you have provided for us to comment on the Draft Environmental Assessment. We regret this late submission and hope that you nevertheless will be able to consider our comments and observations.

Sincerely,

Jerry F. Halverson
Kai Opua Canoe Club

cc: Lawrence Campos
Councilperson Pisicchio
Councilperson Tyler
Representative Whalen

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

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HONOLULU, HAWAII 96809

MAR - 7 2001

Mr. Jerry F. Halverson
Kai 'Opua Canoe Club
P.O. Box 3079
Kailua-Kona, Hawaii 96745

Dear Mr. Halverson:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your comments on the draft Environmental Assessment (EA) relating to the proposed repairs to the Kailua-Kona Wharf. First of all, thank you for the information you provided relating to the economic benefits of the outrigger canoe races. We appreciate your detailed statistics and please be advised that it will be added to SECTION 6 of the draft EA. While we could not locate the economic returns of all the various users of the pier, we provided such statistics that we were able to receive. This, of course, proves that the Kailua-Kona Wharf is a valuable asset to Kailua Village and the Kona community.

As to your questions relating to a new pier on piles, a cost review has been made and this will be included in the draft EA as APPENDIX F. A copy is enclosed for you information. As the study concludes, the cost will be high, probably six times the available legislative funds. Further, the pier will be closed down for a lengthy period, two or more years. This would be an economic disaster to the Kona community.

As to the green sea turtle, it has an extensive range within the Hawaiian Archipelago. It is an endangered species and protected, as you point out. Any work on the pier or boats in the bay will have to observe this statutory regulation. The green sea turtle is a regular habitue of the Honokohau Small Boat Harbor and co-exists among the fishing boats. There is no reason why it cannot also traverse safely in the waters of Kailua Bay. We will note this in **SECTION 8: PROBABLE IMPACTS AND MITIGATION MEASURES**, of the draft EA. Thank you for bringing this to our attention.

We appreciate your helpful comments.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

Enc. APPENDIX F
c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers

12/28/00

Aloha,

I would really like to see an environmental impact assessment done in Kailua-Kona Bay. I understand the state is going to pour cement around the existing "pier."

The pier is (and has been) encroaching on the heiau located next to it. Sacred stones are currently underneath it.

Please make a study to determine what is best for Kailua-Kona in terms of tourism, fishing and the sacred Hawaiian sites. Please enlist the aide of Mauna Roy to learn about the Heiau. He is currently located in the King Kamehameha's Kona Beach Hotel at Kūlana Huli Honua.

Thank you

Robin Krueger
POB 2726
Kamuela, HI
96743

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
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HONOLULU, HAWAII 96809

MAR - 7 2001

Mr. Robin Kruger
P.O. Box 2726
Kamuela, Hawaii 96743

Dear Mr. Kruger:

Comments Relating to Draft Environmental Assessment
Kailua-Kona Wharf Improvements, Job No. 40-HB-2
Kailua Village, North Kona, Hawaii

Thank you for your comments relating to the draft Environmental Assessment. We share your concern on tourism, fishing, and sacred Hawaiian sites. Tourism operators and fishermen are prime users of the pier. In this respect, we need to proceed as soon as possible with the proposed repairs to prevent further damage to the pier and the closing of additional sections of the pier for safety reasons. Such occurrences will have a negative impact on users of the facility.

As to the pouring of cement as well as pile driving operations, silt curtains will be used to contain sediment and prevent it from spreading in the waters of Kailua Bay.

As to the sacred Hawaiian sites, your mention of David Mauna Roy is most welcome. He was a prominent speaker at our public informational meeting. His talents, and that of his daughter Mikihala, will be given strong consideration for assistance on this project.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

c: Division of Boating and Ocean Recreation
NKO- Consulting Engineers
David Mauna Roy

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
235 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4185
FAX NUMBER (808) 586-4186

May 3, 2001

Andrew Monden, Chief Engineer
Department of Land and Natural Resources
Engineering Branch
P.O. Box 373
Honolulu, Hawaii 96809

Attention James Schoocraft

Dear Mr Monden:

Subject Draft Environmental Assessment (EA) for Kailua-Kona Wharf Improvements

We have the following comments to offer.

Two-sided pages In order to reduce bulk and save on paper, please consider printing on both sides of the pages in the final document.

Pre-assessment comments. The December 29th, 2000 letter from the Department of Public Works asks about provisions for bicycle parking, but your response did not address this Please include this in the final EA

Accepting authority. Please note that, for environmental assessments, the accepting authority is the same as the applicant agency. DLNR, and not BLNR, will make the determination of significant impact, or lack of significant impact, after reviewing the final EA and all the comment letters and responses

Noxious substances Section 8 notes that "noxious substances transported to the project site will be controlled and secured." In the final EA indicate what kinds of substances these might be and their purpose

If you have any questions, call Nancy Heinrich at 586-4185

Sincerely,

GENEVIEVE SALMONSON
Director

c: Arnold Okubo
George Nishimura

BENJAMIN J CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
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P O BOX 373
HONOLULU, HAWAII 96809

JUN 21 2001

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

Attention: Ms. Nancy Heinrich

Dear Ms. Salmonson:

Draft Environmental Assessment (DEA)
Kailua-Kona Wharf Improvements
Kailua-Kona, Kailua Village, North Kona, Hawaii

In response to your comments relating to the Kailua-Kona Wharf Improvements DEA, we will take the following actions:

Two-sided pages
For this DEA, since extra copies have been printed and are available, we will substitute the corrected pages in the DEA where such changes occur. This will save on printing new sets of the report. In the future, we will request our consultants to consider printing on both sides of the pages.

Pre-assessment comments
We have written to the County Public Works Department clarifying our earlier letter. A copy (which will be included in the final EA) is enclosed for your information.

Accepting Authority.
We have stated that the accepting authority would be the Chairperson of the Board of Land and Natural Resources (BLNR). The BLNR is an executive board and has given authority to the Chairperson to accept environmental reports. In this respect, the use of Chairperson, Board of Land and Natural Resources is correct.

Noxious Substances:
We have added the following clarification of noxious substances as mentioned in the 5th paragraph of Section 8:

"All noxious substances transported to the job site, such as fuel and grease for construction equipment, paints, solvents, asphaltic compounds, dry cement mixes and other similar materials to be used on or incorporated into the job, will be controlled and secured as will be described in the job specifications."

Should you have further questions, please contact Mr. Hiram Young of the Design Section at Ext. 70260.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

Encl.

c: Nishimura, Katayama and Oki, Inc.
Arnold Okubo and Associates, Inc.
DLNR/Division of Boating and Ocean Recreation
James L. Schoocraft, Acting Administrator
Manuel Emiliano, Engineering Branch Chief

Author: "Kevin R. Seiter" <kseiter@hawaii.rr.com> at Internet
Date: 4/11/2001 4:00 AM
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Debra Tom/DBEDT <DeTom@dbedt.hawaii.gov> at Internet,
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Lary Ratliff <7thwave@kona.net> at Internet,
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Janice & Bruce Patterson <jbpat@hawaii.rr.com> at Internet,
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Chip Fletcher <fletcher@soest.hawaii.edu> at Internet,
Duane and Marjorie Erway <erwayd001@hawaii.rr.com> at Internet,
DLNR <dlnr@pixi.com> at Internet,
Mike & Sue Crisafi <mcrisafi@ilhawaii.net> at Internet,
Ray Chaikin <RayChaikin@aol.com> at Internet,
Steve Arnett <sarnett@konacoast.net> at Internet
Subject: KAILUA WHARF-Draft Environmental Assessment Comments due May
---------- Message Contents

http://www.state.hi.us/health/oeqc/notice/08apr2001.pdf

01 APR 12 AM 9:32

Mr. Andrew Monden
Dept. of Land and Natural Resources
1151 Punchbowl St., Room 130
Honolulu, Hawaii 96813

Re: Kailua-Kona Wharf Improvements
District: North Kona
T.M.K.: 7-5-06:39
Applicant: DLNR, Boating Division

Dear Mr. Monden:

I reviewed the Draft Environmental Assessment and plans for the Kailua-Kona "wharf" improvements.

The Kailua "wharf" was built to accommodate loading cattle on barges. It was not built for people. It's design is antiquated--it is encased in the ocean floor and blocks currents and sand transportation in Kailua Bay. It was built on top of historically and culturally significant sites.

The repair concept is an ill-conceived, expensive, short-term fix which will substantially interfere with coastal processes and further degrade Kailua-Bay. The concept of steel bulkhead encasement of this outdated facility is an engineering boondoggle that will increase interference with sand transportation and water circulation in the bay, adversely affecting coral and marine life. None of these issues are adequately addressed by the Applicant.

The "improvement" also fails to adequately address traditional, cultural and significant historical presence already disturbed by the existing wharf. This "oversight" is inadequately addressed by the Applicant.

This dangerous, antiquated, environmentally degrading facility should be removed and a new, piling-based pier constructed in its place. An environmental assessment cannot adequately address the problems associated with further encasement of this facility. The only meaningful solution is replacement with a pier that accommodates community needs without unduly interfering with coastal processes.

Kevin R. Seiter
P.O. Box 1839
Kailua-Kona, HI 96745
kseiter@hawaii.rr.com
www.laguerdobros.com/seiter/

BENJAMIN J CAYETANO
GOVERNOR OF HAWAII

GILBERT COLOMA-AGARAN
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTY
JANET E. KAWELO

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STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

JUN 21 2001

Mr. Kevin R. Seiter
P.O. Box 1839
Kailua-Kona, Hawaii 96745

Dear Mr. Seiter:

Kailua-Kona Wharf Improvements Project
Kailua Village, North Kona, Hawaii

This is to acknowledge receipt of your e-mail relating to the Kailua-Kona Wharf Improvements project. In response to your comments, we wish to state the following:

Your statement that the Kailua wharf was built to accommodate loading of cattle on barges and not built for people is true to some extent. Even before the present pier was constructed, the wharf was a scene of activity with loading of coffee bags and unloading of cargo for the Kona community. The American Factors (which started as the Hackfield Store) is long gone now and was at the head of the bay. It played a prominent part in the activities involving the wharf. Around 1960, cattle began to be shipped through a new and larger Kawaihae wharf. The activities at the Kailua wharf subsequently changed to meet the times and needs of the Kona community. The storage building, a feature of the wharf from the turn of the century, was removed in the 1960's. Only the pier, which was improved in 1952, now remains. The pier has become a sport commercial fishing center and grown to accommodate tourist-oriented activities.

Being that this is a repair project, no new historical or archaeological feature will be disturbed. That significant sites have been lost in the past is a matter of fact. Please refer to the archaeological reports contained in the draft environmental assessment.

Your contention that a new pier on pilings be constructed is not covered by the present legislative appropriation. Due to interest in this matter, our consultants were asked to evaluate this suggestion and their report can be found in Appendix F of the draft environmental assessment. We cannot positively state that the merits of a pile-supported pier will be superior to a concrete encased steel sheet piling. This can be determined after the extensive studies shown in Appendix F are completed. The effects of the bay currents on sand transport can then be adequately addressed also.

We are of the opinion that our present course to repair the existing pier is a prudent step to ensure the safety of the users of the pier.

We appreciate your thoughtful comments. Thank you.

Sincerely,

Andrew M. Monden

ANDREW M. MONDEN
Chief Engineer

Enc.
c: BOR (Main Office)
BOR (Kona Office)
NKO

STEPHEN J. ARNETT, CPA
Certified Public Accountant

April 19, 2001

Mr. Andrew Monden
Department of Land and Natural Resources
1151 Punchbowl Street
Room 130
Honolulu, Hawaii 96813

Re: Kailua-Kona Wharf Improvements
TMK: (3) 7-5-06:39
Applicant: DLNR, Boating Division

Dear Mr. Monden:

I have not reviewed the Draft Environmental Assessment and plans for the Kailua-Kona "wharf" improvements, commonly called the Kailua pier. I do have some thoughts on the future of the pier, though.

First, the pier was built for the purpose of loading cattle onto ships. Having people use the pier was not in the original planned use.

Second, the pier appears to block the natural flow of currents and transportation of sand throughout the bay. Old pictures of Kailua-Kona prior to the building of the pier, show beautiful sand beaches along the shoreline fronting the Ocean View Inn.

Third, to dump millions of dollars into an antiquated pier that was built for purposes other that what is anticipated future use, would be foolish. The pier is in bad shape and needs to be demolished and rebuilt with modern technology, such as a piling based pier that would replace the current monster. A piling based pier would allow the natural currents of the ocean to flow as they did in the past in Kailua Bay.

Moreover, a new pier could be designed for the current users, which would include canoe clubs, shuttles to cruise ships, snorkel/dive boats, parasail ventures, fishermen, Captain Bean's, and other meaningful ocean ventures.

My purpose is to encourage the State of Hawaii to back the best plan for the pier. If the fix plan is $2.5 million or in that range, it seems best to put those funds into building a new pier that would better fit the needs of the Kailua community, rather than fix a pier that was designed for a different purpose.

In addition, there may be significant historical, cultural and traditional issues that may need to be addressed in fixing the old pier that could be compromised by building a new one.

Post Office Box 839 • Kealakekua, Hawaii 96750 • Telephone (808) 323-2282 • Fax (808) 323-3633

So, I would encourage DLNR to pursue a plan that is best for the community, and not just a quick fix for the pier.

As we all know the end of the pier is severely damaged and has been "off limits" to users for some time. The reality of the situation is, the end of the pier is used daily by fishermen, canoe coaches, paddlers and anyone else who chooses to slip around the fences built to keep the people out.

Please keep the above comments in mind when pressing for improvements to the Kailua pier. We need a pier that will benefit us all for a long time in the future. Please do not cut corners now at the expense of the future users of Kailua pier.

Thank you so much for your time.

Sincerely yours,

Stephen J. Arnett
Past President of Kai Opua Canoe Club

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
ENGINEERING BRANCH
P.O. BOX 373
HONOLULU, HAWAII 96809

MAY 21 2001

Mr. Stephen J. Arnett, Ph.D.
P.O. Box 839
Kealakekua, Hawaii 96750

Dear Mr. Arnett:

Kailua-Kona Wharf Improvements Project
Kailua Village, North Kona, Hawaii

Thank you for your letter offering thoughts on the Kailua-Kona Wharf project. Since you have not reviewed the Draft Environmental Assessment for this project, a copy is enclosed for your information. We hope this may help you better understand our response to the points raised in your letter.

Your statement that the pier was originally built for loading of cattle may not tell the whole story. Old photos dating back to the turn of the century show a mixed use. With the American Factors store/warehouse situated at the head of Kailua Bay, products such as coffee were shipped out. The wharf also allowed goods to be brought into Kona. After cattle shipments were shifted to Kawaihae Wharf the uses of the Kailua-Kona Wharf changed to meet the needs of the times and became more sport and tourism-oriented.

The beaches along the bay have been altered not only by the wharf, but by the seawall built to protect the buildings along the shore from high waves. What is evident is that the present beaches on both sides of the wharf still exist, even though improvements have been made to the wharf dating back to the turn of the century.

Your suggestion that the present pier be demolished and a new pier on pilings be constructed is not new. This proposal to reconstruct the wharf was made at a public meeting. The consultants were requested to make an evaluation of this. The report of the consultants can be found in Appendix F of the Draft Environmental Assessment. The re-construction of the pier is estimated to cost $18 million, or more, and require a time span of nine years for research, design, and construction.

This project, as stated in the project summary, is essentially a repair project. The objective of this project is to make the pier safe for use again and to retain the economic attributes associated with this facility. In this respect, we are obligated to repair the pier; to change the character of the pier will require legislative approval.

You may be interested in the comments offered by Mr. Jerry Halverson of the Kai Opua Canoe Club. His comments and our response can be found in the Comments and Responses section of the enclosed report.

Thank you for taking time to offer your comments. Should you have any questions, please contact Mr. Hiram Young of the Design Section in Honolulu at (808) 587-0260.

Sincerely,

ANDREW M. MONDEN
Chief Engineer

Enclosure: Draft Environmental Assessment

c: BOR – Main office
BOR – Kona Office
Consultants - Nishimura, Katayama & Oki

APPENDIX A
HISTORICAL/ARCHAEOLOGICL SURVEY

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
33 SOUTH KING STREET, 6TH FLOOR
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HISTORIC PRESERVATION DIVISION
LAND DIVISION
STATE PARKS
WATER AND LAND DEVELOPMENT

September 18, 1997

Mr. W. Y. Thompson, P.E.
98-1051 Kahapili Street
Aiea, Hawaii 96701

LOG NO: 20151 ✓
DOC NO: 9709RC11

Dear Mr. Thompson:

SUBJECT: **Information on Historic Sites in the Kailua-Kona Area -- Kailua Pier Renovation**
Kailua-Kona, North Kona, Hawai'i

You indicated in your discussion on September 15, 1997, with Ross Cordy, our Branch Chief for Archaeology, that plans were being made to renovate the Kailua Pier. You requested information on historic sites in the immediate area. We supply that information below. It is also important, however, to realize the general historic context for Kailua, so we have included a copy of a January 14, 1993, letter we sent to Towill Corp. when they were updating the Master Plan for Kailua-Kona. This letter describes the historic context. Most importantly for the pier area, several themes are important. One, Kailua was one of the royal centers for the Hawai'i Kingdom from A.D. 1600 to 1820, and the residences of at least two rulers were near the pier ('Umi at Pa o 'Umi and Kamehameha I at Kamakahonu). Two, Kailua was the seat for the Governor of Hawaii from 1820 up until ca. 1850, with Kuakini as the Governor for much of that time, and his residence (Hulihe'e Palace) and the church date to that period. Three, after the 1850s, Kailua remained the center for Kona, with ranches shipping cattle out, occasional vacation use by high chiefs and royalty (e.g., Hulihe'e Palace), and the like. The original Kailua wharf dates to this period.

For the pier area, many of the sites once present have been destroyed by urban development of this century. However, some sites remain, with information as follow:

1. Kamakahonu -- State Site 10-27-7002. National Historic Landmark. This site was the residential compound of Kamehameha I from 1813 until his death in 1819. It had previously been the residence of a high chief, and it was undoubtedly a residential area back into the centuries prior to European contact. During Kamehameha's use of this compound, reportedly 11 house structures were present. These included his sleeping house, houses for his wives, a large men's house, storehouses, and 'Ahu'ena heiau. Upon Kamehameha's death, a mortuary house was built,

which held his remains until they were taken and hidden away. After Liholiho's departure from Hawai'i Island in 1820, the high chief Kuakini, who served as Governor of Hawai'i for many years, resided in Kamakahonu and altered walls, abandoned the heiau, and built new structures. Kuakini resided here until 1837, when he had Hulihe'e built and moved there. By the late 1800s, Kamakahonu was abandoned, and in the early 1900s H. Hackfeld & Co. purchased the land, and its successor American Factors used the site as a lumberyard and later for the King Kamehameha Hotel. Today, three remnant structures are present on the seaward each of the property (all reconstructed in the 1970s and recently refurbished) -- 'Ahu'ena heiau, the mortuary house's platform, and an additional structural platform. These structures are set aside in a covenant agreement between the State's Historic Preservation Division and the current hotel owners. Other remains of the compound may be present (e.g., subsurface deposits on the beach and under the front lawn -- burials have been found in the sand; and portions of the wall on the west side may be old).

As the residential area of Kamehameha for a number of years, this site is extremely significant. Indeed, it is a National Historic Landmark. The restoration of 'Ahu'ena heiau under the direction of David Mauna Roy and a non-profit corporation 'Ahue'ena Inc. adds to the visual significance of the site. Unfortunately, the current Kailua Pier visually impinges upon the site. Any future alterations to this pier should attempt to reduce visual impacts to the site.

2. 'Ahu'ena Heiau. See above discussion. 'Ahu'ena heiau was a hale o Lono heiau used by Kamehameha. It was an important heiau concerned with success of crops, and it was also used for the training of Liholiho as a future heir and for many political purposes. The heiau was restored in 1975 and repaired in recent years.

3. Pa o 'Umi. This is a traditional cultural place -- a historic property. It is the name for a point of land located between Kamakahonu and Hulihe'e Palace. Its name indicates that this was the residential spot of the ruler 'Umi, who moved the royal court from Waipi'o to Kailua ca. A.D. 1600-1620 (using a genealogical count of 20 years per generation). Its location is shown on an 1880 map of "Kailua Town and Vicinity" by Emerson and Kanakanui. As part of the Corps of Engineers' improvements to the Seawall Fronting Kailua Bay, they have agreed to an interpretive marker of this historic property along the wall -- above the location where the property is buried today.

4. Hulihe'e Palace. State Site 10-27-7001. This house was built in 1838 by Kuakini, a high chief and Governor of Hawai'i under Kamehameha II and III (and also the brother of Ka'ahumanu, one of Kamehameha's wives, and the regent during the early years of Kamehameha III's reign). It is a two story wood-frame building with a stone basement, built in Western style. (See State Historic Preservation Division files for details on the building's construction styles and technique.) Kuakini used this house as his main dwelling until his death in 1844. His heirs -- Leleiohoku (his adopted son, who died in 1848) and his wife Princess Ruth Keelikolani (Governess of Hawai'i from 1855-1874, who died in 1884) -- and King Kalakaua (who acquired the house in 1884) used the house more as a summer palace. The house has been restored in 1927 and in 1953, and is currently

State property under the care and operation of the Daughters of Hawaii. This site is clearly well away from your project area, and the project should have "no effect" on this site.

Mokua'aikaua Church -- State Site 10-27-7231. This existing church was built in 1836. Known as the "First Christian Church of Hawaii." Mokuaikaua Church is closely associated with the first efforts of Christian missionaries arriving in the Hawaiian Islands. The present building, as the first stone church in the Islands, became an example that other missionaries would imitate. This site is also clearly well away from your project area, and the project should have "no effect" on this site.

We have no information on the existing pier. Any information, date of construction, engineer, etc. you may have would be helpful in determining if the pier itself has any historic significance. We request the opportunity to review the plans to determine the impact the renovation may have to the known historic sites.

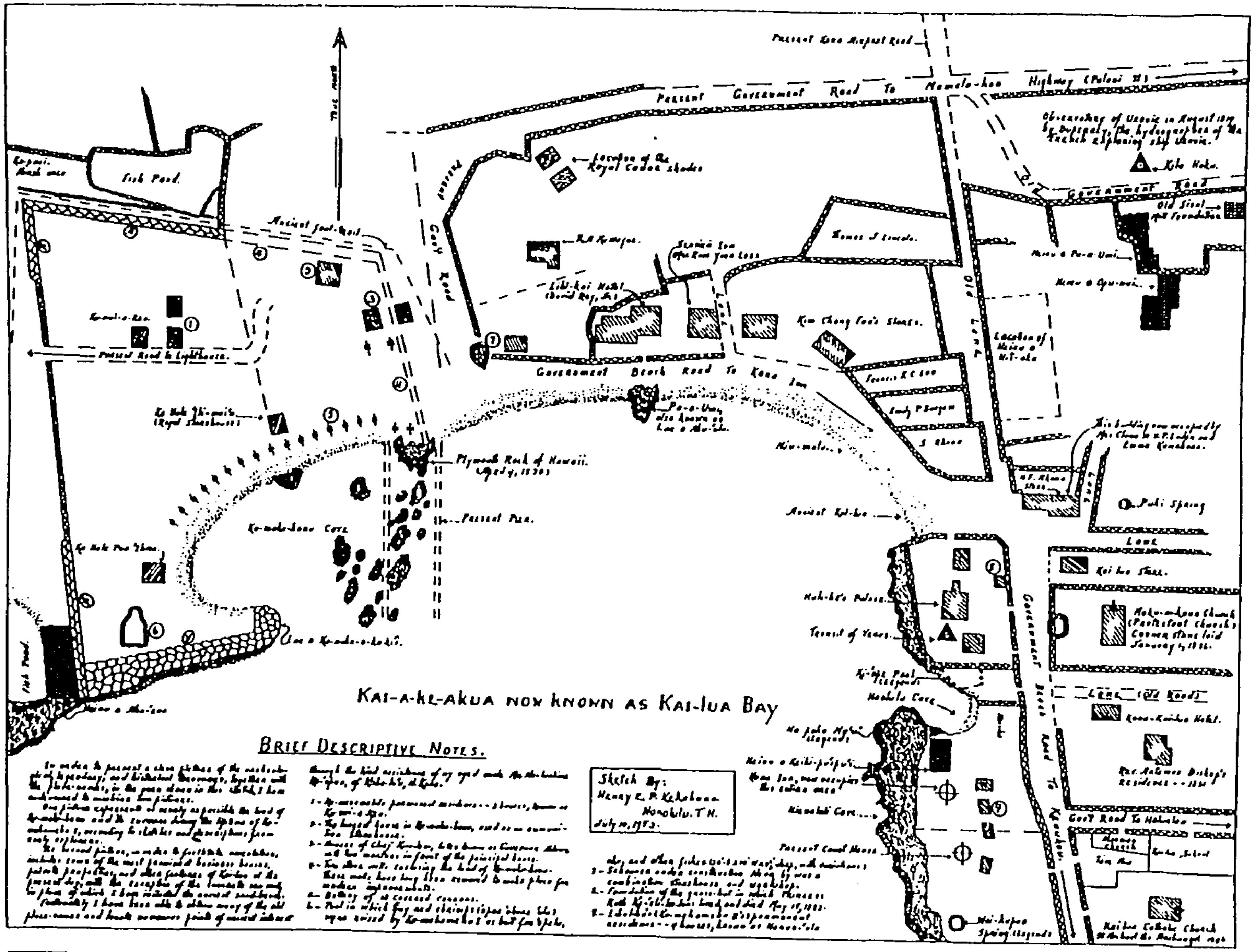
If you have any questions or would like to look at the specific site files for Kamakahonu, Hulihe'e Palace or Mokua'aikaua Church, please contact us.

Aloha,

DON HIBBARD, Administrator
State Historic Preservation Division

RC:amk

Attachment (copy of January 14, 1993, letter to Stone)



3 Historic Kailua

The preparation of this map was financed in part through a Comprehensive Planning Grant from the Department of Housing and Urban Development.

JOHN WAIHEE
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
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WILLIAM W. PATY, CHAIRPERSON
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WATER AND LAND DEVELOPMENT

January 14, 1993

Ms. Deborah Stone
R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817

LOG NO: 7209
DOC NO: 9301RC09

Dear Ms. Stone:

SUBJECT: **Updated Master Plan for Kailua-Kona -- Historic Preservation Concerns**
Kailua-Kona Area, North Kona, Hawaii

This finally responds to your submittal of July 1992. Dr. Cordy of our staff had spoken to you several months ago and indicated that we did have comments and that he would try to get them to you rapidly. Unfortunately, we have been unable to get to the comments until now. But because these master plans are important planning documents, we have sent these comments on nonetheless, hoping that they still might be able to be incorporated in the updated master plan.

We had two major concerns. One, the historical overview of the area fails to mention ca. 1,500 years of the history of this area, and this information needs inclusion. Two, the historic site information is not at all current.

On the historic overview, we offer a brief summary here :

> Current archaeological research indicates that from ca. A.D. 0-600 to the A.D. 900s, permanent settlement was in the windward areas of Hawai'i Island, where rainfall was sufficient for successful growing of crops near the shore. Population gradually spread throughout these windward areas during these centuries. At this time leeward areas, such as Kailua-Kona were visited to gather natural resources -- quite notably fish. Some campsites in caves have been found dating to this period.
>
> In the A.D. 900s, it appears that permanent settlement began to spread into leeward lands -- initially focusing around embayments. Kailua-Kona with its bay is likely to have been an early settlement. At this time, it is believed that people had their dwellings near the shore and cleared forest inland where rainfall was sufficient for the cultivation of taro. Trails would lead up to these inland farms. Population gradually spread in the area in ensuing centuries. By the A.D. 1200s-1300s, it seems likely that Kona or parts of Kona had formed into a small polity (polities) with a ruler, local chiefs and commoners. Oral histories indicate that other polities existed on the island, with Hilo and Hamakua (the later

controlled by Waipi'o) and several in Kohala of note. Small national heiau were present at this time.

In the A.D. 1400s-1500s, the island became unified under the Pili line of rulers based in Waipi'o. In the time of the ruler 'Umi-a-Liloa, ca. A.D. 1600-1620 by one means of estimation, the royal center was moved from Waipi'o and royal centers in Kona became of importance. 'Umi, himself, was said to have had a primary center in Kailua-Kona with his residence near the place called Pa-o-'Umi. Succeeding Pili line rulers cycled their centers among a number of Kona residences and residences elsewhere on the island, with Kailua-Kona being one of these royal centers. The ruler Alapa'inui was in residence in Kailua when the Maui king began raiding Hawai'i Island in the mid-1700s. Typically such centers contained the ruler's residence, residences of high chiefs, a major national heiau (which became increasing larger in size in the A.D. 1600s-1700s), other heiau, and often a refuge area (pu'uhonua). By the 1700s, the fields of Kona's communities had also intensified with greater populations and greater demands of the chiefs. In the higher rainfall zones inland, stones had been cleared out and stacked as walls, creating a formal, walled field area planted in taro and sweet potatoes and in breadfruit at lower elevations. In lower elevations all the way to the shore, informal clearings, mounds, and terraces were used to plant sweet potatoes; and on the forest fringe above the walled fields there were clearings, mounds and terraces which were primarily planted in bananas. A coastal trail connected the communities of northern Kona, approximating today's Ali'i Drive in the Kailua area.

In 1782, shortly after European contact, the kingdom of Hawai'i fell into three competing kingdoms with the death of the ruler Kiwala'o. The kingdom of Ka'u (Ka'u and parts of Puna) was controlled by Kiwala'o's brother, Keoua. The kingdom of Hilo (Hilo and parts of Puna and Hamakua) was controlled by Kiwala'o's uncle, Keawema'uhili. The third kingdom (Kona, Kohala and parts of Hamakua) was under Kiwala'o's cousin, Kamehameha. Eventually, Kamehameha prevailed and reunified the Hawai'i kingdom and expanded its borders to include the entire island chain. In the years from 1782 until 1792, when Kamehameha unified Hawai'i Island, he often was in residence in Kailua-Kona which had become a port for foreign traders along with Kawaihae and Kealakekua. In the final years of his life, 1813-1819, Kamehameha returned to establish his residence in Kailua-Kona.

With Kamehameha's death in 1819, Liholiho and Ka'ahumanu assumed control of the kingdom. The kapu system was abolished in Kailua-Kona. Shortly thereafter, the capital of the kingdom was moved from Hawai'i Island, never to return. In the absence of the king, high chief Kuakini (brother of Ka'ahumanu) was eventually appointed governor over Hawai'i Island and became an extremely powerful figure on the island. Kuakini resided primarily in Kailua-Kona. Here the missionaries arrived, establishing a station in 1823 where Kuakini and his many subjects lived.

After Kuakini's death in 1844, princess Ruth Ke'elikolani (his son's widow) became Governor of Hawaii (1855-1874). She moved the island's capital to Hilo, where it remains to this day. Thus, for the latter part of the 1800s, Kailua-Kona no longer was a political center -- although occasionally it was visited by the governor's or the king's family and retainers. Kailua-Kona did remain an economic center for northern Kona, with goods transported in from outlying areas (dried fish, salt) and shipped out to those areas. By the end of the century, large ranches had begun to form and ranching, along with coffee, came to dominate much of the economics of the area for the next 50 years.

Today, much of this past is no longer with us. Kailua-Kona has become a small urban-tourist center, with an airport and numerous service businesses, ranging from car dealerships to fast food outlets to modern grocery stores to curio shops.

For current historic site information, we have added some information and addressed site preservation related to historical themes. This information follows:

Historic sites once covered much of Kailua-Kona. With the urbanization of the area this pattern has changed. Historic preservation laws did not come into place until the early 1970s. Development prior to that time was focused in the core of Kailua-Kona from what used to be the King Kamehameha Hotel to beyond the Kona Hilton, and mostly seaward of Ali'i Drive. This development proceeded without archaeological survey. Many historic sites were destroyed in these years, with our records being only brief survey work (Stokes' turn of the century study of heiau, Reinecke's 1930 coastal survey, Kekahuna's 1952 study of some heiau). Since the early 1970s, most developments have been preceded by archaeological surveys, and in the late 1980s these increased in number and quality with a resurgence of development. Only a few areas in Kailua-Kona lack survey at this point.

Because many of the shoreline areas have long been developed, most, if not all, of the early sites of Kailua-Kona are probably gone -- those temporary camps dating before the A.D. 900s and the early permanent settlements of the A.D. 900s-1100s. Archaeological surveys are finding some house sites, temporary camps (in caves and in small surface shelters), burials and informal fields inland of Alii Drive which date to the A.D. 1200s-1700s.

The State Historic Preservation Division's policy is to preserve the best examples of sites in a region related to different themes. In the north Kona region, the theme of settlement in the period from the A.D. 900s-1700s is substantially preserved at Kaloko-Honokohau National Historic Park where a wide range of houses, shelters, burials, and religious structures are preserved -- in essence the entire coastal portions of two settlements, Kaloko and Honokohau. Other coastal sites have been preserved just to the north -- permanent habitations of commoners, men's houses, shrines, and small community heiau in the lands of Kohanaiki, Ooma and Kalaoa. Inland fields and settlement are being preserved in Kohanaiki (walled field portions and habitations) and in Keauhou.

A second theme being preserved in northern Kona is that of royal centers. Kahalu'u at the Keauhou Resort has national heiau remaining from that center (Ke'eku, Hapaiali'i, and others) and an associated holua in Keauhou. At Holualoa, the national heiau at Kamoa Point are part of the Keolonahihi State Historical Park and the royal residential area of the ruler Keakamahana and her daughter, the ruler Keakealaniwahine, is being acquired by the State. The royal center theme is also reflected at Kailua-Kona for parts of Kamehameha's residence (Kamakahonu) exists and was restored in the 1970s on the grounds of what used to be the King Kamehameha Hotel. This is a National Historic Landmark. The structures remaining include 'Ahu'ena heiau, which has a reconstructed thatched building on it, and the mortuary platform of Kamehameha. Pa o 'Umi as a place also is a remnant of the royal center theme, but it is not suitably interpreted. Other archaeological remains of elite house sites may be found during survey of remaining undeveloped lands in Kailua, and such sites might merit preservation as part of this theme.

Another theme relates to the time of Kuakini. Hulihe'e Palace was built for Kuakini in 1837, later passing to Ruth Ke'elikolani. This structure is restored and run by the Daughters of Hawaii. Under Kuakini's sponsorship, the missionaries first stone church was constructed in1836, Mokuaikaua. A large wall, which stands up to 6-8 feet tall, and surrounds Kailua-Kona and communities to the south, has been called the Kuakini Wall. Accounts in the mid-1800s call it the Great Wall. This wall was probably to keep cattle out of the dwelling lands, and it may well have been built under Kuakini's instructions. This impressive wall is being set aside in preservation in developments at the requirement of the County of Hawaii and the State's Historic Preservation Division.

For the period of the late 1800s and early 1900s, Hulihe'e Palace still applies. In fact, the structure is interpreted and furnished relevant to the late 1800s. Ranching period history for Kona is emphasized at the Kona Historical Society's museum in upland Kealakekua. Some of the few other remaining sites included in our inventory are St. Peter's Catholic church built in 1880, presently located in Kahaluu; and stone Church ruins across Kahaluu Beach Park. Original portions of Kona Inn built in 1928, are an excellent example of the early resort architecture on the island of Hawaii. The Henderson House should be included, and we expect several beach houses on the mauka side of Alii Drive might have historic significance.

Historic preservation planning needs for future development and for general planning related to historic preservation primarily fall into two areas for Kailua-Kona. One, because of the importance of the Kailua area, it is vital that future development be preceded by archaeological inventory survey to determine if important (significant) historic sites are present. If such sites are present, then mitigation will be needed before development. This might take the form of archaeological data recovery -- more intensive archaeological work to recover the basic information from the sites and better interpret Kailua's history. Such interpretation will help better present the history of the area to Kailua's residents and schoolchildren, as well as to visitors. Mitigation might also take the form of preservation. Interpretive preservation might

be needed for any elite housing sites that are found (as part of the royal center theme), for sites related to the theme of Kuakini's time, or for sites related to the time of the late 1800s and early 1900s. It should be realized that the Kuakini Wall, as part of the theme of Kuakini's time, will have to be preserved with physical and visual setbacks, as part of the policy of the County and State Historic Preservation Division. Also, for planning purposes, it is important to emphasize that the sites which are set aside for interpretive preservation must be aggressively maintained and linked with coordinated interpretation. For example, the thatched reconstruction of 'Ahu'ena heiau is now deteriorating and needs restoration. Hawaiian community groups, our office, the Office of Hawaiian Affairs, and the hotel owner are working on this project. Sites of similar theme need to be interpreted, such as Pa o 'Umi as part of the royal center theme. The Kailua-Kona community at large must be aware of the needs to keep the interpreted sites maintained and well interpreted. As a tourist center, this is doubly important, for visitors come to see historic sites of Hawaiian culture as well as the sun, scenery, and hula/luau.

We hope that this information is of use. If you have any questions, please feel free to contact our office. Ross Cordy is our contact person for this matter (587-0012).

Sincerely,

DON HIBBARD, Administrator
State Historic Preservation Division

RC:jen

cc: Virginia Goldstein, Planning Dept., County of Hawaii

JAN 21 1993

Lloyd Soehren
February 2000

Since long before the arrival on the Kona coast of Captain James Cook in 1779, Kailua Bay has been the scene of maritime activity. The location was one of several[1] along the central coast favored by the governing chiefs as places of residence. The presence of fresh water springs, the proximity to the fruitful upland gardens, good access to marine resources and transport, and the climate undoubtedly were factors in the decision by Kamehameha to settle here in 1812. As ruler of the archipelago, Kamehameha relied upon communication by sea. Although his successors moved the kingdom's capitol to Lahaina and then to Honolulu, Kailua continued to serve as a major port for the Kona district, first in supplying fresh produce to visiting ships, then in exporting agricultural products to Honolulu and receiving goods and passengers in return. A small wharf was built to facilitate such commerce. With the development of interisland air service and the modern harbor at Kawaihae, use of the Kailua pier has shifted to recreational activities.

The name Kailua was originally applied only to a canoe landing at the eastern end of the sand beach which formerly lined the shore, in the land of Keopu 1, adjoining the grounds of Hulihe'e Palace (Kekahuna & Kelsey 33: Kekahuna 1953). It has expanded over the past century to encompass the entire bay and surrounding village, engulfing and obliterating numerous small, individually named places and features. According to the plan of the area by Hawaiian historian Henry E. P. Kekahuna, dated July 10, 1953, the bay was known as Kai-a-ke-akua, which appears on RM 1676 and elsewhere in its contracted form as Kai-a-ke-kua.

Post-contact changes in land use have destroyed nearly all prehistoric archaeological remains in the urban area of Kailua, save for the Kamakahonu cove adjoining the wharf. Traces of the early nineteenth century land use are to be found in the records of the Board of Commissioners to Quiet Land Titles. Title to the major land divisions, *ahupua'a*, was confirmed in the chiefs who held them in fief from Kamehameha III, at the Mahele or division of land between the king and his feudal chiefs, completed on March 7, 1848.

From this historical record we learn that the *ahupua'a*, and their new owners, from the vicinity of the wharf to Hulihe'e Palace were (from north to south):

Keahuolū awarded to Keohokālole, mother of King Kalākaua and queen Lili'uokalani (LCAw 8452:12).
Lanihau 1 (Lanihau-iki), awarded to Wm. Lunalilo who succeeded Kamehameha V to the throne (LCAw 8559-B:11).
Lanihau 2 (Lanihau-nui) retained by the Government.
Moeauoa 1 awarded to N. Namau'u, brother of Mataio Kekūanao'a, father of Kamehameha IV and V, and of Ruth Ke'elikōlani (LCAw 10474:3).
Moeauoa 2 awarded to W. P. Leleiōhōku, adopted son of Governor Kuakini, husband of Nahi'ena'ena (sister of Kamehameha III) and later of Ruth Ke'elikōlani (LCAw 9971:27).

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[1] Hōlualoa, Kahalu'u and Ka'awaloa were also favored by royal courts at earlier periods. Kailua Bay provided better anchorage for sailing vessels, perhaps a determining factor in its choice as the capitol.

Keōpū 1 awarded to Miriam Kekau'ōnohi, great-granddaughter of Kekaulike, king of Maui (LCAw 11216:39).
Keōpū 2 retained by the Government.
Keōpū 3 awarded to Victoria Kamāmalu, sister of Kamehameha IV and Kamehameha V, half-sister of Ruth Ke'elikōlani.
Honua'ula retained by the Government.

In addition to the *ahupua'a* of Moeauoa 2, a number of house lots were awarded to W. P. Leleiōhōku along the shore. These include:

	LCAw	TMK
Pā ia Laioha	9971:42	7-5-06:por.20
Pu'u Loa	9971:41	7-5-06:por.20
Pā ia Lo'e	9971:68	7-5-06:25
Niumalu	9971:39	7-5-06:10
Pā Ka'aipuhi	9971:38	7-5-06:9
Hale Hana Lole	9971:37	7-5-07:15(dropped into 16)
Pā o Hulihe'e	9971:36	7-5-07:20
Papa'ula	9971:45	7-5-07:21
Pā o Papa	9971:46	7-5-07:5,23,24
Pā ia Naheana & Kaiwi	9971:47	7-5-07:8

These small parcels scattered throughout the village contain no archaeological features today and survive in name only, with the exception of Pā o Hulihe'e where now stands Hulihe'e Palace. Names of several other house lots awarded lesser citizens are unrecorded.

Another place of note is the **Pā o 'Umi**, a house lot given to Samuel Rice (LCAw 3202:2, RP 1956; TMK 7-5-06:19) by Governor Kuakini in 1822, "for his services" (Foreign Testimony 2:146). "Claimant received this lot 'Pa-o-Umi' so called from its having been the P.: or Yard of old Umi, the king..." (Award Book 3:25-26) It lay between "Loe's premises" on the west (Pā ia Lo'e, LCAw 9971:68) and "Luka's premises" on the east (Grant 3618 to S. M. Kanakanui). The site played a minor role in the early history of Kamehameha and his rise to power. Upon the death in 1782 of his uncle, Kalani'ōpu'u, ruler of Hawai'i island, "...the chiefs of Ka'ū...wanted the remains of Ka-lani-ōpu'u to go to Pā o 'Umi in Kailua, North Kona, so that more Kona lands would belong to them, and more calm places in which to live." (Ii 1963:13)

On the shore below the house lot was a small point of rock called "...Pā-o-'Umi[2], or Ka Lae o 'Ahu'ula, where famed King 'Umi landed when he first came to Kai-lua by canoe from his ancestral court at Waipi'o... On this point of rock King 'Umi ordered his attendant (kahu) to

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[2] A Hawaiian Government Survey triangulation station on the point was given that name in commemoration of the nearby house lot. See RM 1676. Such a small promontory would not have been called anyone's "Pā" or house lot. "Ka Lae o 'Ahu'ula" is a much more plausible name.

dry his precious feather cloak ('ahu'ula)..." (Kekahuna & Kelsey 9: Kekahuna 1953). This point has been almost completely covered by Ali'i Drive and the sea wall, where it is proposed to mount an interpretive marker. The house lot is now occupied by a structure formerly known as the Lihikai Hotel (Kekahuna 1953).

Nearby was the **Kahua Kau Wa'a**, the site of a canoe shed and boat yard dating from the time of Kamehameha I, which was sold in 1893 by the Provisional Government (Grant 3649 to J. Keaweualani, TMK 7-5-06:17).

The first Kailua wharf, adjoining Kaiakekua Landing on the west (RM 1676), was probably constructed in the late nineteenth century to accommodate whale boats and lighters from interisland steamers. It was built along a small rocky point of lava called by Kekahuna (1953) "the Plymouth Rock of Hawaii (April 4, 1820)" upon which the first missionaries landed from the brig Thadeus. "In 1915 freight shipments, consisting of coffee, sugar and general cargo, had increased to such an extent that it became necessary to enlarge the wharf area. So it was, that late in the year, a contract was let to the firm of Lewis and Wery for doubling the capacity of the wharf. This work was completed in 1916....in 1952 a contract was let to build a more modern facility of steel and concrete. The new wharf was completed in 1953..." (Child, ms) About 1963 or 1964 the boat launching ramp was added on the west side. The old wharf is buried under the existing concrete and steel structure.

At the western end of the sandy shore and adjacent to the wharf is *Kamakahonu cove* (State Site 10-27-7002, National Historic Landmark). This area, now occupied by a hotel, is the most important historically and archaeologically in the vicinity. Here Kamehameha I lived from 1813 until his death in 1819. Although most physical remains of the royal residence have been destroyed, several features survive, including a reconstruction of his temple, Ahu'ena heiau, and the ruin of his mortuary house, Hale Pua 'Ilima, where he died. Those two structures are the only ones which might be adversely affected by the vibration of pile driving nearby. A large mural depicting the site as it might have appeared in those years, by local artist Herb Kane, is on the wall of the hotel lobby.

After Kamehameha II moved the capitol from Kailua in 1820, Kamakahonu was occupied by high chief John Adams Kuakini, brother of *Kuhina Nui* Ka'ahumanu (widow of Kamehameha I), and governor of the island. Kuakini remodeled the two story stone warehouse built by Kamehameha, Ka Hale 'Ili mai'a, into his personal residence and converted the site of Ahu'ena heiau into a fort with a number of cannon installed. After Kuakini completed construction of his new stone residence at Kalake'e in 1838, Kamakahonu was abandoned as a royal residence. Although his adopted son, Leleiōhōku, had claimed the property as his own at the Mahele, the claim was rejected on the grounds that the fort and improvements belonged to the Government (Barrere 1975:42-43). The property was purchased in 1875 by W. P. Leleiōhōku II [adopted son of Ruth Ke'elikōlani, brother of David Kalākaua] (Grant 3148, apana 2).

About 1828 Governor Kuakini built a very large church in the traditional style, thatched with ti leaves, on the site of the first Christian services held in 1820. Huge 'ōhi'a timbers are said to have been dragged from the forests of Moku'aikaua, a kipuka in Keauhou 1, several

miles to the south, hence the name given to the church. In 1835 that structure was destroyed by fire, whereupon Kuakini replaced it with the present stone building, completed in 1836 (State Site 10-27-7231). Incorporated into the building were stones from several nearby heiau, including Keikipu'ipu'i across the street, and perhaps from Pā o 'Umi as well. Also used for construction of the corners of the church were many of the "Pōhaku kalai a 'Umi", the "Hewn stones of 'Umi". These large blocks of pāhoehoe lava, with smoothed surfaces and squared corners, had been accumulated by 'Umi for his proposed tomb, never completed. Others were used in the memorial arch at the entrance to the church, built in 1910. Another marks the site of Princess Ruth's grass house on the grounds of Hulihe'e Palace.

Kuakini then built a new residence for himself at Kalake'e, on the shore across the road from Moku'aikaua. This property had been the first residence of Kamehameha when he returned to Kailua in 1812, where he lived until completion of his new houses at Kamakahonu (Ii 1963:110,117). It adjoined a major temple, Keikipu'ipu'i, which lay to the south where the Kona Inn was built (TMK 7-5-07:por.21). He named his new palace "Hulihe'e" (State Site 10-27-7001) after his younger brother who had died in 1824 (Kekahuna & Kelsey 12), and occupied it until his own death in 1844. Hulihe'e passed to Kuakini's heir, Leleiōhōku, who died in the measles epidemic of 1848 and left it to his widow, Princess Ruth Ke'elikōlani. It was leased from Ruth by Kamehameha IV and visited by succeeding royalty. Princess Ruth died there in 1883, in her traditional thatched house which she preferred to the foreign style of dwelling. It was acquired by King Kalakaua in 1885 from the estate of Princess Bernice Pauahi Bishop, Ruth's heir. In 1925 the property was acquired by the Territory of Hawaii and has been operated as an historic house museum by the Daughters of Hawaii since 1927.

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APPENDIX B
BOTANICAL LIST

BOTANICAL SURVEY, KAILUA BAY, KONA, HI
February 1, 2000
by Bunichi Usagawa

SECTION I. AHUENA HEIAU - KING KAMEHAMEHA HOTEL

Palmae:
- Chrysalidocarpus lutescens - Areca palm
- Cocos nucifera - Coconut palm
- Pritchardia affinis - Loulu palm
- Undetermined palm sp. - 3 var.
- Veitchia merrillii - Manila palm

Guttiferae:
- Calophyllum inophyllum - Kamani

Boragniceae:
- Cordia subcordata - Kou
- Messerschmidia argentia - Tree heliotrope

Pandanaceae:
- Pandanus odoratissimus - Hala

Malvaceae:
- Hibiscus sp. - Hibiscus
- Thespesia populnea - Milo

Combretaceae:
- Terminalia catappa - False Kamani

Goodeniaceae:
- Scaevola frutescens - Naupaka kahakai

Bignoniaceae:
- Spathodea campanulata - African tulip

Gramineae:
- Saccharum officinarum - Sugar cane

Euphorbiaceae:
- Aleurites moluccana - Kukui
- Codiaeum variegatum - Croton

Araliaceae:
Brassia actinophylla - Octopus tree

Musaceae:
Musa sp. - Banana

Liliaceae:
Cordyline terminalis - Ti
Dracaena marginata - Dracaena

Apocynaceae:
Cerbera mangus - Cerbera
Nerium oleander - Oliander
Plumeria accuminata - Plumeria

Sapindaceae:
Filicium decipiens - Fern tree

Moraceae:
Ficus sp. - Banyan
Ficus pandurata - Fiddle fig
Ficus retusa - Chinese banyan

Luguminosaea:
Acacia confusa - Formosa koa

Podocarpaceae:
Podocarpus gracilior - Podocarpus

Guttiferae:
Clusia rosea - Scotch attorney

Caesalpinioideae:
Delonix regia - Royal poinciana

Pinaceae:
Pinus sp. - Pine
Undetermined sp. (tree) in parking lot
Undetermined sp. (shrub) near parking lot

SECTION II. PALANI ROAD TO SARONA ROAD

Compositae:
Bidens sp. - Ko`oko`olau - Hawaiian tea

Ulmaceae:
Trema orientalis - Gunpowder tree

Malvaceae:
Hibiscus tiliaceus - Hau

Araceae:
Pothos sp. - Golden pothos

Nyctaginaceae:
Bougainvillea sp. - Bougainvillea

Moraceae:
Ficus macrophylla - Morton Bay fig
Ficus retusa - Chinese banyan

Amaryllidaceae:
Hymenocallis littoralis - Spider lily

Palmae:
Chrysalidocarpus lutescens - Areca palm
Veitchia merrillii - Manila palm
Undetermined palm sp. (3 var.)

Apocynaceae:
Plumeria accuminata - Plumeria
Undetermined shrub - sp. w/lavender flowers

SECTION III. SARONA ROAD TO HULIHEE PALACE

Mimosoideae:
Samanea saman - Monkeypod tree

Boragniceae:
Messerschmidia argentia - Tree heliotrope

Palmae:
Actinophloeus macarthuri - MacArthur palm
Chrysalidocarpus lutescens - Areca palm
Cocos nucifera - Coconut palm
Pritchardia sp. - Loulu palm
Pritchardia thurstonii - Loulu palm

Malvaceae:
Hibiscus sp. - White hibiscus
Hibiscus tiliaceus - Hau
Thespesia populnea - Milo

Pandanaceae:
Pandanus odoratissimus - Hala

Apocynaceae:
Plumeria accumimata - Plumeria

Araliaceae:
Brassaia actinophylla - Octopus tree

Euphorbiaceae:
Aleurites moluccana - Kukui

Polypodiaceae:
Polypodium phymatodes - Laua`e fern

Amaryllidaceae:
Hymenocallis littoralis - Spider lily

Liliaceae:
Cordyline terminalis - Ti

Musaceae:
Musa sp. - Banana

Rubiaceae:
Morinda citrifolia - Noni

Moraceae:
Ficus sp. - banyan

Nyctaginaceae:
Bougainvillea sp. - Bougainvillea

Cycadaceae:
Cycas circinalis -Sago palm

Liliaceae:
Dracaena fragrans - Dracaena
Dracaena marginata - Dracaena

Rutaceae:
Murraya Exotica - Mock orange

Caesalpinioideae:
Delorix regia - Royal poinciana

Lythraceae:
Lagerstroemia speciosa - Giant Crepe Myrtle

Ulmaceae:
Trema orientalis - Gunpowder tree

Cactaceae:
Hylocereus undatus - Night Blooming Cereus

Respectfully submitted,

Bunichi Usagawa

Bunichi Usagawa

References:

In Gardens of Hawaii by Marie C. Neal

Palms by Alec Blombery and Tony Rodd

APPENDIX C
FAUNA SURVEY

FAUNA SURVEY OF KAILUA PIER AND IMMEDIATE VICINITY
KAILUA-KONA, HAWAII
February 12, 2000

The observations and known sightings are composed almost entirely of introduced species of birds and mammals. It is also possible that three endemic Hawaiian creatures classified as endangered by the U. S. Fish & Wildlife Service may enter or fly over the project site. These are the Hawaiian Hawk or Io, Nene, and the Hawaiian Bat.

FAUNA LIST

These birds may possibly be found near or flying over the project site.

NATIVE BIRDS

Common Name	Hawaiian Name	Scientific Name
Hawaiian Goose	Nene	Nesochen sandvicensis
Hawaiian Hawk	Io	Buteo solitarius
Hawaiian Owl	Pueo	Asio flammeus sandwichensis
Pacific Golden Plover	Kolea	Pluvialis fulva
Wandering Tattler	'Ulili	Heteroscelus incanus
Sanderling	Hunakai	Calidris alba
Ruddy Turnstone	Akekeke	Arenara interpres
Black-Crowned Night Heron	Auku'u	Nycticorax nycticorax hoactli
Great Frigatebird	Iwa	Fregata minor palmerstoni
Brown Booby	'A	Sula leucogaster plotus
White-Tailed Tropicbird	Koa'e Kea	Phaethon lepturus dorotheae
Hawaiian Noddy	Noio	Anous minutus melanogenys

INTRODUCED BIRDS

Common Name	Scientific Name
Barn Owl	Tyto alba
Black Francolin	Francolinus francolinus
Gray Francolin	Francolinus pondicerianus
Spotted Dove	Streptopelia chinensis
Zebra Dove	Geopelia striata
Japanese White-Eye	Zosterops japonicus
Common Mynah	Acridotheres tristis
House Sparrow	Passer domesticus
House Finch	Carpodacus mexicanus
Saffron Finch	Sicalis flaveola
Java Sparrow	Padda oryzivora
Warbling Silverbill	Lonchura malabarica
Spotted Munia (Ricebird)	Lonchura punctulata
Yellow-Fronted Canary	Serinus mozambicus
Lavender Waxbill	Estrilda caerulescens
Red Cardinal	Cardinalis cardinalis
Yellow-Billed Cardinal	Paroaria capitata

MAMMALS

The Hawaiian Bat, the State's only native land mammal, is widely distributed on the Island of Hawaii. It could possibly inhabit or fly over the project site from time to time.

Other mammals that could be present are all introduced by humans. It is probable that the following list of mammals could be found at the project site:

NATIVE MAMMAL

Common Name	Scientific Name
Hawaiian Bat	Lasiurus cinereus semotus

INTRODUCED MAMMALS

Common Name	Scientific Name
Mongoose	Herpestes auropunctatus
Rat	Rattus rattus
House Mouse	Mus musculus
Cat	Felix catus
Dog	Canis familiaris

APPENDIX D
MARINE SURVEY

MARINE LIFE SURVEY
KAILUA-KONA PIER
KAILUA-KONA, HAWAII

Conducted by:

Michael Childers
John Coney
Chris Cordio
Steve Cotton

Submitted April 15, 1997

to

W. Y. Thompson, P.E.
98-1051 Kahapili St.
Aiea, HI 96701

INTRODUCTION

This report summarizes a nearshore marine life survey of the perimeter area of Kailua-Kona Pier, Kailua-Kona, Hawaii. The survey was conducted for the purpose of characterizing the diversity and abundance of the nearshore marine community prior to the proposed repairs to the pier.

METHODS

This survey was conducted on April 6, 1997 by a team of three scientific divers performing two dives each. On each of the dives a five meter wide transect beginning at the public beach end of the pier and ending at the small boat ramp was surveyed. The transect included the exterior face of the pier bulkhead. Marine fish, corals, macroinvertebrates, and macroalgaes along the transect were noted and their abundance visually estimated. Visual observations were augmented by U/W 35 mm slides. The general substratum composition within the transect was also noted. While at the pier, the survey results were reviewed and a species list compiled.

RESULTS

In addition to the species list indicating the relative abundance of seaweeds, invertebrates, and marine fish, the following narrative describes the general coral community and substratum composition along the perimeter of the pier.

Beginning at the public beach end of the pier, *Porites lobata* (lobe coral) was abundant both on the bulkhead and on the seafloor. The lavender octocoral, *Anthelia edmondsoni* covered most of the hard substrate of the seafloor as well as large portions of the bulkhead. The rice corals, *Montipora verrucosa* (brown rice coral) and *M. flabellata* (blue rice coral) as well as *Pavona varians* (false brain coral) were commonly found encrusting areas of the bulkhead as well as the substrate. A few colonies of *Pocillopora meandrina* (cauliflower coral) were observed. The substrate in this area consisted of sand with boulders and colonies of lobe coral.

Continuing along the pier, lobe coral was again the most abundant coral on the bulkhead and the bottom, with brown rice coral and cauliflower coral being commonly found. Some colonies of *P. compressa* (finger coral) were observed on the bottom.

At the seaward end of the pier, lobe coral remained the most abundant type of coral with colonies of finger coral becoming common on the seafloor and deeper portions of the bulkhead. Rice corals were observed less commonly. The seafloor here consisted of mostly rocks and colonies of lobe and finger corals. Overall, corals on the bulkhead were less abundant than other sections of the pier.

Rounding the corner of the pier, leading to the small boat ramp, lobe coral was the dominant species both on the bulkhead and along the seafloor, with false brain coral, brown rice coral, and octocoral also being abundant. Cauliflower corals and finger corals were commonly observed.

SPECIES LIST

Relative Abundance = Abundant>Common>Uncommon>Rare

SEAWEEDS

Division	Species	Common Name	Relative Abundance
Cyanophyta	*Lyngbya majuscula*	blue-green algae	abundant
Chlorophyta	*Bryopsis sps.*		rare
	Chaetomorpha antennina		rare
	Ulva fasciata	sea lettuce	abundant
Phaeophyta	*Sphacelaria furcigera*		rare
Rhodophyta	*Ahnfeltiopsis concinna*	limu aki'aki	abundant
	Mesophyllum mesomorphum		abundant
	Porolithon gardineri		abundant
	Porolithon onkodes		abundant
	Predaea weldii		rare

INVERTEBRATES

Phylum	Species	Common Name	Relative Abundance
Porifera	unknown	sponges	uncommon
Cnidaria	*Anthelia edmondsoni*	lavender octocoral	abundant
	Cyphasterea ocellina		uncommon
	Leptastrea purpurea		uncommon
	Montipora flabellata	blue rice coral	uncommon
	Montipora verrucosa	brown rice coral	common
	Palythoa tuberculosa	rubber coral	uncommon
	Pavona varians	false brain coral	common
	Pocillopora meandrina	cauliflower coral	common
	Porites compressa	finger coral	uncommon
	Porites lobata	lobe coral	abundant
	Porites rus		uncommon
	Zoanthus spp.	zoanthids	common
Mullusca	*Phyllidia varicosa*	nudibranch	rare

	Cellana exarata	limpets	uncommon
	Pinctada margaritifera	black pearl oyster	rare
	Cypraea mauritiana	humpback cowry	rare
Annelida	*Eurythoe complanata*	fireworm	rare
	Spirobranchus giganteus	christmas tree worm	abundant
Arthropoda	unknown	hermit crabs	uncommon
	Grapsus tenuicrustatus	A'ama crabs	common
	Stenopus hispidus	barber pole	rare
Echinodermata	*Actinopyga mauritiana*	speckled sea cucumber	uncommon
	Chrondrocidaris ginantae	rough spined urchin	rare
	Culcita novaeguineae	cushion seastar	rare
	Echinometra mathaei	rock boring urchin	abundant
	Echinometra oblonga	black boring "	abundant
	Echinothrix calamaris	banded urchin	abundant
	Echinothrix diadema	black urchin	abundant
	Heterocentrotus mammillatus	slate pencil urchin	abundant
	Holohturia atra	black cucumber	rare
	Linkia multiflora	pink seastar	rare
	Tripneustes gratilla	collector urchin	abundant

Fishes

Family	**Species**	**Common Name**	**Relative Abundance**
Synodontidae	*Synodus spp.*	lizardfish	rare
Bothidae	*Bothus mancus*	peacock flounder	rare
Carrangidae	*Decapterus macarellus*	opelu	common
Muraenidae	*Gymnothorax flavimarginatus*	yellow margin moray	uncommon

	Gymnothorax meleagris	whitemouth moray	uncommon
Aulostomidae	*Aulostomus chinensis*	trumpetfish	common
Scorpaenidae	*Scorpaenopis diabolus*	devil scorpionfish	rare
Serranidae	*Cephalopholis argus*	peacock grouper	uncommon
Cirrhitidae	*Paracirrhites arcatus*	arceye hawkfish	common
	Paracirrhites forsteri	blackside hawkfish	uncommon
Mullidae	*Mulloidichthys flavolineatus*	white goatfish	uncommon
	Mulloidichthys vanicolensis	yellowfin goatfish	common
	Parupeneus bifasciatus	doublebar goatfish	uncommon
	Parupeneus multifasciatus	manybar goatfish	uncommon
Chaetodontidae	*Chaetodon auriga*	threadfin butterfly	uncommon
	Chaetodon lunula	raccoon butterfly	common
	Chaetodon multicinctus	pebbled butterfly	abundant
	Chaetodon ornatissimus	ornate butterfly	common
	Chaetodon quadrimaculatus	fourspot butterfly	uncommon
	Chaetodon trifasciatus	oval butterfly	uncommon
	Chaetodon unimaculatus	teardrop butterfly	uncommon
	Forcipiger flavissimus	common longnose	abundant
	Forcipiger longirostris	rare longnose	common
Pomacentridae	*Abudefduf abdominalis*	Hawaiian sergeant	abundant

	Abudefduf sordidus	blackspot sergeant	uncommon
	Chromis vanderbilti	blackfin chromis	abundant
	Plectroglyphidodon johnstonianus	blue-eye damselfish	uncommon
	Stegastes fasciolatus	Pacific gregory	common
Labridae	*Bodianus bilunulatus*	Hawaiian hogfish	uncommon
	Coris venusta	elegant coris	common
	Gomphosus varius	bird wrasse	uncommon
	Labroides phthirophagus	cleaner wrasse	uncommon
	Stethojulis balteata	belted wrasse	common
	Thalassoma duperrey	saddleback wrasse	abundant
	Thalassoma trilobatum	christmas wrasse	uncommon
Scaridae	*Scarus psittacus*	palenose parrotfish	uncommon
Acanthuridae	*Acanthurus achilles*	achilles tang	abundant
	Acanthurus dussumieri	eyestripe surgeon	uncommon
	Acanthurus leucopareius	whitebar surgeon	rare
	Acanthurus nigrofuscus	brown surgeon	abundant
	Acanthurus olivaceus	orangebar surgeon	common
	Acanthurus xanthopterus	yellowfin surgeon	uncommon
	Ctenochaetus strigosis	goldring surgeon	abundant
	Zanclus cornutus	moorish idol	abundant
	Zebrasoma flavescens	yellow tang	abundant

Blennidae	*Exallias brevis*	shortbodied blenny	rare
Balistidae	*Sufflamen bursa*	lei triggerfish	common
Monacanthidae	*Cantherhines dumerilii*	barred filefish	uncommon
Ostraciidae	*Ostracion meleagris*	spotted boxfish	uncommon
Tetraodontidae	*Arothron hispidus*	stripebelly puffer	uncommon
	Canthigaster jactator	Hawaiian whitespotted toby	common

CONCLUSIONS

The marine life community around the pier appears to be typical of a nearshore Hawaiian marine community exposed to seasonal, moderately high energy surf. None of the species observed are listed as threatened or endangered. It should be noted, however, that rare species of fish or invertebrates, especially nocturnal species, may have been missed during the daytime visual survey. Nonetheless, colonization by hard stony corals, octocorals, seaweeds, macroinvertebrates, and abundant reef fishes suggest a healthy marine community.

FAUNA SURVEY OF KAILUA PIER AND IMMEDIATE VICINITY
KAILUA-KONA, HAWAII
February 12, 2000

The observations and known sightings are composed almost entirely of introduced species of birds and mammals. It is also possible that three endemic Hawaiian creatures classified as endangered by the U. S. Fish & Wildlife Service may enter or fly over the project site. These are the Hawaiian Hawk or Io, Nene, and the Hawaiian Bat.

FAUNA LIST

These birds may possibly be found near or flying over the project site.

NATIVE BIRDS

Common Name	Hawaiian Name	Scientific Name
Hawaiian Goose	Nene	Nesochen sandvicensis
Hawaiian Hawk	Io	Buteo solitarius
Hawaiian Owl	Pueo	Asio flammeus sandwichensis
Pacific Golden Plover	Kolea	Pluvialis fulva
Wandering Tattler	'Ulili	Heteroscelus incanus
Sanderling	Hunakai	Calidris alba
Ruddy Turnstone	Akekeke	Arenara interpres
Black-Crowned Night Heron	Auku'u	Nycticorax nycticorax hoactli
Great Frigatebird	Iwa	Fregata minor palmerstoni
Brown Booby	'A	Sula leucogaster plotus
White-Tailed Tropicbird	Koa'e Kea	Phaethon lepturus dorotheae
Hawaiian Noddy	Noio	Anous minutus melanogenys

INTRODUCED BIRDS

Common Name	Scientific Name
Barn Owl	Tyto alba
Black Francolin	Francolinus francolinus
Gray Francolin	Francolinus pondicerianus
Spotted Dove	Streptopelia chinensis
Zebra Dove	Geopelia striata
Japanese White-Eye	Zosterops japonicus
Common Mynah	Acridotheres tristis
House Sparrow	Passer domesticus
House Finch	Carpodacus mexicanus
Saffron Finch	Sicalis flaveola
Java Sparrow	Padda oryzivora
Warbling Silverbill	Lonchura malabarica
Spotted Munia (Ricebird)	Lonchura punctulata
Yellow-Fronted Canary	Serinus mozambicus
Lavender Waxbill	Estrilda caerulescens
Red Cardinal	Cardinalis cardinalis
Yellow-Billed Cardinal	Parcaria capitata

MAMMALS

The Hawaiian Bat, the State's only native land mammal, is widely distributed on the Island of Hawaii. It could possibly inhabit or fly over the project site from time to time.

Other mammals that could be present are all introduced by humans. It is probable that the following list of mammals could be found at the project site:

NATIVE MAMMAL

Common Name	Scientific Name
Hawaiian Bat	Lasiurus cinereus semotus

INTRODUCED MAMMALS

Common Name	Scientific Name
Mongoose	*Herpestes auropunctatus*
Rat	Rattus rattus
House Mouse	Mus musculus
Cat	Felix catus
Dog	Canis familiaris

APPENDIX E
NOISE & VIBRATION STUDY

Y. Ebisu & Associates
Acoustical and Electronic Engineers

1126 12th Avenue
Room 305
Honolulu, Hawaii 96816
(808) 735-1634

YEA Job #34-024
June 27, 1997

W. Y. Thompson, P.E.
98-1051 Kahapili Street
Aiea, Hawaii 96701

Subject: Results of Noise/Vibration Study; Emergency Repairs to Kailua Pier
North Kona, Hawaii

Dear Mr. Thompson:

Purpose. The following letter report describes my predictions and evaluations regarding potential noise and vibration impacts resulting from pile driving operations during the emergency repair work on the Kailua Pier. Figure 1 depicts the relationship of the Kailua Pier Project Site to the community of Kailua fronting Kailua Bay. Some of the historic buildings identified in Figure 1 date back to the early 1800's, and risks of potential damage to these structures were also evaluated. Pre-drilling will be required by the project specifications, and should reduce the number of blows required to drive a pile to refusal. But pre-drilling is not expected to significantly reduce the worst case noise or vibration levels of the pile driver, particularly during the final stages of hard driving at refusal.

Existing Background Ambient Noise Levels. Existing background ambient noise measurements were obtained during the morning of June 20, 1997 at four locations around the Kailua Pier. The results of these measurements are depicted in histogram format in Figures 2 thru 5 for Locations "A" thru "D", respectively. The noise measurement locations are shown in Figure 1. In the histograms of measured ambient noise levels, the Lmax, Leq, and Lmin values represent the maximum, average, and minimum sound levels, respectively, which were recorded at the measurement location. The L50 and L10 values represent the statistical median (level exceeded fifty percent of the time), and the level exceeded ten percent of the time, respectively. Measured background ambient noise levels were controlled by surf, birds, and motor vehicle traffic, and typically ranged between 50 and 65 dB, and were considered to be moderately loud.

Pile Driving Noise. Typical maximum (or Lmax) noise levels of impact pile drivers are expected to range between 98 dB at 100 FT distance to 78 dB at 1,000 FT

distance. Typical median (L50, or noise level exceeded 50 percent of the time) noise levels during impact pile driving activities are expected to range between 93 dB at 100 FT distance to 71 dB at 1,000 FT distance.

The predicted outdoor noise levels during pile driving activities at various locations around the Kailua Pier are shown in Figure 6. Expected maximum noise levels in the outdoor function areas and outside the ground level shops of the King Kamehameha Hotel are expected to range between 87 and 90 dB. Indoors, typical levels of pile driving noise within naturally ventilated and air conditioned structures are approximately 10 and 22 dB less, respectively, than the outdoor levels shown in Figure 6. Similar levels of 87 to 90 dB.are expected at the shops and a single family residence at the north end of Alii Drive. At the Hulihe'e Palace and Mokuaikaua Church, lower levels of 80 to 81 dB are predicted from pile driving activities. The predicted noise levels from pile driving activities are relatively high, and can interfere with outdoor functions at the hotel, sleep, and speech communication.

Mitigation of impact pile driving noise to inaudible levels will not be practical due to the intensity of the noise sources (98 dB at 100 FT distance), and due to the exterior nature of the work. There are no noise limits placed on pile driving activities, except for the mandatory curfew periods shown in Table 1. These curfew periods are administered by the State Department of Health (DOH) and are applicable on the island of Hawaii under "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996. As indicated in Table 1, noisy construction activities are not allowed on holidays or Sundays, during the early morning, and during the late evening periods under the DOH permit procedures.

It is recommended that the State advise the community of the probable period of pile driving activities prior to award of the contract due to the disruptive nature of the repair work. Because of the relatively high levels of pile driving noise which are predicted in the outdoor function areas of the King Kamehameha Hotel, it is recommended that the Contractor minimize pile driving activities during use of the outdoor function areas by large groups or convention guests. Prior to scheduling of the pile driving work, a mutually acceptable work schedule should be arranged between the hotel and the Contractor. By scheduling the pile driving work in conjunction with the hotel bookings, potential noise and economic impacts on the hotel and its guests may be minimized. Because of the residence located next to the shops in Kona Square, as well as the resort nature of the area, a later start time of 9:00 AM instead of 6:00 AM is recommended for pile driving activities. This later start time has been incorporated into the project specifications.

Vibration from Pile Driving. Induced ground vibrations from impact pile driving operations have the potential to cause architectural and structural damage to structures, and to create discomfort to those exposed to high levels of vibration.

Ground vibrations generated during pile driving operations are generally described in terms of peak particle (or ground) velocity in units of inches/second. The human being is very sensitive to ground vibrations, which are perceptible at relatively low particle velocities of 0.01 to 0.04 inches/second. Damage to structures, however, occur at even higher levels of vibration as indicated in Table 2. The most commonly used damage criteria for structures is the 2.0 inches/second limit derived from work by the U.S. Bureau of Mines and a value of 0.5 inches/second used by Dames and Moore (August 28, 1992 letter to Walter Leong & Associates). A more conservative limit of 0.2 inches per second was used for planning purposes on this project because of the repetitive nature of pile driving operations which can increase risks of damage due to fatiguing, the large plate glass windows of the ground floor restaurants and shops nearby, plus the historic nature and age of some of the structures and buildings in the area.

Based on measured vibration levels during pile driving operations under various soil conditions and at various distances, estimates of ground vibration levels vs. distance from the pile driver have been made for various soil conditions and for various energy ratings of the pile drivers. Figure 7, which was extracted from "Damage Effects of Pile Driving Vibration;" Highway Research Record, Number 155, may be used to predict vibration levels for the soil conditions indicated. When coral layers must be penetrated, vibration levels can be expected to be higher than those shown in Figure 7, particularly if the adjacent structures are supported by the common coral layer. Pre-drilling should eliminate this concern. From Figure 7, and for wet sand soil conditions, the 0.2 inches/second vibration damage criteria will be exceeded at a scaled energy distance factor of approximately 0.7. The scaled energy distance factor is equal to the square root of the energy (in foot-pounds) per blow of the hammer divided by the distance (in feet) between the pile tip and the monitoring location. For a 30,000 foot-pound pile driver, a scaled energy distance of 0.7 equates to a separation distance of 247 FT. For a 50,000 foot-pound pile driver, a scaled energy distance of 0.7 equates to a separation distance of 319 FT. Figure 8 depicts the predicted vibration levels from a 50,000 foot-pound pile driver using the wet sand (worst case) curve of Figure 7.

Under clay soil conditions, and using the prediction procedures contained in Figure 7, a shorter separation distance of 115 FT is required to not exceed the 0.2

inches/second criteria when using a 30,000 foot–pound pile driver. It should be noted that 0.2 inches per second vibration levels were measured from a 22,400 foot–pound pile driver at even shorter separation distances of approximately 30 FT in sandy, layered soil ("Some Aspects of the Ground Vibration Problem;" Noise Control Engineering; May–June 1978). The measurement data reported from the 22,400 foot–pound pile driver were significantly lower than the vibration levels predicted by the method–ology of Figure 7. Similar observations of lower than predicted vibration levels were reported locally by Dames and Moore (August 28, 1992).

As indicated above, predictions of peak ground vibration levels vs. scaled en–ergy distance factor from the driven pile are not precise, with initial uncertainty factor for a given location in the order of 10:1. For this reason, it is standard practice to employ seismograph monitoring of ground vibrations during pile driving operations with a 3–axis geophone or accelerometer. Since pile drivers of approximately 30,000 to 50,000 foot–pounds ratings are specified for use on the job site, the initial vibration predictions indicate that there is some risk of exceeding the 0.2 inches/second vibration damage criteria at 247 to 319 FT separation distances, and monitoring during the initial phase of pile driving operations is warranted. Monitoring alone, however, may not be a practical mitigation measure unless there are alternative pile driving methods or foundation plans which can be employed if the damage criteria is exceeded. Nevertheless, the following mitigation measures are recommended for implementation during the design and construction phases of the project:

- In addition to the normal planning and design concerns regarding potential damage due to settling and heaving during construction, consideration should also be given to risks of damage due to vibration from pile driving. A damage criteria of 0.2 inches/second should be used in conjunction with the vibration prediction method of Figure 7 to identify the potential damage risk distances to the driven piles for old structures. Because of the possible over–prediction of vibration levels using Figure 7, the requirement for initial 3–axis geophone monitoring at all structures within 300 feet of the pile driver should be added to the project specifications. If measured vibration levels are significantly less than 0.2 inches/per second at 300 feet distance, the monitoring program may be discontinued.

- Predicted vibration levels at the Hulihe'e Palace and Mokuaikaua Church (two historic structures) are less than 0.2 inches per second for a 50,000 foot–pound pile driver. Therefore, risks of architectural or structural damage to these two

older buildings of historical significance are considered to be very low. Vibration levels from pile driving could be as high as 0.4 inches/second at the Ahu'ena Heiau. The rock base and thatched structure at the Heiau site appear to have been restored. Because of the nature of the structures on the site, risks of architectural (plaster cracking or glass breaking) damage and structural damage are considered to be low. The Heiau site is a primary candidate for vibration monitoring during the initial phases of pile driving.

- Test piles should be driven and their vibrations monitored and recorded at the Heiau site and at the King Kamehameha Hotel (near the parking lot) prior to initiation of routine pile driving operations. The monitoring of the test piles should be designed to measure the expected peak, 3-axis vibration levels at the two monitoring sites. The results of the monitoring should be compared with the predicted vibration levels shown in Figures 7 and 8, and used to define the empirical distances from the driven pile to the 0.2 inches/second damage risk locations. A more accurate evaluation of the risks of architectural or structural damage to the nearby structures can be made following these tests.

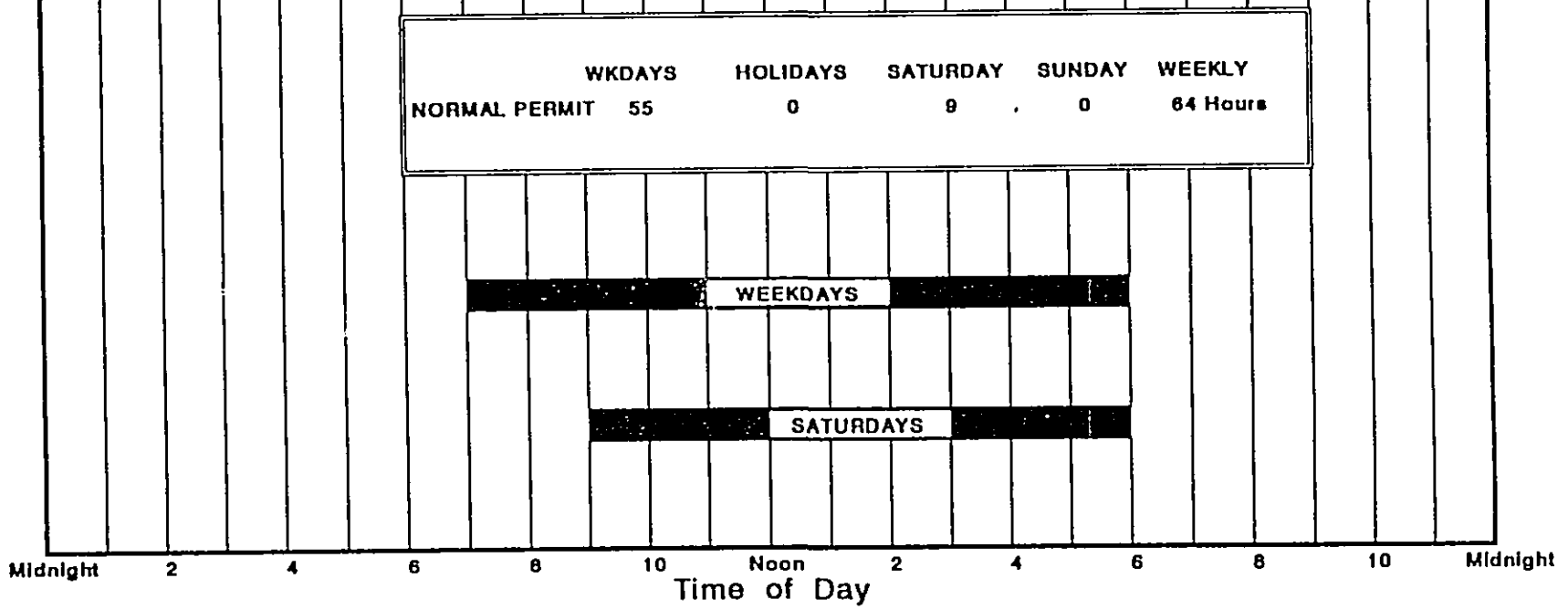
- If measured vibration levels from the test piles indicate that 0.2 inches/second would not be exceeded at structures within 300 feet from the driven pile, the geophone monitoring program may be discontinued.

Summary. To summarize, the airborne noise impacts from the pile driving activities are expected to be difficult to mitigate due to the large (1,000 FT radius) impact area for naturally ventilated buildings. The King Kamehameha Hotel's outdoor function areas, as well as the shops, a single family residence, and visitor attractions along Alii Drive are within the zone of greatest noise impact. Risks of architectural or structural damage to the two historic buildings on Alii Drive are expected to be very low due to their relatively large separation distance from the project site. Risks of architectural or structural damage to some of the structures within 300 feet of the pile driving activities are considered to be low, but initial vibration monitoring is recommended for empirically determining vibration levels at the closest structures within 300 feet of the piles.

Sincerely,

Yoichi Ebisu, P.E.

	WKDAYS	HOLIDAYS	SATURDAY	SUNDAY	WEEKLY
NORMAL PERMIT	55	0	9	0	64 Hours



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

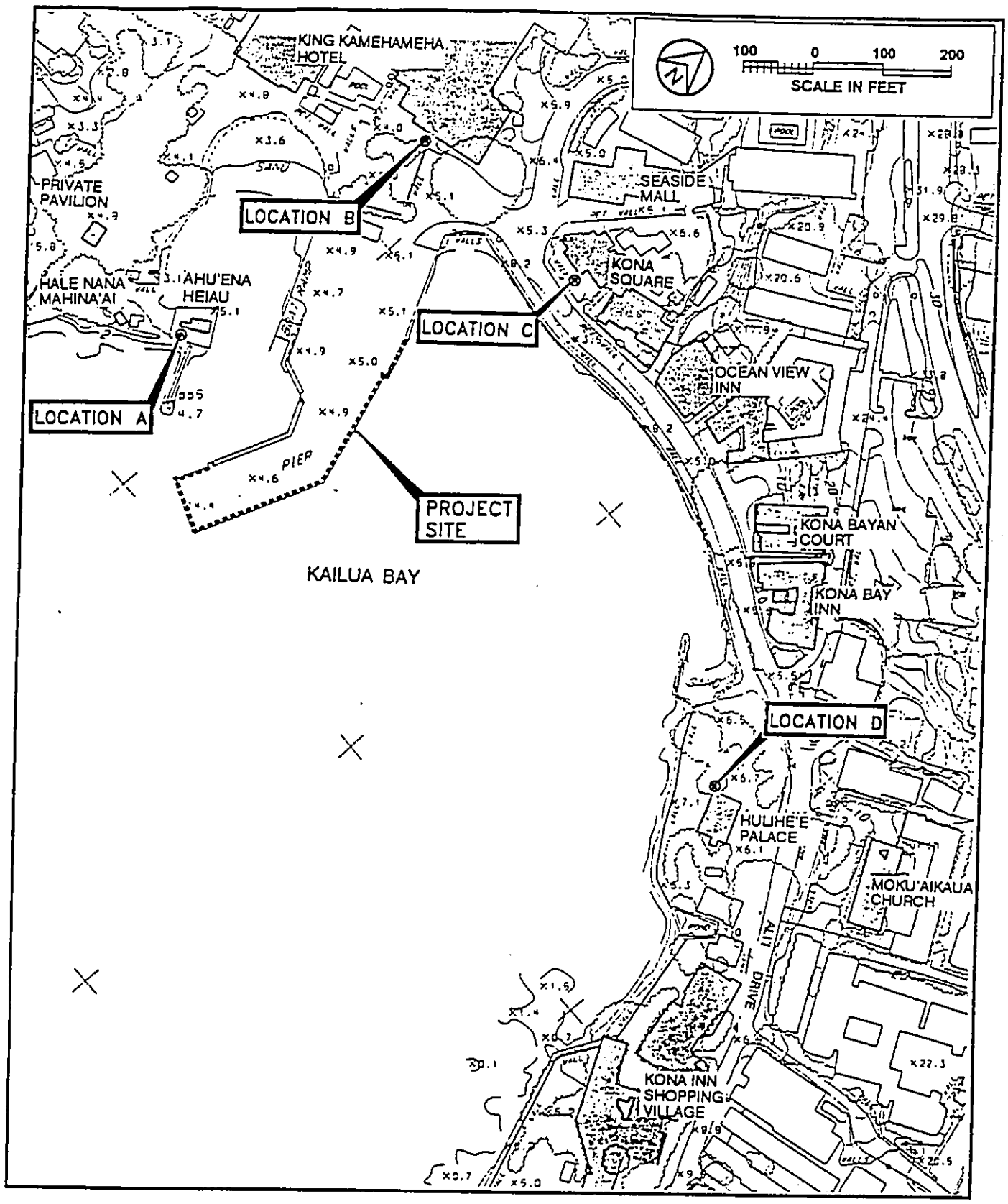
TABLE 1

TABLE 2

SUMMARY OF BUILDING DAMAGE CRITERIA

PEAK GROUND VELOCITY (mm/sec)	PEAK GROUND VELOCITY (in/sec)	COMMENT
193.04	7.6	Major damage to buildings (mean of data).
137.72	5.4	Minor damage to buildings (mean of data).
101.16	4.0	'Engineer structures' safe from damage.
50.8	2.0	Safe from damage limit (probability of damage <5%).
		No structural damage.
33.02	1.3	Threshold of risk of 'architectural' damage for houses.
25.4	1.0	No data showing damage to structures for vibration <1 in./sec.
15.24	0.6	No risk of 'architectural' damage to normal buildings.
10.16	0.4	Threshold of damage in older homes.
5.08	0.2	Statistically significant percentage of structures may experience minor damage (including earthquake, nuclear event, and blast data for old and new structures).
		No 'architectural' damage.
3.81	0.5 to 0.15	Upper limits for ruins and ancient monuments.
1.0	0.04	Vertical vibration clearly perceptible to humans.
0.32	0.01	Vertical vibration just perceptible to humans.

Source: 'State-of-the-Art Review: Prediction and Control of Groundborne Noise and Vibration from Rail Transit Trains'; U.S. Department of Transportation; December 1983.



LOCATIONS OF NOISE MEASUREMENT SITES

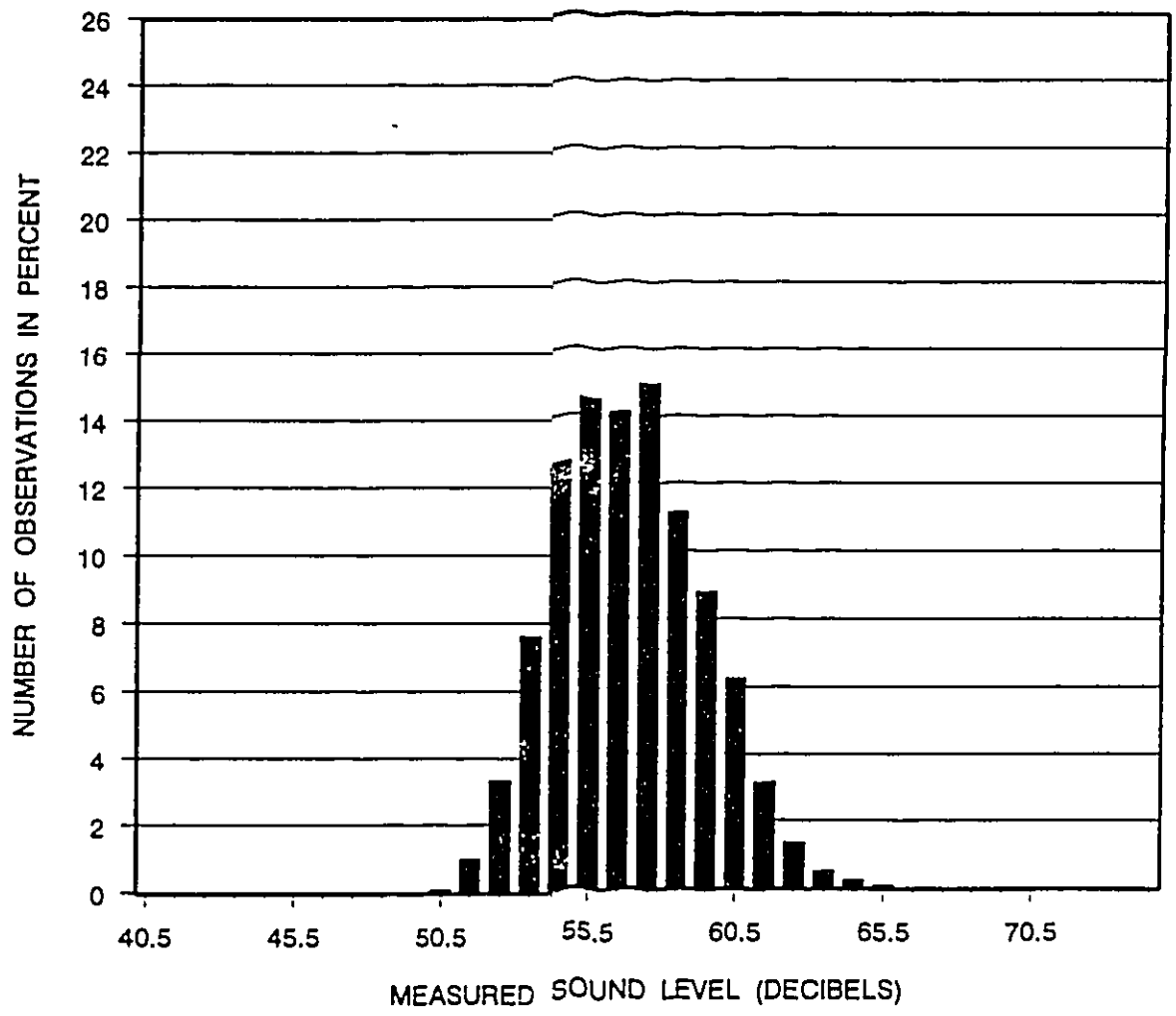
FIGURE 1

FIGURE 2

HISTOGRAM OF MEASURED SOUND LEVELS AT LOCATION "A"

DATE: JUNE 20, 1997
TIME: 0800–0815 HOURS

METER RESPONSE: FAST



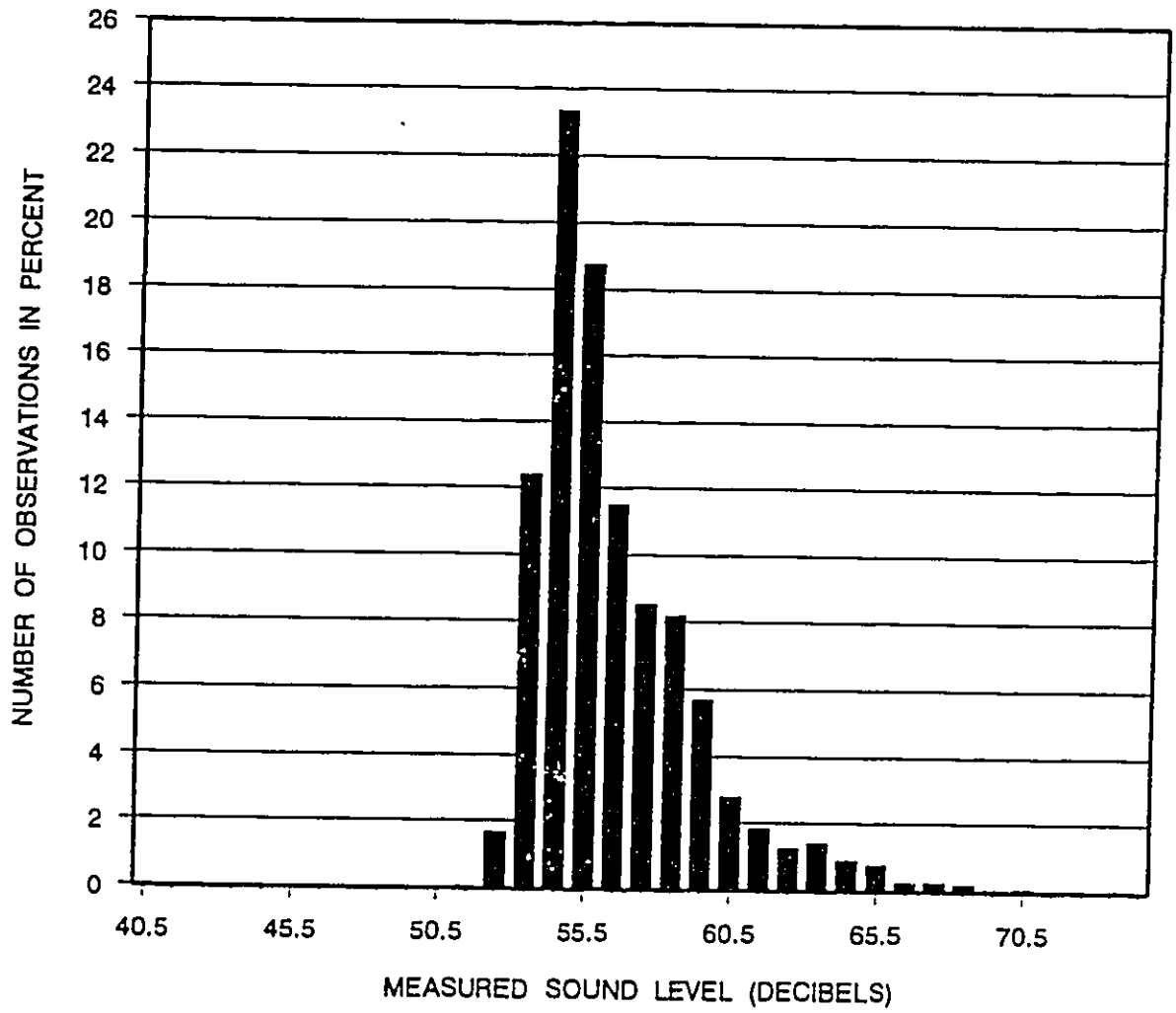
Lmax: 65.4 dBA
L10: 60.1 dBA
L50: 56.6 dBA
Leq: 57.4 dBA
Lmin: 50.1 dBA

FIGURE 3

HISTOGRAM OF MEASURED SOUND LEVELS AT LOCATION "B"

DATE: JUNE 20, 1997
TIME: 0825–0840 HOURS

METER RESPONSE: FAST



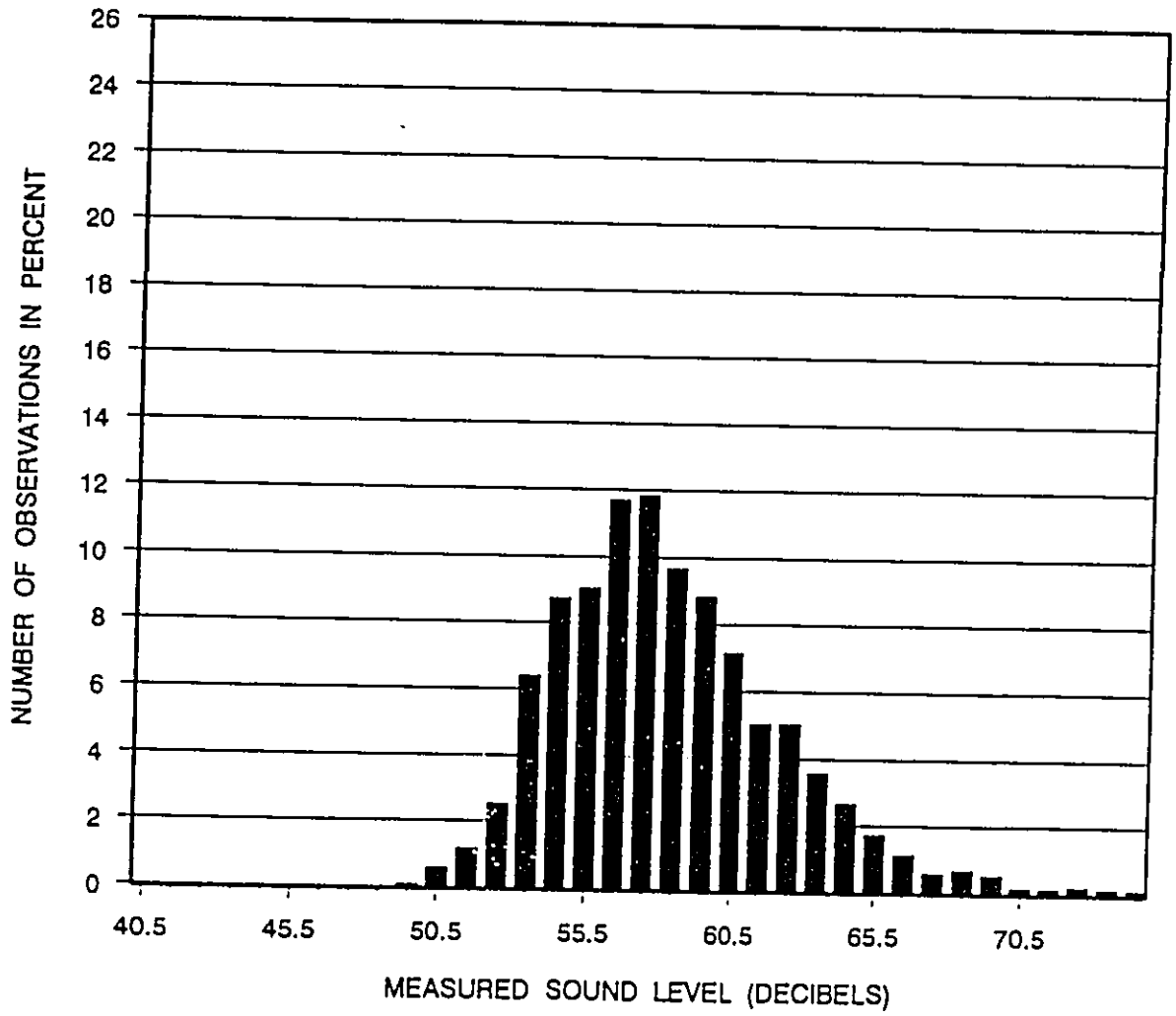
Lmax:	72.9 dBA
L10:	59.6 dBA
L50:	55.6 dBA
Leq:	57.5 dBA
Lmin:	51.7 dBA

FIGURE 4

HISTOGRAM OF MEASURED SOUND LEVELS AT LOCATION "C"

DATE: JUNE 20, 1997
TIME: 0854–0909 HOURS

METER RESPONSE: FAST



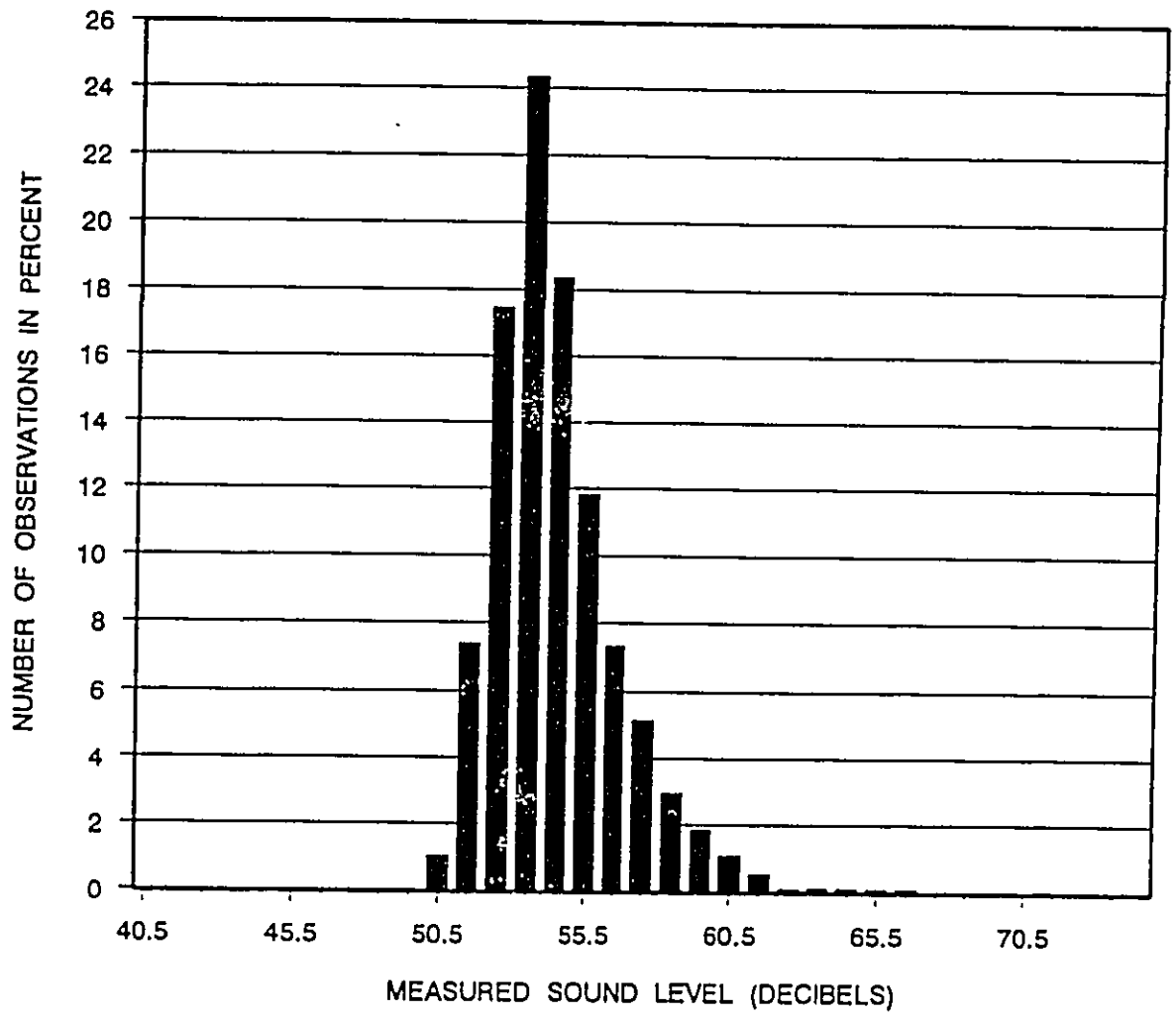
Lmax: 76.1 dBA
L10: 63.1 dBA
L50: 57.6 dBA
Leq: 60.5 dBA
Lmin: 49.2 dBA

FIGURE 5

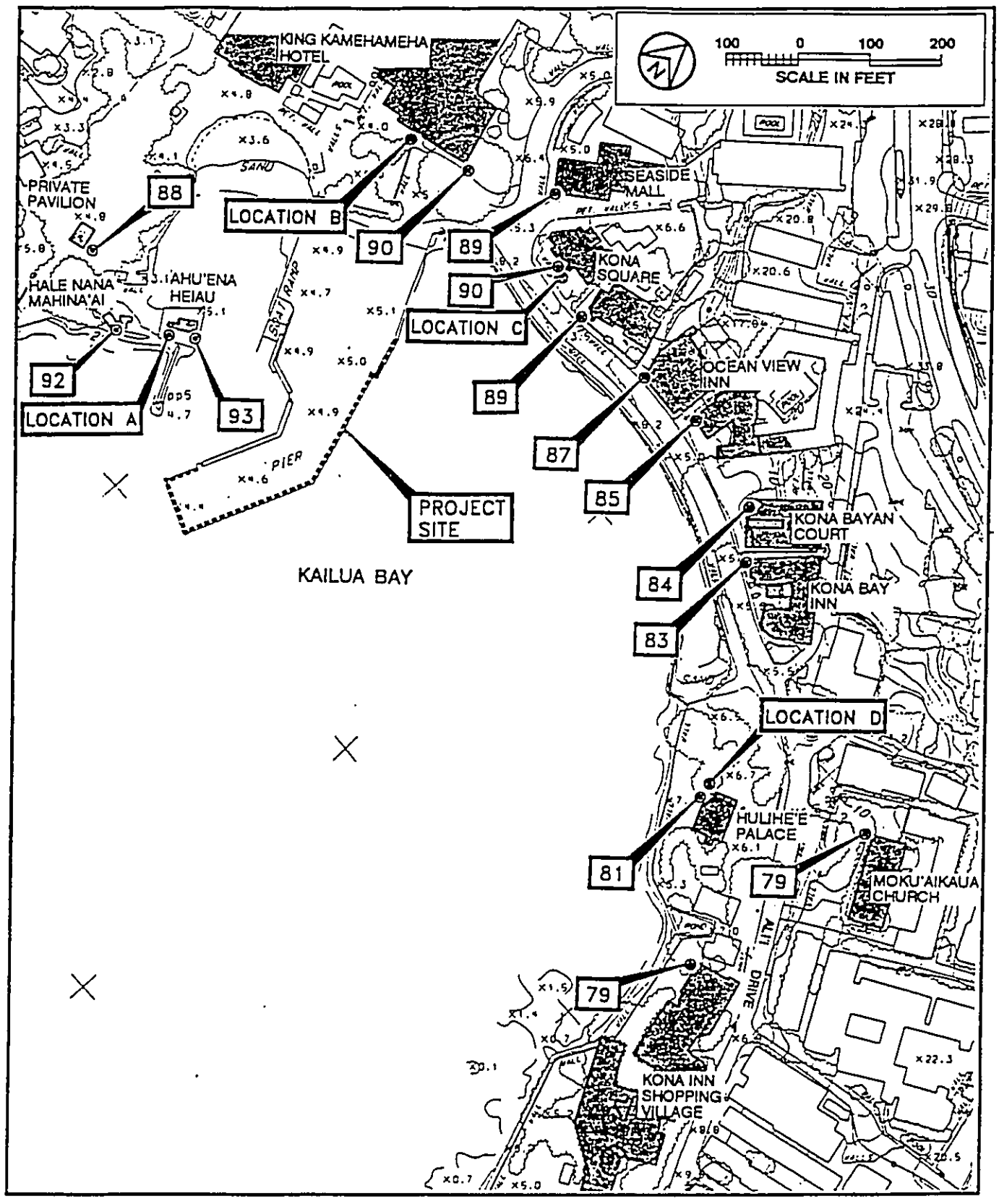
HISTOGRAM OF MEASURED SOUND LEVELS AT LOCATION "D"

DATE: JUNE 20, 1997
TIME: 0928–0943 HOURS

METER RESPONSE: FAST

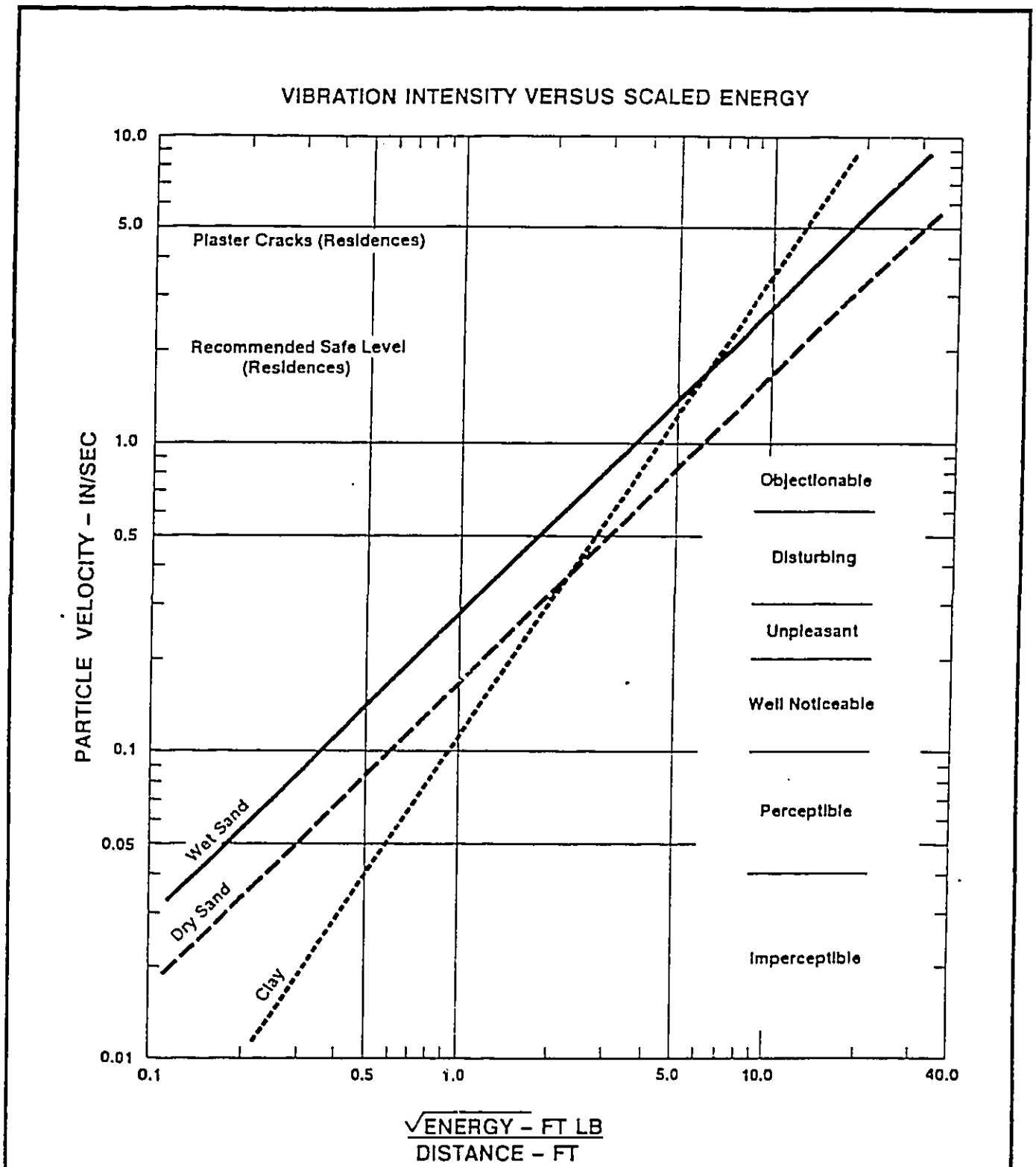


Lmax: 66.4 dBA
L10: 57.1 dBA
L50: 53.6 dBA
Leq: 54.9 dBA
Lmin: 49.8 dBA



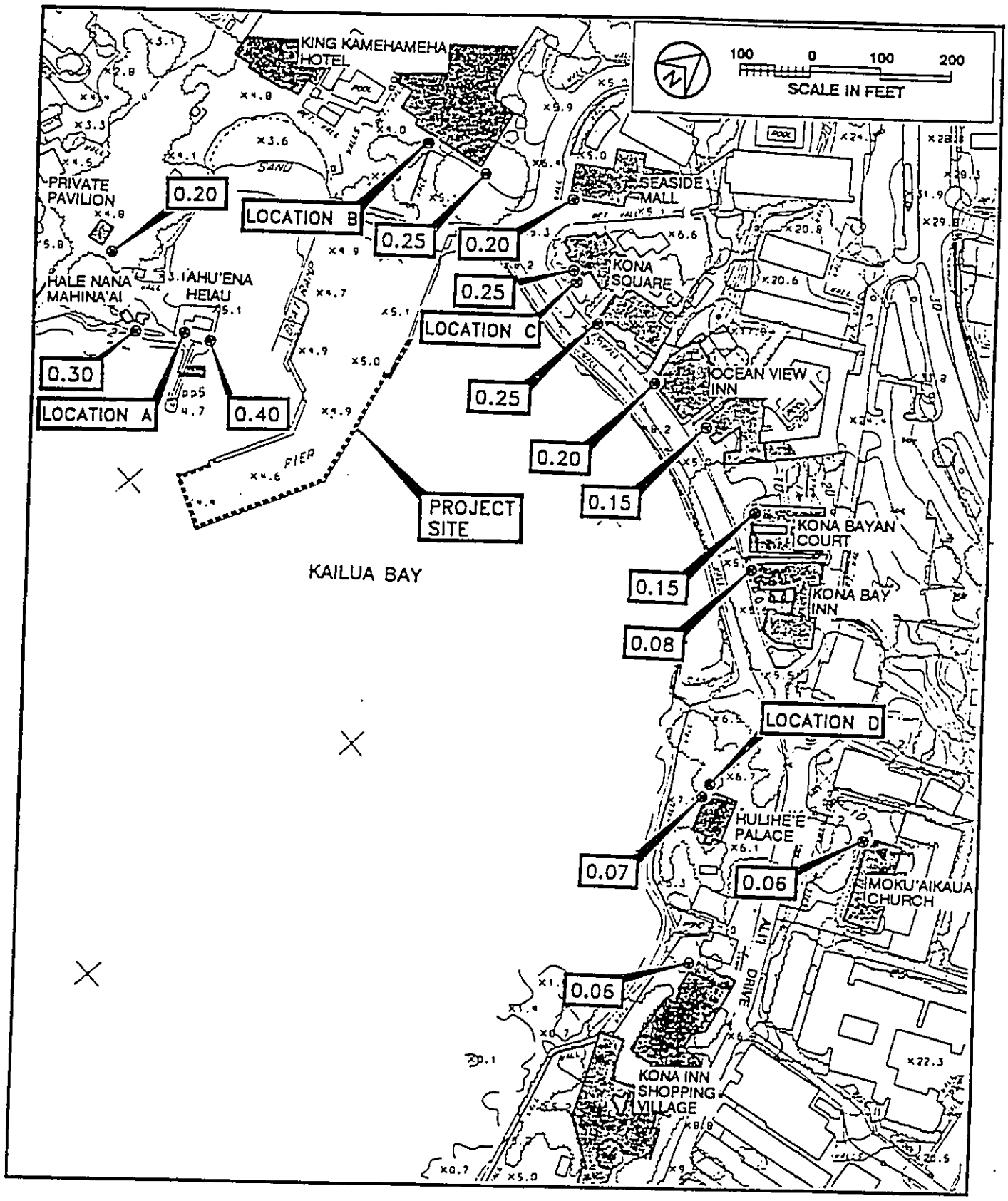
MAXIMUM NOISE LEVELS (IN DBA) DURING PILE DRIVING

FIGURE 6



MINIMUM VIBRATION INTENSITIES EXPECTED FROM PILE DRIVING

FIGURE 7



PEAK VIBRATION LEVELS (IN INCHES / SEC.) DURING PILE DRIVING

FIGURE 8

APPENDIX F
ALTERNATIVE PIER CONSTRUCTION

Nishimura, Katayama & Oki, Inc.
CONSULTING STRUCTURAL ENGINEERS

826 Kaheka St. • Suite 302 • Honolulu, Hawaii 96814 • Telephone: (808) 947-2808 • Fax: 941-5424 • email: nko@hawaii.rr.com

George K. Nishimura, P.E., President
Kenneth M. Katayama, Corporate Secretary
Leonard F. Oki, P.E., Vice President

KAILUA-KONA WHARF

ALTERNATIVE PIER CONSTRUCTION

THIS EXHIBIT WAS PREPARED TO ANSWER QUESTIONS FROM THE PUBLIC ON THE COST FOR REPLACING THE EXISTING PIER WITH A PIER SUPPORTED ON A PILE FOUNDATION TO ALLOW OCEAN WATER TO FLOW NATURALLY UNDER THE PIER.

February 14, 2001

KAILUA-KONA WHARF
ALTERNATIVE PIER CONSTRUCTION
Kailua Village, North Kona, Hawaii

PROJECT ELEMENTS:

1. Initial Funding:
   Legislative approval and funding for conducting required studies to replace the existing pier are not available at this time. At the earliest, approval and funding may be available in a year or two. The studies and surveys shown below will be required before definitive construction documents can be prepared. Funding for these studies and surveys must be made available before any work on this project can begin.

2. Studies and Surveys Required

   a. Master or Conceptual Plan Development:
      Information and maps need to be gathered from available sources to develop a master or conceptual plan.

   b. Bathymetric Survey:
      A survey to determine the ocean bottom configuration of Kailua Bay will be required for the preparation of other studies.

   c. General Coastal Processes Study:
      This study is required to determine the forces that impact Kailua Bay such as, summer and winter waves, tsunami, and wind, and their effect on sand transport, wave heights, etc.

   d. Wave Forces Study:
      This will be a numerical modeling study using historical wave data to determine the effects of wave forces at Kailua Bay and the magnitude of uplift loads on the pier structure supported on piles.

   e. Sand Resource Survey:
      Since reference has been made concerning the possible enlargement or enhancement of the sandy beach at Kailua Bay, this will be a special study to see if sand is available in sufficient quantity in Kailua Bay to support a sandy beach or if the sand will have to be furnished from other sources.

   f. Topographic Survey:
      This survey will be required for the preparation of construction documents for the pier.

   g. Environmental Impact Statement:
      An environmental impact statement must be prepared and approved before removal of the existing pier and construction of the new pier can begin.

3. Public Meetings:
   Public meetings should be scheduled as follows:
   a. prior to beginning studies and surveys to acquaint the public with the scope and goal of the project;
   b. during the conceptual planning period; and
   c. at various intervals during the development of final construction documents.

4. Cost Benefit Evaluation of the Proposed Project:
   This evaluation is required of to determine the feasibility of undertaking this project. This evaluation will be required to qualify for any Federal funding which may be available for this project.

5. Construction Documents:
   Based on the results of the field studies/surveys listed in 2 above and public input from the public meetings, construction documents will be prepared. A final opinion as to the probable cost of construction will also be prepared at this time.

6. Required Permits:
   Various agencies will be contacted during the course of the planning process to ensure compliance with requirements of existing laws and regulations. Agencies will include but not limited to: Department of Land and Natural Resources (CDUA, historic preservation, sand mining, landform alteration, aquatic concerns, etc.); Department of Health (water quality); Department of Business, Economic Development and Tourism (Coastal Zone Management); County Planning Department including the Kailua village Design Commission (General Plan, Zoning, Special Management Area, and Shoreline Setback); County Department of Public Works (traffic, building permits, disposal of existing pier materials); U.S. Fish and Wildlife Service (marine life); U.S. Coast Guard (navigation); National Park Service (historic sites); and U.S. Army Engineers (permit to work in the sea);

7. Obtain Construction Funding:
   The funding for a new pier will likely require Federal funds due to the magnitude of its cost. Matching State funds will also have to be appropriated by the State Legislature.

OPINION AS TO THE PROBABLE COST OF CONSTRUCTION:

Demolition and removal of existing pier:	S 5,500,000
Construction of new pier* on pile foundation:	S 13,000,000
TOTAL:	S18,500,000

* New pier will be approximately 62,000 square feet, the same as the existing pier.

The above cost should be increased at a compounded rate of 6% per year to the year of construction after year 2001 to determine the cost of construction for the actual year of construction. Cost for engineering services will need to be added to the project cost and may exceed S1,000,000.

ESTIMATED TIME TABLE:

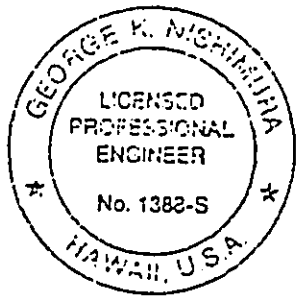
1.	Obtain legislative approval and initial funding for the preparation of required studies and surveys.	1 year
2.	Complete required studies and surveys.	3 years
3.*	Obtain State and Federal funding for construction of project.	3 years
4.*	Prepare and process Environmental Impact Statement and construction documents.	3 years
5.	Demolition of existing pier, disposal of material to be removed and construction of new pier.	2 years

*It may be possible to perform the work required for items 3 and 4 at the same time.

Estimated minimum time required to complete construction	9 years

IMPORTANT NOTE:

Wharf users must find other locations to conduct their businesses during the two years required for the demolition of the existing pier and the construction of the new pier.



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