

REVISED  
ENVIRONMENTAL IMPACT STATEMENT  
for the  
PROPOSED ALII LANDING  
CLUSTER DEVELOPMENT

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IV	Calculation of Erosion Severity Rating Number

## I. SUMMARY

Alii Landings Associates propose to construct a 54-unit cluster development to be known as "Alii Landing." The project will be situated on 5.264 acres in Heeia, Koolaupoko, Oahu. The subject property is located at the makai end of Ipuka Street and is owned by Guy Kearny Harrison.

The proposed project involves the construction of buildings, roadways, drainage system, water system, sewage pump station, force main, and landscaping. The 1981 estimated construction cost of the Alii Landing project including on- and off-site improvements is estimated at 8.2 million dollars.

The proposed development will introduce 54 new residential dwelling units and families into the community. The social characteristics of the new residences will be similar to the surrounding neighborhood.

The 5.264-acre parcel of land presently contains an unimproved road and three dwellings, with most of the site overgrown with weeds and scrub vegetation. The proposed project will convert this site into a multi-family residential community with landscaping, paved internal roadways, and parking spaces. It should be noted, however, that the area surrounding the project site has been previously urbanized. The subject parcel is surrounded by King Intermediate School, the City and County of Honolulu and Board of Water Supply Corporation Yard and the Alii Bluffs single-family residential subdivision. Heeia Fishpond is adjacent to the site; however, no work is proposed within the boundaries or immediately adjacent to the pond.

The project site is zoned R-6 except for a small corner of the parcel adjacent to Heeia Fishpond, which is zoned P-1. The entire site is located within the Special Management Area (SMA). The proposed project is not situated within the shoreline setback and would, therefore, not constitute a significant adverse or detrimental effect to the shoreline environment.

The major impacts anticipated with the project are construction related. Erosion control procedures as well as compliance with the applicable building and construction codes and ordinances will mitigate these normally anticipated impacts.

## II. DESCRIPTION OF THE PROPOSED ACTION

### A. PROJECT LOCATION

Alii Landing Associates propose to construct a 54-unit cluster development to be known as "Alii Landing." The project will be situated on 5.264 acres in Heeia, Koolaupoko, Oahu. (See Figure 1 - Location Map). The land is owned by Guy Kearny Harrison. The subject property is located at what may be described as the fringe of the urbanized town of Kaneohe and at the makai end of Ipuka Street. Ipuka Street is a fully developed subdivision street with an undeveloped terminus at the primary access point of the subject property. The property has approximately 950 feet of shoreline on its North-Northeast boundary while its South and Southwest boundary abuts an intermediate school site and a City and County Public Works yard. The northwest boundary abuts a narrow strip of vacant land with dense underbrush in much the same unkept condition as the subject property. The project is located makai and east of Heeia wetlands. The property is separated from the wetlands by Alii Bluffs Subdivision and Kamehameha Highway. Tax key designation includes TMK: 4-6-04:11 and 4-6-05:5. (See Figure 2 - Tax Map). The site is zoned R-6 with a small corner of the parcel adjacent to Heeia Fishpond, zoned P-1. (See Figure 3 - Zoning Map).

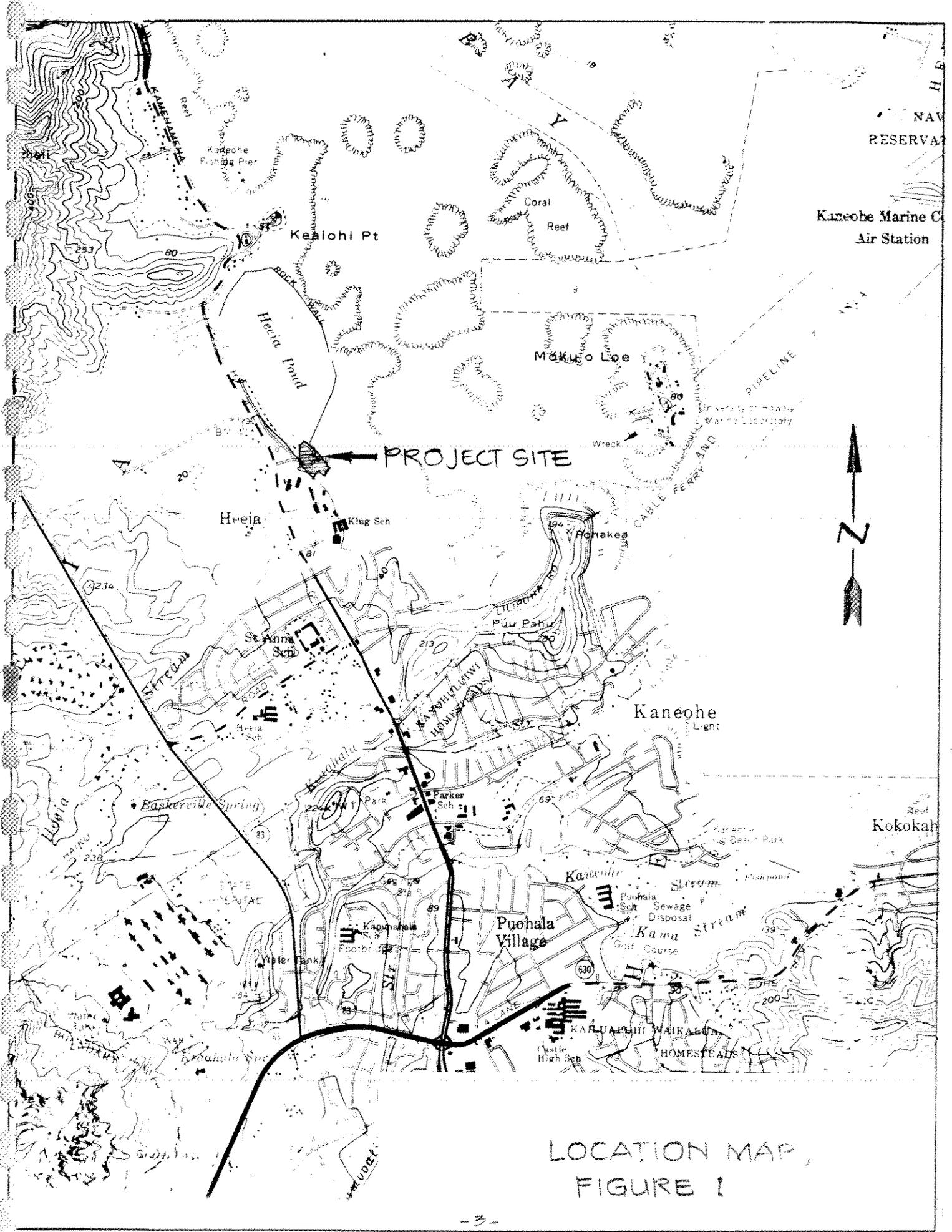
### B. STATEMENT OF OBJECTIVES

Specific objectives of the Alii Landing project are to provide a good home in a suitable living environment for each resident family; provide an opportunity for home ownership; create an attractive residential community designed to fit its surroundings with minimal adverse effect on both the physical and socio-cultural environment of the neighborhood and surrounding community; and to establish a stronger visual relationship between the existing neighborhood and Kaneohe Bay.

### C. GENERAL DESCRIPTION OF THE ACTION'S TECHNICAL, ECONOMIC, SOCIAL AND ENVIRONMENTAL CHARACTERISTICS

#### 1. Technical Characteristics

The proposed project will include the on-site construction of roadways, drainage, sanitary sewer and water systems which will be maintained by the Alii Landing Homeowner's Association. The sanitary



LOCATION MAP,  
FIGURE 1

TRUE NORTH

4-G-05:5 4-G-04:11

FIGURE 2  
TAX MAP KEY MAP

B. P. Bishop Estate

108.818 Ac.

FISH

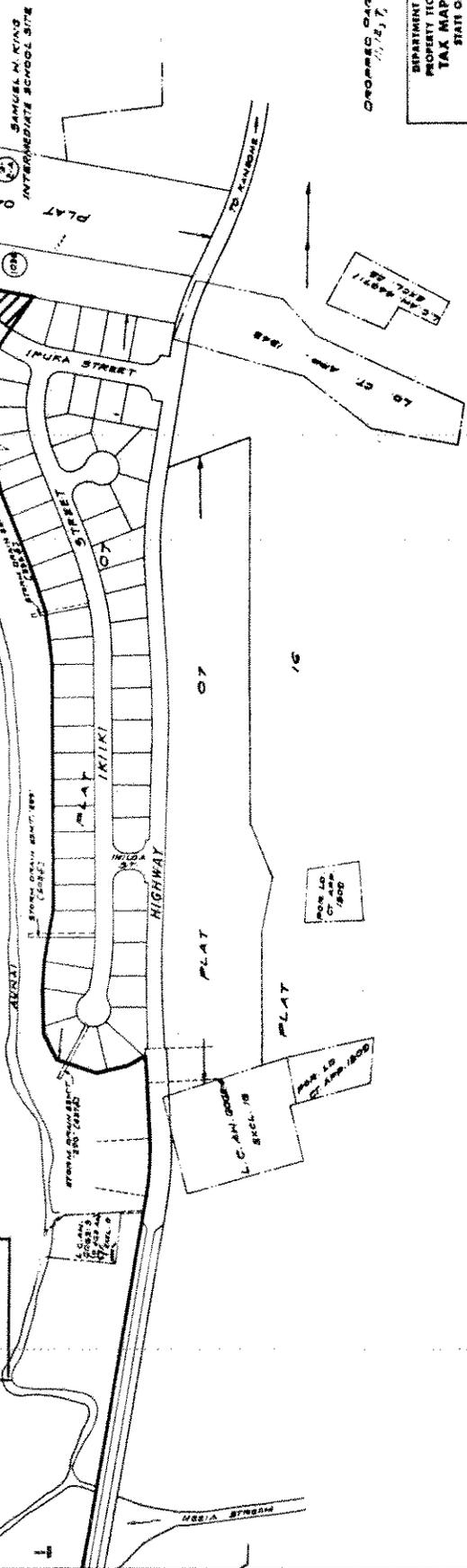
POND

APP.

1100

HEEIA

CT.



OROGRAPHIC GRADIENTS, S. G. S.  
1943

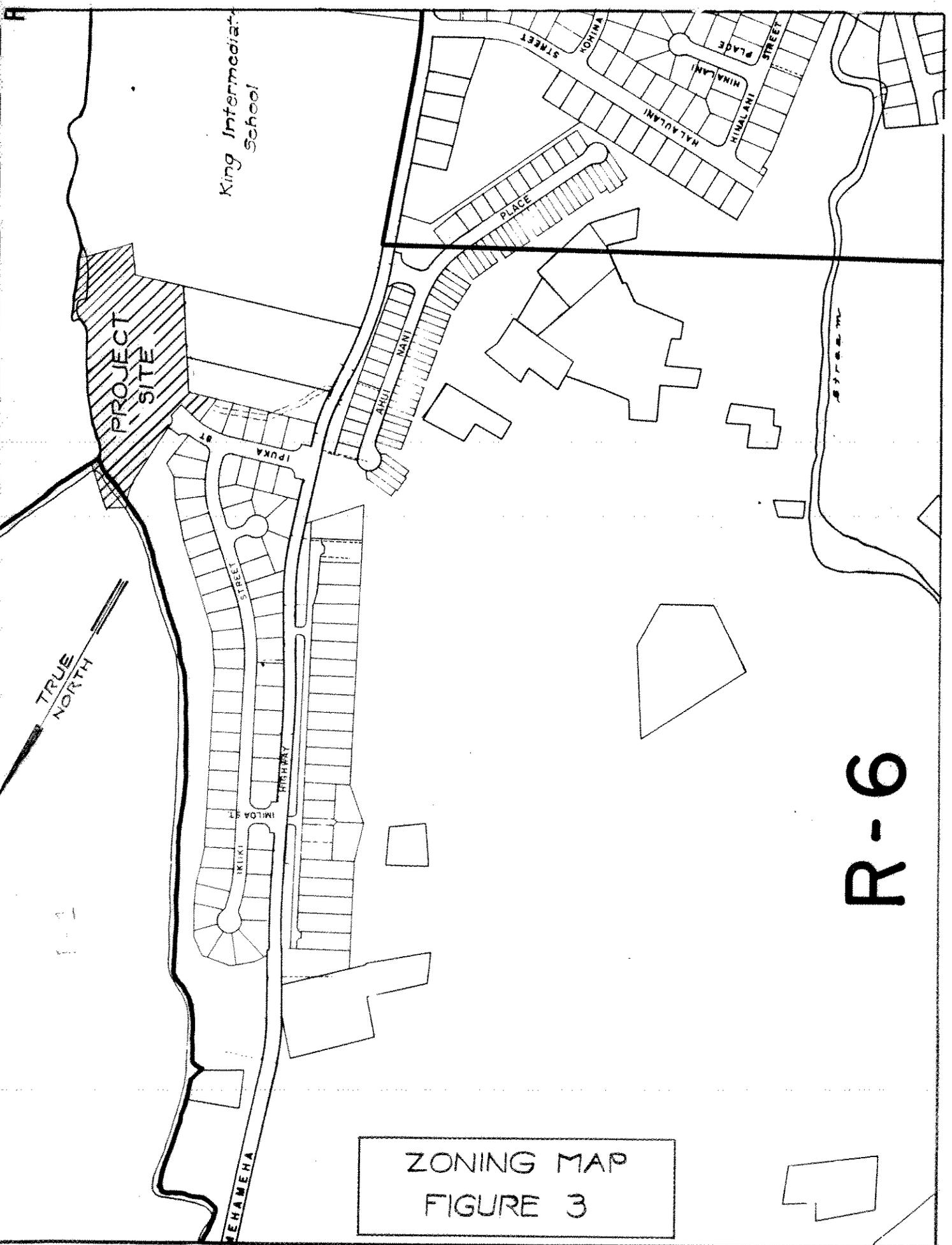
DEPARTMENT OF TAXATION  
PROPERTY TECHNICAL OFFICE  
TAX MAPS BRANCH  
STATE OF HAWAII  
TAX MAP

FIRST TAXATION DISTRICT	
ZONE	SEC.
PLAT	

4	6	05
---	---	----

SCALE 1 IN. = 200 FT.

FOR PROPERTY ASSESSMENT PURPOSES  
SUBJECT TO CHANGE



R-6

ZONING MAP  
FIGURE 3

sewer system includes a pump station located on the project site and a force main installed along Ipuka Street and connected to the existing privately operated and maintained force main along Kamehameha Highway which discharges into the city gravity sewer. Further off-site improvements which include the extension of Ipuka Street and installation of the water system up to the proposed cluster entrance will be under the jurisdiction of the City and County of Honolulu and will, therefore, be installed in accordance with applicable design standards. No work is proposed in the waters of Kaneohe Bay or in Heeia wetlands. Figure 4 is the preliminary grading and utility plan for the project.

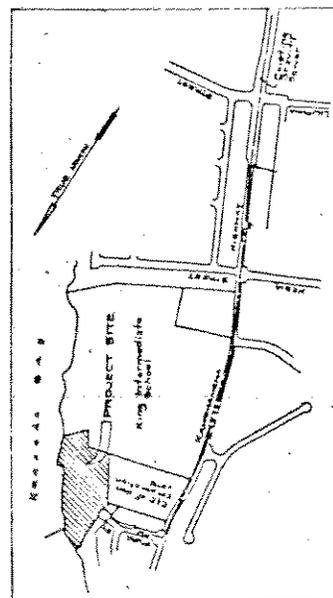
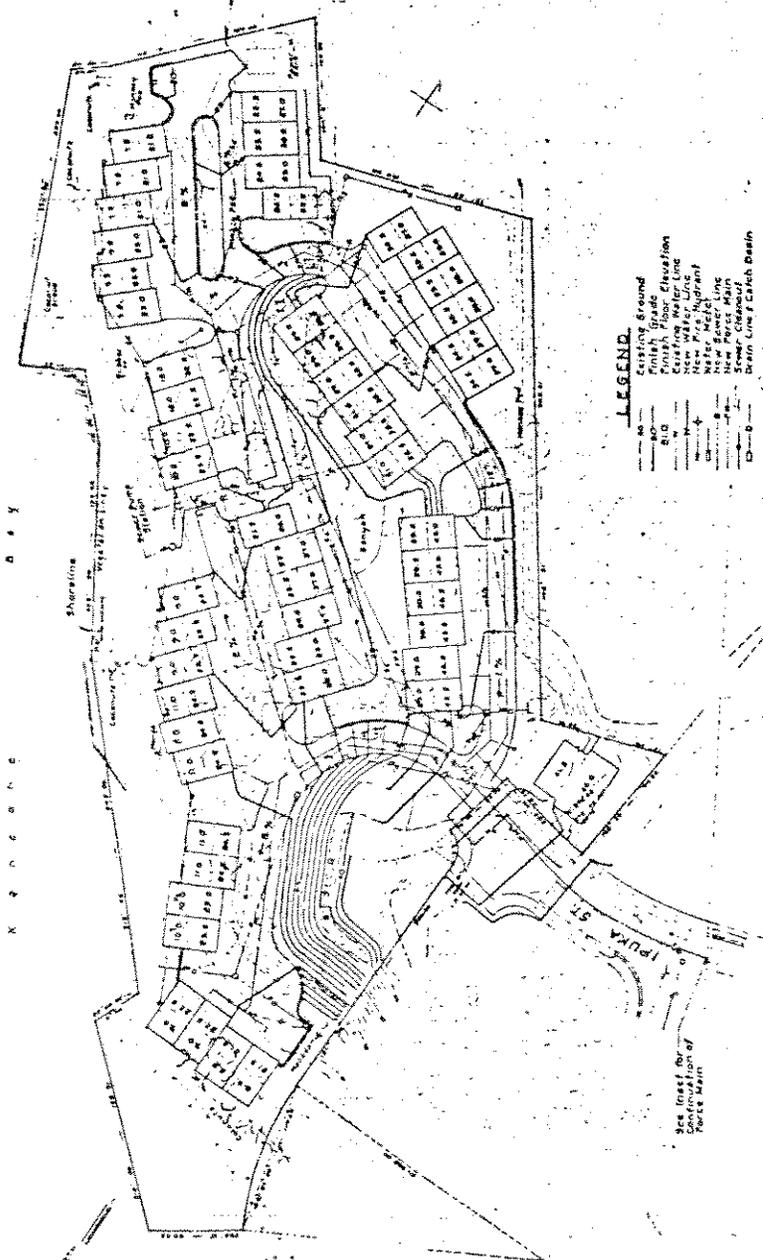
a. Grading and Drainage

Presently, the surface runoff from the City and County of Honolulu Corporation Yard collects at a 36-inch diameter drain inlet located on the southwest boundary corner, discharges into an earth swale, and along with additional surface runoff from Ipuka Street, flows into an 18-inch diameter drain inlet and eventually discharges into Kaneohe Bay. The entire drainage system alignment is within a 10-foot wide City drainage easement. The remaining off-site surface runoff enters the project site along its entire mauka boundary and sheet flows toward the ocean over slopes varying from 3% to 100%. (See Figure 5 - Topographic Survey) The existing drainage easement is illustrated on Figure 2 (Tax Map).

The existing drainage system presently carries storm water through the project site and will continue to perform the same function with the proposed improvements. Since the quantity of storm water will not appreciably increase as a result of the proposed development, a negligible impact is foreseen.

The State of Hawaii Department of Health (DOH) does not require a National Pollutant Discharge Elimination System (NPDES) permit for storm runoff resulting from the project. The proposed drainage system will be submitted for review and approval with respect to water quality effects on Kaneohe Bay. The State of Hawaii Department of Health will provide this review. During the construction phase, the probability for undesirable silt and run-

# PRELIMINARY GRADING AND UTILITY PLAN FIGURE 4



INSET

off entering Kaneohe Bay will be increased. Therefore, in accordance with the recommendations of the 208 Water Quality Management Plan, provisions for small on-site retention/infiltration facilities, filter berms along the shoreline and sediment basins on the mauka areas are proposed for use as temporary erosion control measures. The City and County of Honolulu Department of Public Works will review and approve a temporary erosion control plan prior to any construction. The construction period will also be kept to a minimum in order to reduce the probability for earthwork related erosion. The completed drainage improvements and final ground cover will act as permanent erosion control measures.

b. Roadways

The proposed grading will allow for roadways meandering throughout the site with retaining walls where necessary to negotiate the steep terrain. The earthwork quantities consist of approximately 8,000 cubic yards of excavation and 10,000 cubic yards of embankment. These quantities are considered small for a development of this size which indicates minimal earth movement.

Approximately 1,500 feet of 22 feet-wide paved roadway will be constructed. The roadway system will be private, i.e. maintained by the Alii Landing Homeowners' Association. Parking areas will be provided based on two stalls for each unit and additional guest parking.

c. Water Supply

An 8-inch water line will be connected to the 12-inch main along Ipuka Street and extended to the entrance of the Alii Landing development. The domestic water for the project will be tapped from this extension and a water meter will be installed at this point. A detector check meter will likewise be provided at the project entrance with 8-inch water lines installed under the project's roadways to provide for adequate fire protection. Fire hydrant spacing will comply with Board of Water Supply and Fire Department spacing criteria. Both domestic and fire flow

water lines after the meter connection will be maintained by the Alii Landing Homeowners' Association. Water availability and water development charges will be determined by the Board of Water Supply at the time the construction plans are approved.

d. Sanitary Sewage Disposal

The individual units will sewer into a gravity system which will enter a pump station located on the project site. A 4-inch force main will run through the project site and along Ipuka Street to Kamehameha Highway where a connection to the existing 6-inch force main presently serving the Alii Bluffs area is proposed. This entire system up to the sewer connection with the six-inch force main in Kamehameha Highway will be maintained by the Alii Landing Homeowners' Association. The force main along Kamehameha Highway up to the 27-inch trunk sewer will be maintained by all parties utilizing this system. Figure 6 (off-site sewer plan) illustrates the proposed sewer system.

e. Landscaping

Approximately 1.69 acres of the proposed project will be used for landscaped open space. The open space will be designed with soft texture plant and ground cover material.

Trees that exist on the present site and that will remain will include three Monkey Pod (Samanea saman), one Earpod (Enterolobium cyclocarpum) and one Macadamia (Macadamia integrifolia). It is also planned that many existing Coconut trees (Cocos nucifera) will either remain on their present positions or will be relocated to other placements within the project site.

A Red Hibiscus hedge (Hibiscus rosa-sinensis) will be planted along the south and west boundaries of the project site. The existing and relocated Coconut trees will be placed in the lawn along the makai boundary. Flowering trees such as Royal Poinciana (Delonix regia) and Wili Wili (Erythrina sandwicensis) will be stationed at the entrance to the proposed project, around the recreation area, and at landscape islands situated in the roadways. Medium trees such as Singapore Plumerias (Plumeria

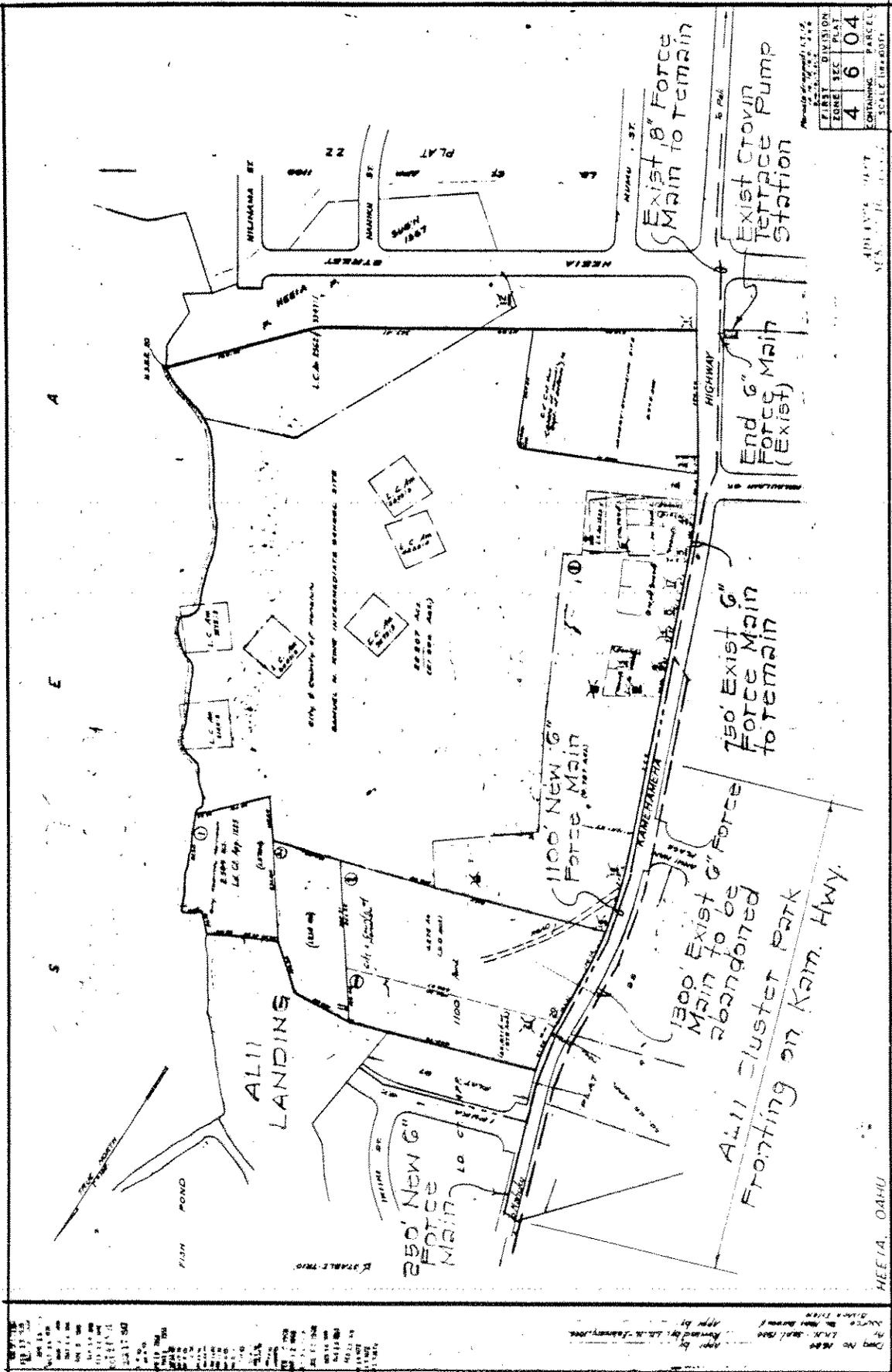


FIGURE 6  
OFF-SITE SEWER PLAN

HEEHA, OAHU

Part

SHEET NO. 1  
 DATE: 4/6/04  
 DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 APPROVED BY: [Name]  
 PROJECT: [Name]  
 LOCATION: [Name]

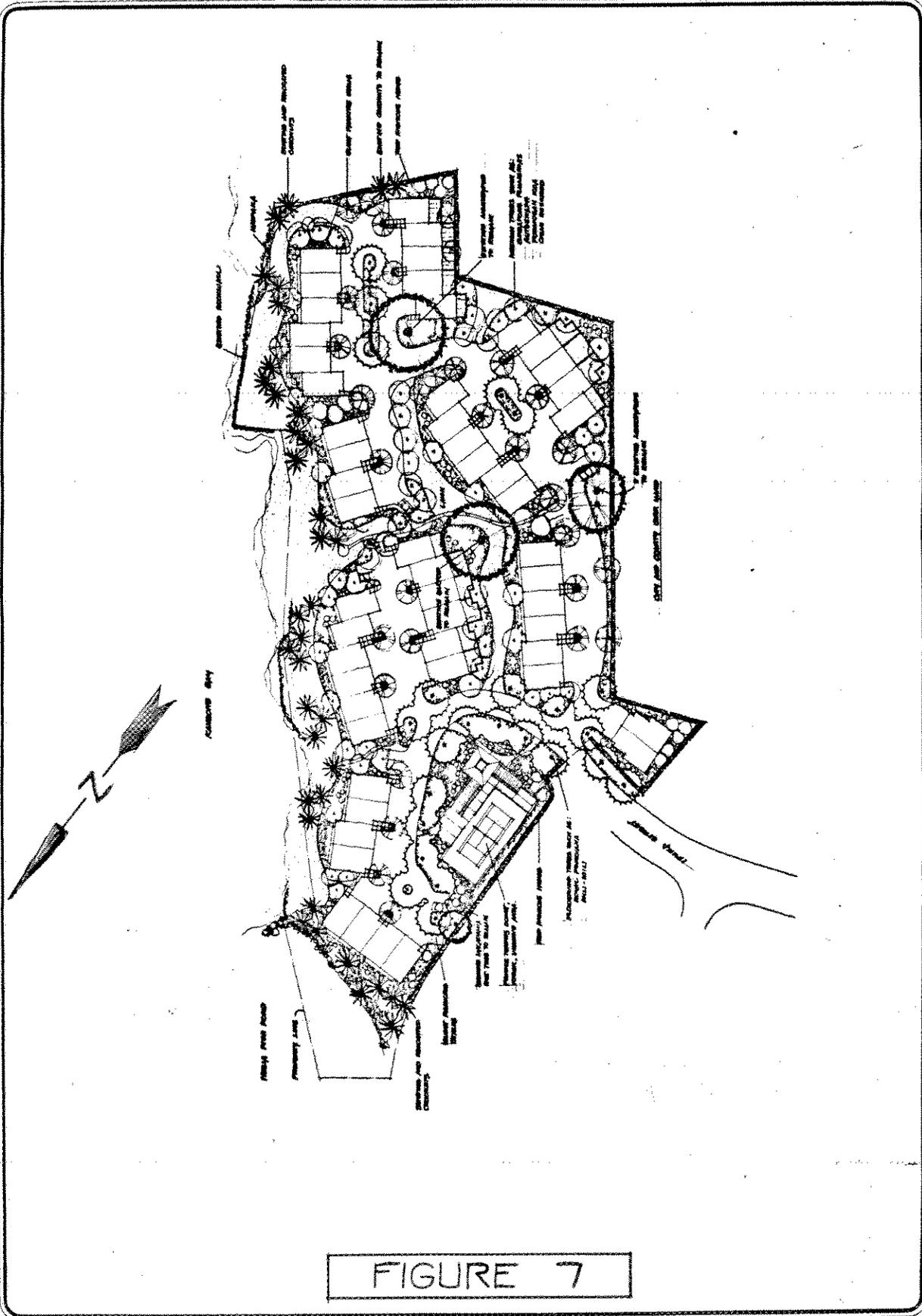


FIGURE 7

obtusa), Autograph (Clusia rosea), Formosan Koa (Acacia confusa), Cigar Boxwood (Citharexylum spinosum) will ring the lawn that will be set in the middle of the project site running parallel to the ocean. In addition, Naupaka (Scaerola sericea) will be planted in the southeast corner of the parcel. (See Figure 7 - Landscape Plan)

## 2. Economic Characteristics

The addition of 54 families may benefit the community economically although the majority of the residents can be expected to commute to areas outside of Kaneohe. Immediate economic effects would be felt by the larger community through the infusion of circulating dollars into the community during the construction life of the project.

The 1981 construction value of the Alii Landing Project including on and off-site cost is estimated at 8.2 million dollars. The on-site construction of roadways, drainage and water systems, a sewage pump station, force main and landscaping alone will cost an estimated 1.1 million dollars.

At 1981 prices, it is estimated that the units in this project will be sold within the \$250,000 to \$300,000 range. This compares to the \$120,000 to \$270,000 range for existing homes located in the area which are presently on the market or have recently been sold.

## 3. Social Characteristics

The proposed project would introduce 54 new families into the social life of the surrounding neighborhood. Each family will bring with it a wealth of diversity and individual experience. Interaction with the surrounding community is likely to occur in the political, educational, planning, recreational and economic spectrums. Perspective buyers will probably be compatible to existing residents with respect to social characteristics based on the fact that the income levels for both perspective buyers and existing residents will be similar.

The design concept of the project as a planned development will tend to foster intra-community exchange. Sharing of facilities such as the recreation area, mail boxes and requirement for participation in the homeowners' association should meld the homeowners into a mini-community with its own social identity.

#### 4. Environmental Characteristics

Most of the 5.264 acres of the project site are overgrown with weeds and scrub vegetation. There is also a Japanese cemetery in an advanced state of disrepair located on the site. The area surrounding the project site has been previously urbanized. As stated earlier, directly south of the project site is King Intermediate School; west of the site are the City and County of Honolulu Board of Water Supply Corporation Yard, and a single-family residential subdivision, which borders much of the western boundary of Heeia Fishpond. Heeia wetlands is located mauka and west of the property. The wetlands is separated from the proposed project by Kamehameha Highway and Alii Bluffs subdivision. The proposed project will convert this site into a multi-family residential community with landscaping, paved internal roadways and parking spaces. The existing aerial topography for the area (Figure 8) illustrates the proximity to existing development.

#### D. USE OF PUBLIC FUNDS OR LANDS FOR THE ACTION

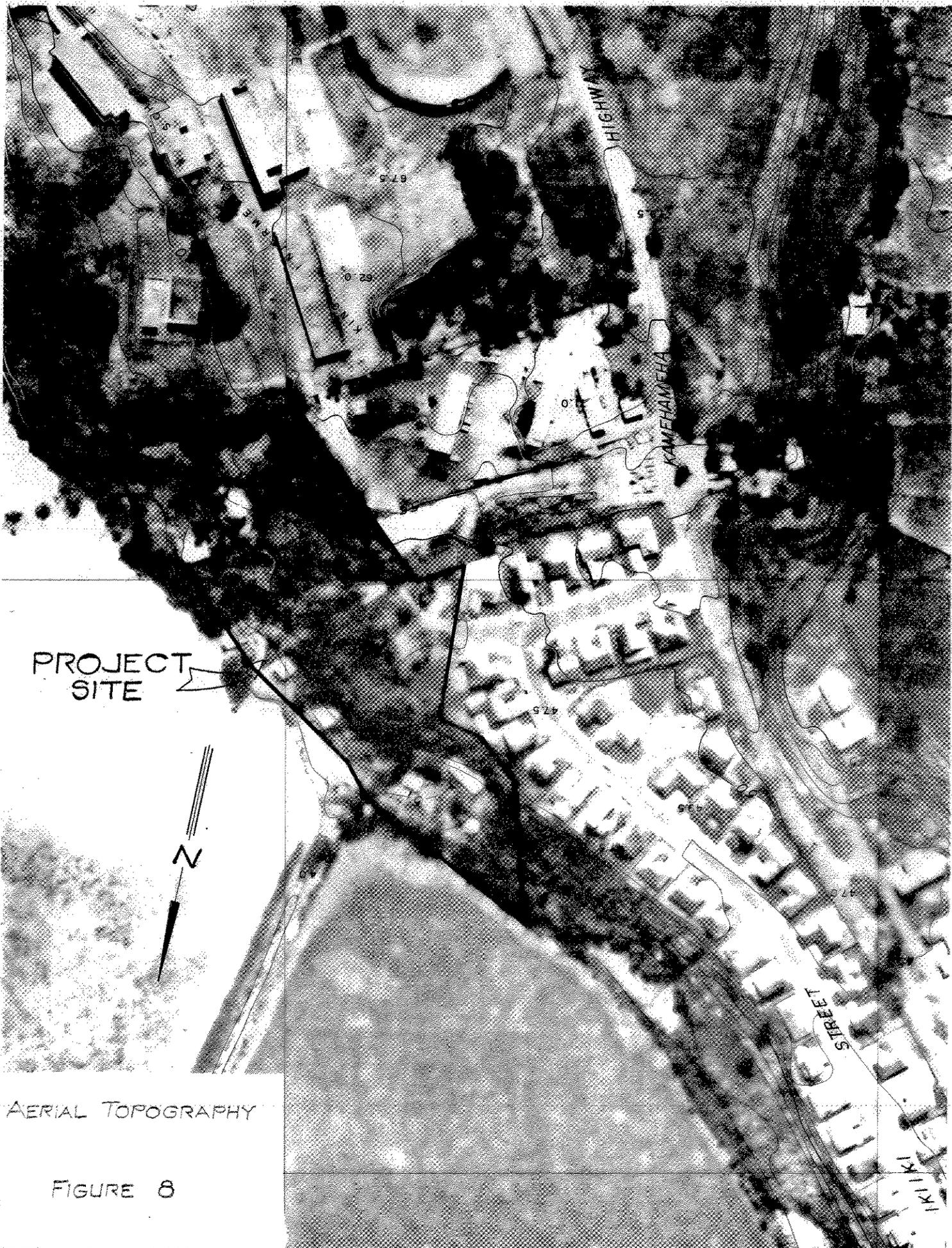
No public funds or lands will be used for the action. The proposed off-site sewer force main will be installed within public streets.

#### E. PHASING AND TIMING OF ACTION

Site improvement and construction is anticipated to begin in the year 1981 or 1982 with occupancy in 1983. Land clearing and grading will be scheduled during drier months to minimize erosion potential of denuded landscape.

#### F. SUMMARY TECHNICAL DATA

1. U.S. Department of Agriculture, Soil Conservation Service, "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii," U.S. Government Printing Office, Washington, D.C., August, 1972.
2. Munekiyo, Michael T., "The Use of an Environmental Performance Standard in Management of Storm Runoff from Urbanizing Hawaiian Watersheds," Hawaiian Environmental Simulation Laboratory Technical Report No. 4, University of Hawaii, May, 1976.
3. Cox, Doak C. et al, "Estuarine Pollution in the State of Hawaii," Water Resources Research Center Technical Report No. 31, University of Hawaii, November, 1973.



PROJECT  
SITE



AERIAL TOPOGRAPHY

FIGURE 8

4. Kelly, Marion, "Loko I'a O He'eia: Heeia Fishpond," Bishop Museum Report 75-2, Honolulu, Hawaii, 1975.
5. Neal, Marie C., "In Gardens of Hawaii," Bishop Museum Press, Honolulu, 1965.
6. Department of Planning and Economic Development, "State of Hawaii Data Book," Hawaii, 1980.
7. Department of Geography, University of Hawaii, "Atlas of Hawaii," University Press of Hawaii, 1973.
8. Elliott, Margaret E. et al, "Wetlands and Wetland Vegetation of Hawaii," United States Army Corps of Engineers, Pacific Ocean Division, Hawaii, September, 1977.
9. Office of Air and Waste Management, Office of Air Quality Planning Standards, "Guidelines for Air Quality Maintenance Planning and Analysis Volume 9: Evaluating Indirect Sources," U.S. Environmental Protection Agency, Research Triangle Park, North Carolina, January 1975.

G. HISTORIC PERSPECTIVE

In compliance with the Department of Land Utilization's determination set forth on page 3, 80/SMA-109(SM) (See Appendix I), an archaeological/historical reconnaissance of the project was conducted to verify the existence or absence of artifacts due to the site's proximity to Heeia Fishpond. It should be noted that there is approximately 4,800 feet of shoreline bordering Heeia Fishpond. Roughly 100 feet of fishpond shoreline is located within the parcel. This represents only 2.0% of the total length of shoreline bordering the fishpond. As previously stated, no work is proposed within the boundaries or immediately adjacent to the pond. Appendix II contains the text of the archaeological survey conducted.

In summary, it was determined through the research of land use documents for the past one hundred years that the project site has seen many changes in land use to accommodate the production of sugar cane, pineapple, rice and other crops. At present, the site contains a road, three dwellings, carport and dog kennel. Based on the various uses of the site with time, it is unlikely that the site contains historical value or artifacts. The archaeological survey confirms this contention. Heeia Fishpond is adjacent to the project. However, no work is proposed within the boundaries or immediately adjacent to the pond.

III. DESCRIPTION OF ENVIRONMENTAL SETTING

A. DESCRIPTION OF THE EXISTING CHARACTERISTICS AND CONDITIONS OF THE ENVIRONMENT IN THE VICINITY OF THE ACTION AS IT EXISTS BEFORE COMMENCEMENT OF THE ACTION, FROM BOTH A LOCAL AND REGIONAL PERSPECTIVE

1. Physical and Chemical Characteristics

a. Earth

A large extent of the Kaneohe region has high nearly vertical cliffs and amphitheater-headed valleys. Some valley floors may be gently sloping. The project site is located on an uncliffed coastline with little or no cliff along the shoreline.

The property is a sloping lot with varying degrees of slope from areas of 3% slope to areas of almost 100% (1 horizontal:1 vertical)

b. Soils

The project site lies within the geographic region which has a representative soil composition of Lolekaa silty clay (sheet 59, "Soil Survey of Oahu, U.S. Department of Agriculture, Soil Conservation Service, August 1972). For this type of soil, the permeability is moderately rapid, runoff is medium and the erosion hazard is moderate.

c. Surface Water

The Flood Insurance Rate Map, City and County of Honolulu (USDC 1974), delineates the 100-year Flood Area and is shown in Figure 9. The project site lies within Zone C of the Flood Hazard District and is, therefore, subject to minimal surface water flooding. Little standing water remains after rainstorms because of the sloping terrain.

There are no significant bodies of surface water or streams within the project site. The property is separated from Heeia wetlands by Alii Bluffs Subdivision and Kamehameha Highway. The site is directly adjacent to the Kaneohe Bay, however, the reef protection of the bay prevents large tidal fluctuations which are associated with tsunami inundation.

**PROJECT SITE**

**ELEVATION REFERENCE MARKS**

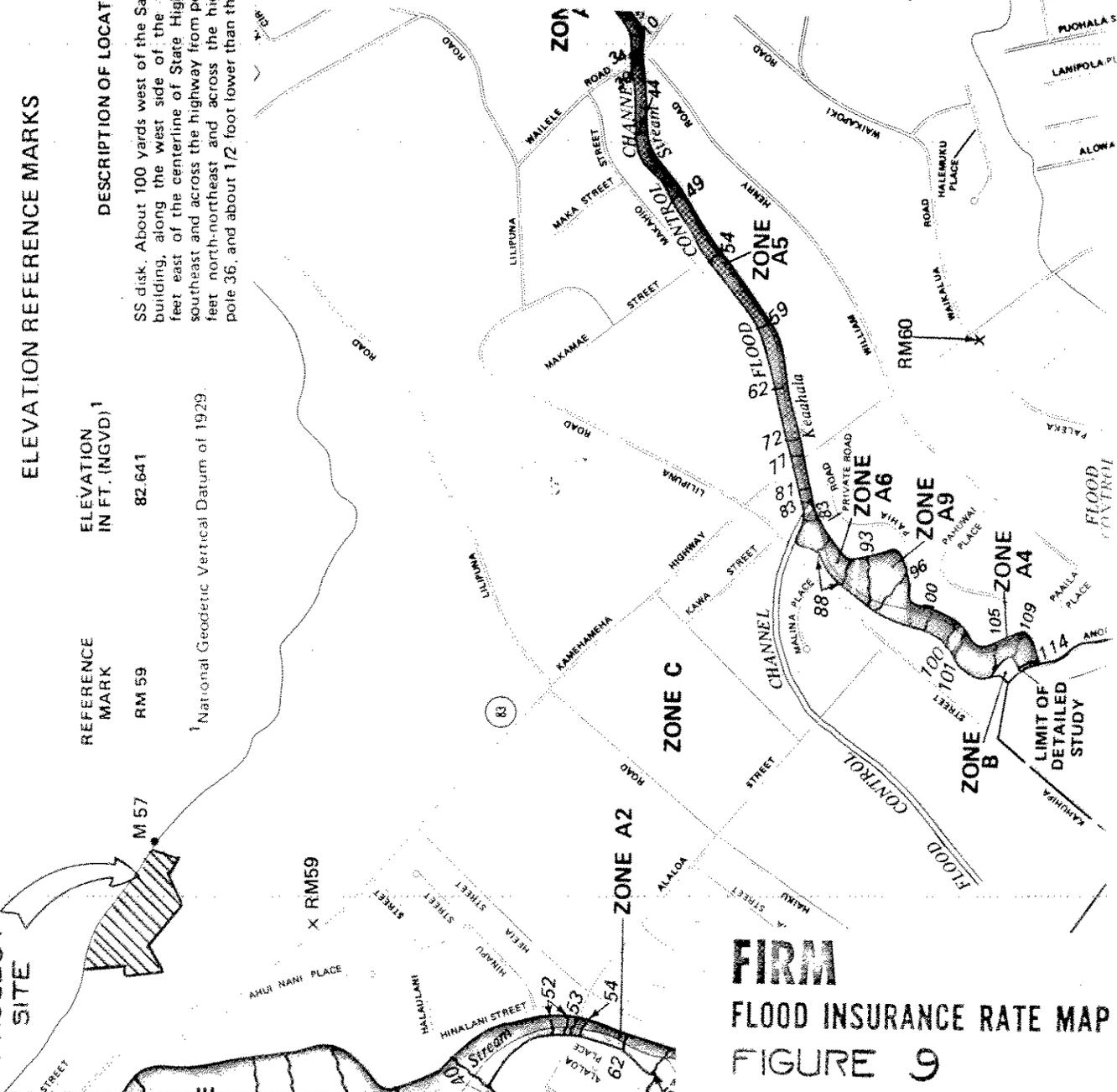
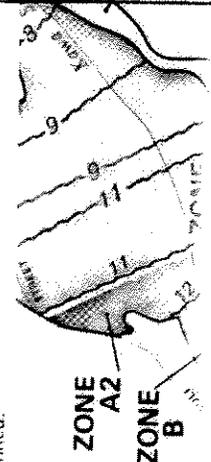
REFERENCE MARK	ELEVATION IN FT. (NGVD) <sup>1</sup>	DESCRIPTION OF LOCATION
RM 59	82.641	SS disk. About 100 yards west of the Samuel Wilder School building, along the west side of the football field, 31.0 feet east of the centerline of State Highway 83. 65.2 feet southeast and across the highway from power pole 37, 126.7 feet north-northeast and across the highway from power pole 36, and about 1/2 foot lower than the highway.

<sup>1</sup>National Geodetic Vertical Datum of 1929



**\*EXPLANATION OF ZONE DESIGNATIONS**

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A0	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; average depths of inundation are shown, but no flood hazard factors are determined.
AH	Areas of 100-year shallow flooding where depths are between one (1) and three (3) feet; base flood elevations are shown, but no flood hazard factors are determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
A99	Areas of 100-year flood to be protected by flood protection system under construction; base flood elevations and flood hazard factors not determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)
D	Areas of undetermined, but possible, flood hazards.
V	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors not determined.
V1-V30	Areas of 100-year coastal flood with velocity (wave action); base flood elevations and flood hazard factors determined.



**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**FIGURE 9**

d. Ocean

The Alii Landing project is bounded on the makai side by Kaneohe Bay. The shoreline fronting the project site consists of shallow mudflats, which are unsuitable for either swimming or sunbathing. Kaneohe Bay is afforded the highest possible water classification (Class AA) by the State Department of Health. It is therefore imperative that both point and non-point sources of pollution entering the Bay be adequately controlled. The grading ordinance of the City and County including temporary erosion control plans and procedures are all for the purpose of protecting coastal water quality.

e. Groundwater Recharge Potential

The project site contains no groundwater recharge potential. Also, it is makai of the Board of Water Supply's "no pass" zone boundary.

f. Air Quality

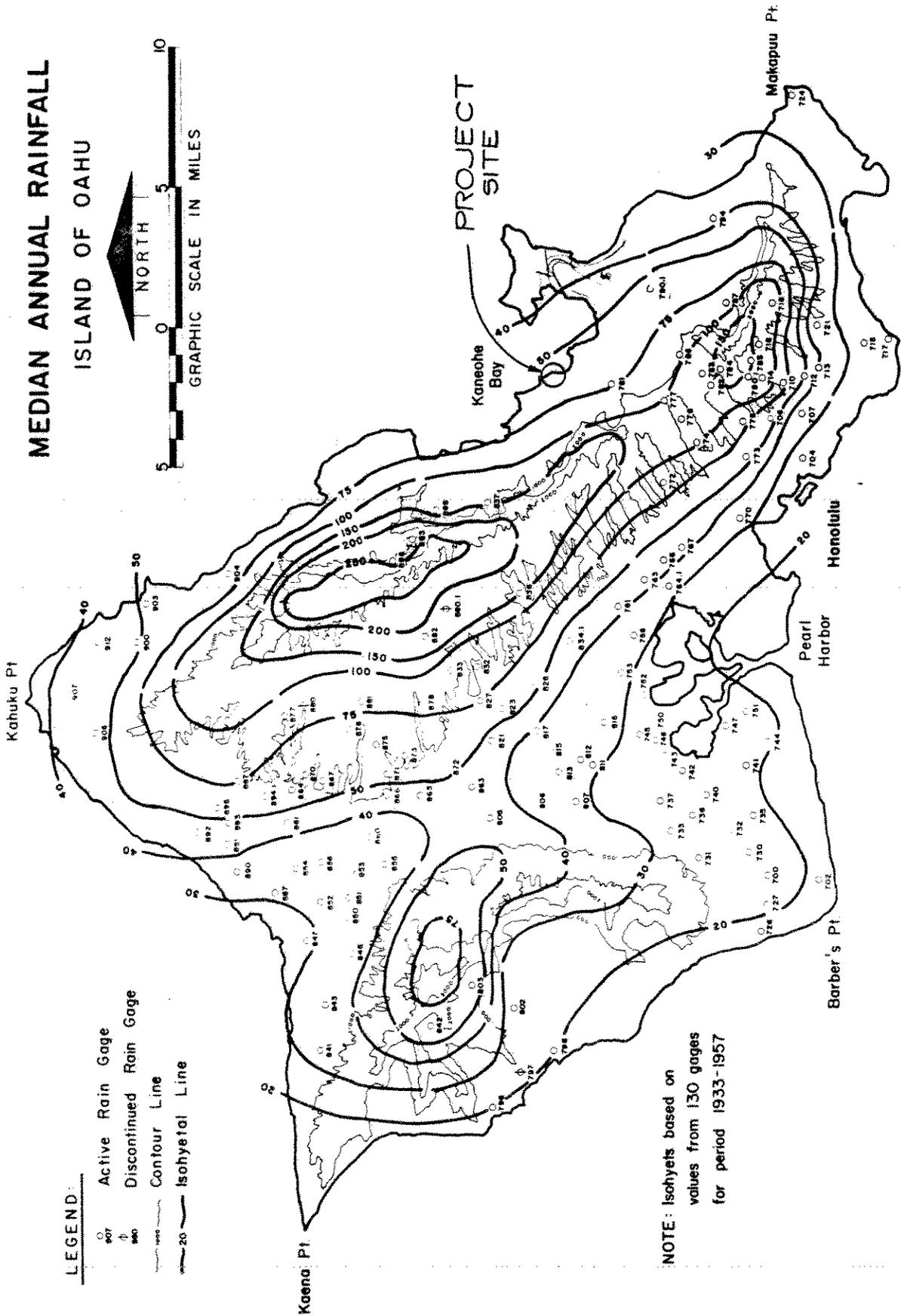
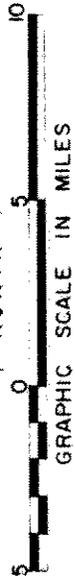
At present, air quality data for the project site is lacking. The nearest air quality sampling station of the State Department of Health is located in Waimanalo. As there are no significant commercial or industrial activities in the vicinity of the proposed action, the atmosphere over the area is generally of good quality. In the Kaneohe area, the major source of air pollution is from vehicular traffic.

g. Climate

The Windward Oahu region is exposed to the prevailing north-eastern tradewinds. The combination of terrain and wind contribute to rainfall of 40 inches per year in the higher elevations of Windward Oahu. At the coastline in the vicinity of the project the mean annual rainfall tapers down to 10 inches. Diurnally, showers are more frequent during the night and early morning. Figure 10 illustrates isohetyls for Oahu and locates the project site.

The prevailing tradewinds ranging between 10 and 14 mph maintain a cool climate. The average annual temperature in

# MEDIAN ANNUAL RAINFALL ISLAND OF OAHU



- LEGEND:**
- Active Rain Gage
  - ⬇ Discontinued Rain Gage
  - Contour Line
  - Isohyetal Line

NOTE: Isohyets based on values from 130 gages for period 1933-1957

FIGURE 10

Windward Oahu at altitudes below 550 feet is approximately 74°F, and average monthly temperature ranges from 69° to 79°. Average relative humidity in the area is about 70%.

2. Biological Conditions

a. Flora

The vegetation which currently occupies the proposed Alii Landing site is typical of that found on much of Windward Oahu on land of comparable rainfall and elevation. Indigenous plant populations have been subjected to many forces, including: agricultural practices and plant introductions of pre-contact Hawaiians, grazing pressures, successful competition by intentionally and accidentally introduced species, clearing, grading activities, and fires. As a result, native plants make up a much-reduced fraction of the total plant community. Variations in plant communities occur as a result of human activities and of differing drainage patterns, particularly as the topography affects soil moisture.

Presently, the site is overgrown with weeds and scrub vegetation. There is little or no value of the site as an example of native plant habitat. The chief values of the current flora are soil retention and general vegetative cover as a habitat for a very limited and predominately non-native fauna. Table 1 includes those species actually sited or presumed to inhabit the project site based on soil characteristics.

b. Fauna

The site with its proximity to Kaneohe town, King Intermediate School, Alii Bluffs subdivision and the City and County Corporation Yard, does not support native terrestrial vertebrates. Animals observed on the site are stray dogs, cats and mongoose.

As a result of limited protection from predators such as dogs, cats and mongoose, there is little likelihood that the site supports native Hawaiian or endangered Hawaiian avifauna. Of the four endangered species [Hawaiian Stilt (Aeo) Himantopus

TABLE 1  
 FLORA ACTUALLY SITED OR PRESUMED  
 TO INHABIT THE PROJECT SITE

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>
Breadfruit	<u>Artocarpus communis</u>
Bamboo	<u>Bambusa vulgaris</u>
Spanish needle	<u>Bidens pilosa L.</u>
Lauki	<u>Cassia leschenaultiana</u>
Coconut*	<u>Cocos nucifera</u>
Nut grass	<u>Cyperus rotundus L.</u>
Earpod*	<u>Enterolobium cyclocarpum</u>
Haole koa	<u>Leucanea glauca</u>
Macademia*	<u>Macadamia integrifolia</u>
Mango	<u>Mangifera indica</u>
Paper mulberry	<u>Melaleuca leucadendra</u>
Hilo grass	<u>Paspalum conjugatum</u>
Mangrove	<u>Rhizophora mangle L.</u>
Sugar cane	<u>Saccharum officinarum</u>
Monkey pod*	<u>Samanea saman</u>
California grass	<u>Setaria geniculata</u>

\*Trees that exist on the present site and that will remain

knudseni, Hawaiian Coot Fulica americana alai, Hawaiian Duck (Koloa) Anas wyvilliana, Hawaiian Gallinule, Gallinula chloropus sandvicensis], all except the Hawaiian stilt are rarely observed except in remote upland areas or well protected areas. The site characteristics of thick overgrowth in the mauka area and grassed lawn adjacent to Kaneohe Bay are not typical resting or breeding grounds for any of the endangered Hawaiian avifauna.

Table 2 includes those species actually sited or presumed to inhabit the project site.

### 3. Cultural Factors

#### a. Land Use

As previously mentioned, research of the project site through land use documents for the past one hundred years indicates that the parcel has been modified to accommodate the production of sugar cane, pineapple, rice and other crops. In its present state, the site is mostly overgrown although it contains a dirt road, three dwellings and a dog kennel. The changes in land use at the project site mirrors the changes that have occurred in the greater Kaneohe region.

Since western contact, agricultural crops have changed from taro to rice to sugar cane and to pineapple. Eventually many growers found their crops could not successfully compete at the market place with similar crops grown elsewhere. After large-scale growing of pineapple, there was a return to small-scale rice and taro cultivation. By the 1930's, many acres were used for cattle grazing or fell to disuse. In more recent years, increased demands for housing by a growing Honolulu-Pearl Harbor-Kaneohe Marine Corp Air Station-employed population has stimulated the expansion in new housing developments in Kaneohe.

In its present state, the project site can be described as relatively undeveloped. As seen from Ipuka Street, the site's dense underbrush and high weeds create an effective visual barrier between the existing residential community and

TABLE 2  
FAUNA TYPICAL OF PROJECT AREA

<u>MAMMALS</u>	<u>SCIENTIFIC NAME</u>
Domestic dog	<u>Canis familiaris</u>
Domestic cat	<u>Felis catus</u>
Indian mongoose	<u>Herpestes auro punctatus</u>
House mouse	<u>Mus musculus</u>
Polynesian rat	<u>Rattus exulans</u>
Norway rat	<u>Rattus norvegicus</u>
Roof rat	<u>Rattus rattus</u>
 <u>BIRDS</u>	
Common mynah	<u>Acridotheres tristis</u>
Barred dove	<u>Geopelia striata</u>
Mockingbird	<u>Mimus polyglottos</u>
Red-crested cardinal	<u>Paroaria coronata</u>
House sparrow	<u>Passer domesticus</u>
Cardinal	<u>Richomondena cardinalis</u>
Spotted dove	<u>Streptopelia chinensis</u>
Japanese white-eye	<u>Zosterops japonica</u>

Kaneohe Bay. In addition, signs posted on the road which declare that the site is private property, form not only a visual but a real physical buffer zone between the community and the bay.

b. Aesthetics and Human Interest

The neighboring areas away from Kaneohe Town, such as Kaneohe Bay and Heeia Wetland, as a whole have high scenic and open space values. Heeia wetlands provide an unobstructed view of the Koolau Mountains.

An important cultural and environmental resource adjacent to Alii Landing is Heeia Fishpond (TMK: 4-6-5:1). As one of the last remaining examples of pre-contact fish farming, Heeia Fishpond has a very rich history (see Kelly's Loko I'a O He'eia: 1975). This site is an outstanding candidate for reinstatement on the State and Federal Register of Historic Places. The proposed project will not alter any of Heeia Fishpond.

As previously stated, the project site in its present state has no scenic value, as it actually forms a visual barrier to Kaneohe Bay. There are also no unique physical features, species or ecosystems on the project site. There is, however, an unofficial Japanese cemetery in an advanced state of disrepair located on the site. The existing grave sites will be reinterred in accordance with Department of Health regulations. Section 338.25.5, Hawaii Revised Statutes, calls for filing a permit prior to disinterment, notification of the deceased next-of-kin through the insertion of public notices in the newspapers, and finally, the arrangements for reinterment of the bodies.

Following the completion of the Alii Bluffs Subdivision (1972), Mr. Michael T. McCormack, with the cooperation of Mr. Tom Dote, contacted many families of those buried on the site. At that time, an undetermined number of deceased were relocated; however, it is believed that a number of gravesites are still occupied. The families of deceased still interred will be contacted as prescribed by law.

c. Cultural Patterns

The existing land use characteristics and conditions of the site and the Kaneohe region, an area once known for its agricultural production, has eventually evolved into a suburb of the City of Honolulu. The population of the greater Windward Oahu has risen rapidly since the completion of the two trans-Koolau highways. As a result, the Kaneohe region has lost a portion of its rural character. Kaneohe Town is heavily developed, and in some areas supports highrises. In 1960, the population of Kaneohe town was 15,291; in 1970, 29,903; and in 1980, 34,952. At the time of the 1975 census, the median income was \$16,734 and employment was centered in the civilian labor force.

d. Traffic

The major transportation arterials to the area include Likelike and Pali Highways, which link Windward Oahu with Honolulu. Another major highway is Kahekili Highway which joins the Heeia and Kahaluu areas to Likelike and Kamehameha Highway. Kahekili Highway is situated near the coast and provides access to the northern portion of the island. The principal access road to Kaneohe Town from the project site is Kamehameha Highway. (See Figure 1 - Location Map).

The latest traffic summary was conducted in June 1981, at the intersection of Kamehameha Highway and Ipuka Street. The morning peak occurs between 6:30 a.m. and 7:30 a.m., and the afternoon peak, 4:15 p.m. and 5:15 p.m. Table 3 summarizes the foregoing traffic analysis.

TABLE 3

NUMBER OF PEAK HOUR VEHICLES (EXISTING)

	<u>Honolulu - Bound</u>	<u>Kahuku - Bound</u>
<u>A.M. PEAK</u>		
6:30 - 7:30	296	66
<u>P.M. PEAK</u>		
4:15 - 5:15	177	325

As a result of the cumulative effect of all new development, the peak hourly traffic at the various intersections along the major corridors are becoming increasingly congested. The State Department of Transportation is considering improvements to the Heeia-Kea Boat Harbor. This project will also assess traffic on Kamehameha Highway if the project proceeds. However, the State Department of Transportation is considering improvements to Kahekili Highway as well as a new Trans-Koolau Highway (H-3) to alleviate present congestion of the major Kaneohe arteries.

B. POPULATION AND GROWTH CHARACTERISTICS

According to the 1980 edition of the State of Hawaii Data Book, the State Department of Planning and Economic Development predicts a growth increase of 2,693 persons in census tract 105 (where Heeia is located) by the year 1985. Based on 4.08 persons per household (from the latest U.S. Census information for Kaneohe at this time), this would require 660 homes. The proposed construction of 54 homes (while replacing the three existing units) would contribute to the housing requirements of the estimated growth in population.

IV. THE RELATIONSHIP OF THE PROPOSED ACTION TO LAND USE PLANS,  
POLICIES, AND CONTROLS FOR THE AFFECTED AREA

The site is within an area designated as urban on the State Land Use District Boundary Map (see Figure 11). While the General Plan Detailed Land Use Map (see Figure 11 - DLUM) for the project site show cemetery use and provisions for a right-of-way, the applicant is anticipating the adoption of the Proposed Development Plan (Figure 13 - Proposed Development Plan Map) in the fall of 1981. No cemetery or rights-of-way are shown on the Proposed Development Plan. In the event that the Development Plan is not adopted before necessary approvals are required, the developer will seek an amendment to the Detailed Land Use Map.

The site is zoned R-6 with a small portion of the parcel to the Northern extreme in P-1 zone. The surrounding areas are zoned residential for the Alii Bluffs subdivision, Public Facilities for Samuel Wilder King Intermediate School and Preservation for Heeia Fishpond. (See Figure 3 - Zoning Map).

As stated previously, the project site is located within the Special Management Area (SMA) (see Figure 14 - SMA Map). Since the proposed action involves construction within the SMA, a Special Management Area Use Permit is required prior to construction. In compliance with the City and County Department of Land Utilization's determination, an accepted EIS which addresses the significance of the proposed project within the SMA will be submitted concurrently with the SMA permit application.

The objectives of the Hawaii Coastal Zone Management Program (Chapter 205A, Hawaii Revised Statutes) are to protect valuable and vulnerable coastal resources such as coastal ecosystems, special scenic and cultural values, and recreational opportunities. They are also intended to reduce coastal hazards, to provide for coastal-dependent economic uses, and to improve the review process involving development activities.

The proposed project is not situated within the shoreline setback and would, therefore, not constitute a significant adverse or detrimental effect to the shoreline environment in terms of the purposes of the Special Management Area. The following are the objectives of the Coastal Management Program and how the project relates to them:

# STATE LAND USE DISTRICTS

ISLAND OF  
**Oahu**  
 PREPARED BY  
 DEPARTMENT OF  
 PLANNING AND ECONOMIC DEVELOPMENT  
 STATE OF HAWAII



SCALE IN MILES  
 0 1 2 3 4

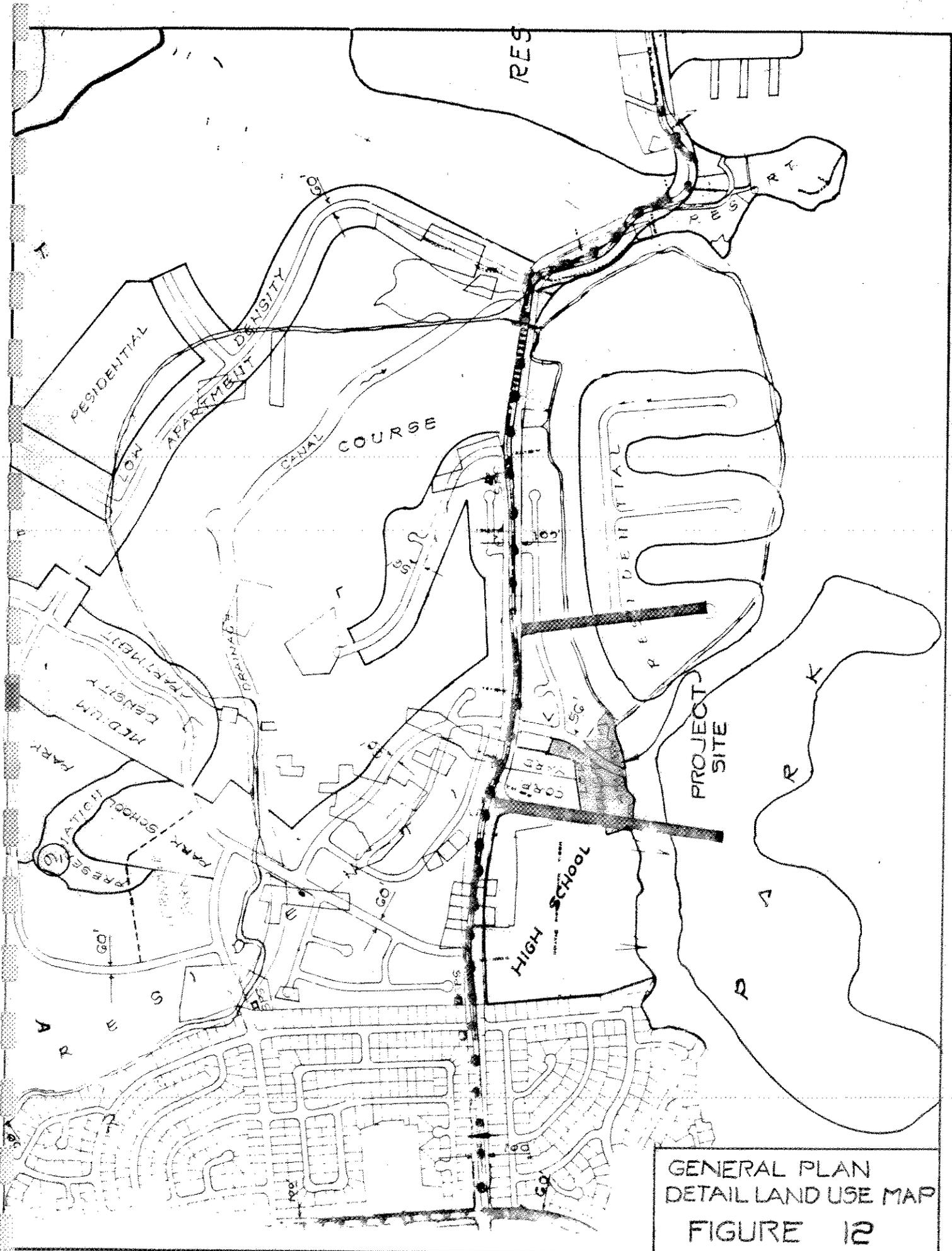
## LEGEND

### LAND USE DISTRICTS

- URBAN
- AGRICULTURE
- CONSERVATION
- PLANNING DISTRICT BOUNDARY
- PRINCIPAL HIGHWAY
- OTHER ROADS



FIGURE 11



GENERAL PLAN  
 DETAIL LAND USE MAP  
 FIGURE 12

1. "Provide coastal recreational opportunities accessible to the public."

Recreational activities normally associated with the shoreline are bathing, swimming, beaching and boating. The shoreline fronting the project consists of shallow mudflats which are unsuitable for the preceding recreational activities. The project is presently under review by the Department of Parks and Recreation, City and County of Honolulu, in determining the means by which the applicant can fulfill the requirements of Ordinance No. 4311, relating to public access to the shoreline. Should a public access to the shoreline be required, a pedestrian access easement alongside the project's private roadways will be provided.

2. "Protect, preserve, and, where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture."

In compliance with the Department of Land Utilitization's determination set forth on page 3, 80/SMA-109 (SM), (see Appendix 1), an archaeological/historical reconnaissance of the project was conducted to verify the existence or absence of artifacts due to the site's proximity to Heeia Fishpond. (See Appendix II). In summary, it was determined that the site contains no above-ground archaeological features because of the various changes in land use of the site through time. While a small corner of the project site is adjacent to Heeia Fishpond, no work is proposed within the boundaries of or immediately adjacent to the pond.

3. "Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources."

In its present state, the project site can be described as relatively undeveloped. As seen from Ipuka Street, the site's dense underbrush and high weeds create an effective visual barrier between the existing residential community and Kaneohe Bay. Implementation of the project will remove the visual barrier and will therefore have

a positive scenic impact on the aesthetic values of Kaneohe Bay. A stronger visual relationship between the existing community and Kaneohe Bay will be established by the creation of view corridors.

4. "Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems."

The State of Hawaii Department of Health (DOH) does not require any form of Natural Pollutant Discharge Elimination System (NPDES) permit for storm runoff resulting from the project. The proposed drainage system will be submitted for review and approval with respect to water quality effects on Kaneohe Bay. The State Department of Health will provide this review. Negligible impact is anticipated based on the size of the project with respect to the Kaneohe Bay watershed.

5. "Provide public or private facilities and improvements important to the State's economy in suitable locations."

The proposed action is consistent with the present land use designation and zoning for the project site. As such, the project will contribute to the economy by providing residential units in a suitable location.

6. "Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, and subsidence."

The project will be designed and constructed in compliance with the requirements of the Federal Flood Insurance Program, the City and County of Honolulu Drainage Standards, and Grading Ordinance.

7. "Improve the development review process, communication, and public participation in the management of coastal resources and hazards."

This EIS was written to communicate the potential impacts of the proposed project in order to facilitate public participation in the review and management of coastal resources and hazards.

V. THE PROBABLE IMPACT OF THE PROPOSED ACTION  
ON THE ENVIRONMENT

A. PHYSICAL IMPACTS

1. Land Alteration

The proposed project involves the construction of a 54-unit cluster development, which includes roadways, drainage system, water system, sewage pump station, force main and landscaping. The major impact will be the urbanization of an undeveloped piece of land.

The proposed grading will allow for roadways on the site with retaining walls where necessary to negotiate steep terrain. The earthwork quantities consist of approximately 8,000 cubic yards of excavation and 10,000 cubic yards of embankment. Earth movement creates a potential for erosion.

2. Urbanization and Kaneohe Bay - Drainage and Erosion

The effects of urbanization adjacent to Kaneohe Bay are increased surface water runoff, increased soil erosion and decreased water quality. With respect to the proposed Alii Landing residential development, the Drainage Report (see Appendix III) predicts that the existing terrain contributes surface runoff to the bay at a rate of 3.6 CFS/AC (cubic feet per second per acre). This rate is based on a design storm which would occur once every 10 years. The Drainage Report further predicts that following on-site improvements, the surface water runoff rate would increase to 4.14 CFS/AC for the same 10-year frequency design storm. This represents a rate increase of 15 percent more runoff resulting from urbanization.

The total surface water runoff from the 40-square mile Kaneohe Bay drainage basin is 95,500 acre-feet per year (from Estuarine Pollution in the State of Hawaii, Volume 2: Kaneohe Bay Study, D.L. Cox, et al, November 1973, WRRRC Technical Report No. 31, page 12.). This translates into 31,000 million gallons of runoff per year. By making the assumption that rainfall within the drainage basin is uniform (i.e., it rains as much near the shoreline as at the mauka regions), each acre of the Kaneohe Bay drainage basin contributes 1.2

million gallons of storm water runoff to the bay. Therefore, the existing 5.264 site contributes 6.3 million gallons of runoff to the bay. The improved site will contribute 7.25 million gallons of runoff. The proposed site improvements will increase the runoff rate by 15%; however, the increased runoff represents less than 0.003 percent increase in the total volume of runoff entering Kaneohe Bay.

From the foregoing quantitative analysis, it is apparent that the effects of the proposed urbanization with respect to surface water runoff, increased soil erosion and decreased water quality will be negligible. The resulting impact will also be negligible.

As further information to verify the effects of urbanization on soil erosion, the City and County of Honolulu utilizes the Soil Erosion Standards and Guidelines. These guidelines require calculation of a severity rating number. The severity rating number has been computed and the calculations are contained in Appendix IV. The severity rating number for the Alii Landing project is 4,800. The standard for the Island of Oahu is 50,000. The closer the rating is to 50,000 is indicative of the potential soil erosion.

With respect to water quality, it is unlikely that any changes would be physically measurable following development since surface water storm runoff occurs over a very short duration. The principal sources of pollution of the bay are the perennial and intermittent streams because of their consistent input and contact to the bay. Two previous principal sources of pollution, the Kaneohe sewage treatment plant and Kaneohe Marine Corps Air Station sewage treatment plant sewage outfalls, have been diverted to the Mokapu Outfall.

From a broader perspective, the urbanization of the Kaneohe Bay drainage basin has created the primary effect of increasing surface runoff as well as created the secondary effects of increased soil erosion and decreased water quality. The impact of increased surface runoff has created an increased potential for flooding along major drainage tributaries. As reactive measures (actions taken after development), projects such as the Kahaluu Flood Control project have been implemented. The Soil Erosion Standards and Guidelines were also adopted to require prediction of soil loss prior to development. And finally, projects such as the diversion of the sewage outfalls from Kaneohe Bay have been implemented to restore water quality. The

resultant of previous development has given rise to additional guidelines and standards. These present guidelines and standards are for the purpose of primarily controlling flood potential and, secondarily, controlling soil erosion and water quality degradation.

### 3. Air

The short-term impact on air quality posed by the proposed action will be the fugitive dust and vehicle emissions during construction. The impact of the Alii Landing-generated traffic on the air quality in Heeia is expected to be relatively minor.

A preliminary air quality analysis was prepared based on the United States Environmental Protection Agency (EPA) publication, "Guidelines for Air Quality Maintenance Planning and Analysis Volume 9: Evaluating Indirect Sources." A traffic study was conducted at the intersection of Kamehameha Highway and Ipuka Street. The study indicated that the present maximum peak hourly flow on Kamehameha Highway in any direction does not exceed 350 vehicles per hour. The anticipated increase in peak hour vehicles will not exceed 38 vehicles per hour. The resulting increase in traffic may also increase automobile emissions by 10.0%. However, based on the type of intersection and the prevailing winds, there is no basis to anticipate that the proposed project will increase auto emissions to dangerous levels. Based on a volume capacity ratio of 0.4, the total 1-hour carbon monoxide impact will be less than 3 ppm. The EPA 1-hour standard is 35 ppm.

### 4. Noise

Construction equipment and machinery noise will be audible throughout the construction phase on site as well as from the movement of equipment through residential areas. The noise-producing machinery are internal combustion engines, compressors, generators and tractors.

## B. BIOLOGICAL IMPACTS

### 1. Flora

Initially, the proposed action will involve clearing and grubbing activities which will result in the removal of most of the terrestrial

resultant of previous development has given rise to additional guidelines and standards. These present guidelines and standards are for the purpose of primarily controlling flood potential and, secondarily, controlling soil erosion and water quality degradation.

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## B. BIOLOGICAL IMPACTS

### 1. Flora

Initially, the proposed action will involve clearing and grubbing activities which will result in the removal of most of the terrestrial

biota except for major existing trees as cited in Table 1. In general, because of the highly modified character of the project site and because none of the biota are considered to be endangered, the impact of removal will be insignificant.

At least 1.69 acres of the 5.264 acre parcel will be landscaped. Landscaping will involve the introduction of exotic flora as accounted in the general description of the Action's Technical Characteristics section. The net result should be one of replacing mostly exotic flora with other exotic vegetation. There should be only a brief period when the soil retention values of vegetative cover will be lost.

The United States Department of the Interior, Fish and Wildlife Service has inspected the site and determined that the proposed action will pose no significant impact on terrestrial flora and fauna.

## 2. Fauna

As the site contains only a very limited and predominately non-native fauna, the proposed project will pose no negative impact on endangered species. No work is proposed within Kaneohe Bay. The previously described soil erosion control measures when implemented should reduce any effects of soil erosion on the marine environment.

It is assumed that the new residents of the Alii Landing project will introduce exotic fauna or pets. However, it is expected that the Alii Landing Homeowners' Association (as similar community associations have done in the past), will draw up rules which regulate the ownership of household pets, such as pick-up and proper disposal of fecal material and restrictions on pet mobility.

## C. IMPACTS ON HISTORICAL SITES

The project site is adjacent to Heeia Fishpond which is an outstanding candidate for reinstatement on the State and Federal Register of Historic Places. The fishpond is one of the very few of its type left on Oahu. A description of the Heeia Fishpond can be found in the Archaeological Reconnaissance. The survey supports the intended plan of leaving this valuable historic site in its present state.

An impact of the proposed action involves the disinterment of the burials from the now-defunct and unofficial Japanese cemetery before

construction activities are initiated. As previously stated, the existing grave sites will be reinterred in accordance with Department of Health regulations. The end result will be the reinterment of the remains in a new setting that can be presumed to be better protected and maintained.

D. POPULATION AND GROWTH IMPACTS ON LAND USE, WATER,  
AND PUBLIC SERVICES

1. Land Use

Presently, the site is undeveloped. Most of the site is zoned R-6 with a small corner adjacent to Heeia Fishpond zoned P-1. The proposed action would intensify the land use of the site to that which is generally planned and zoned.

Implementation of the project will remove the visual barrier of weeds and scrub vegetation and will therefore have a positive impact on the aesthetic values of Kaneohe Bay. A stronger visual relationship between the existing community and Kaneohe Bay will be established by the creation of view corridors.

2. Domestic Water Use

The impact of a project of this nature on the domestic water supply is the resource depletion involved should the project be implemented. This resource depletion should not be of such significance given the number of proposed units involved. Water availability will be determined by the Board of Water supply during their review for a building permit application.

3. Public Services

a. Fire Protection

The Kaneohe and Kahaluu fire stations will provide service to the proposed project. With the proposed addition of five fire hydrants (there are none on the site now), the Alii Landing project should have a positive impact on the firefighting capabilities of the Honolulu Fire Department for the Heeia area. It should be noted that the location of fire hydrants would be under the review of the Board of Water Supply when construction plans are submitted for approval.

b. Sewers and Sewage Treatment

Sewage from the project will be collected on-site by gravity, pumped via force main and ultimately conveyed to the Kaneohe STP. This will replace the use of the present cesspools on the site. Routine technical data with regard to the design and construction of sewer lines and appurtenances will be reviewed and approved by the City and County Department of Public Works. Present facilities will be able to accommodate the additional sewage generated by the proposed project.

c. Solid Waste

The development of the site with residential units will increase the amount of solid waste generated in the Kailua-Kaneohe area. The effects of solid waste generation on the site area will be minimal but the impacts will be felt elsewhere, namely the Kapaa Sanitary Landfill.

The existing residents dispose of the solid waste presently generated. It is planned that the method of solid waste removal for the proposed project will be contracted with a private refuse hauling firm.

d. Police and Civil Defense

The proposed housing units will increase the extent of patrols and the time involved in investigating calls. It should be noted that the Honolulu Police Department has offered suggestions on architectural design features for the protection of occupants and property; these were forwarded to the project architect.

Should the area warrant additional disaster warning devices the Oahu Civil Defense Agency would assume the responsibility of equipment installation.

e. Schools

Informal contact with the State of Hawaii Department of Education has indicated that presently there are more than adequate facilities at Heeia Elementary and King Intermediate Schools to accommodate the increased enrollment generated from

the 54 units. There are plans to add additional classrooms to Castle High School to accommodate increasing enrollment as a result of population growth in the Kaneohe District and not in anticipation of any one particular project such as the proposed action.

f. Electricity and Telephone

Residents of the proposed project will require electricity for their day-to-day activities. As petroleum is the basic resource used in the production of electricity, and all of it is imported, increasing demands for electricity only perpetuates the State's dependence on outside sources for petroleum. Increasing the production of electricity either results in the burning of expensive low-sulfur fuel (with its negative economic impacts) or cheaper high-sulfur fuel (with negative impacts on air quality).

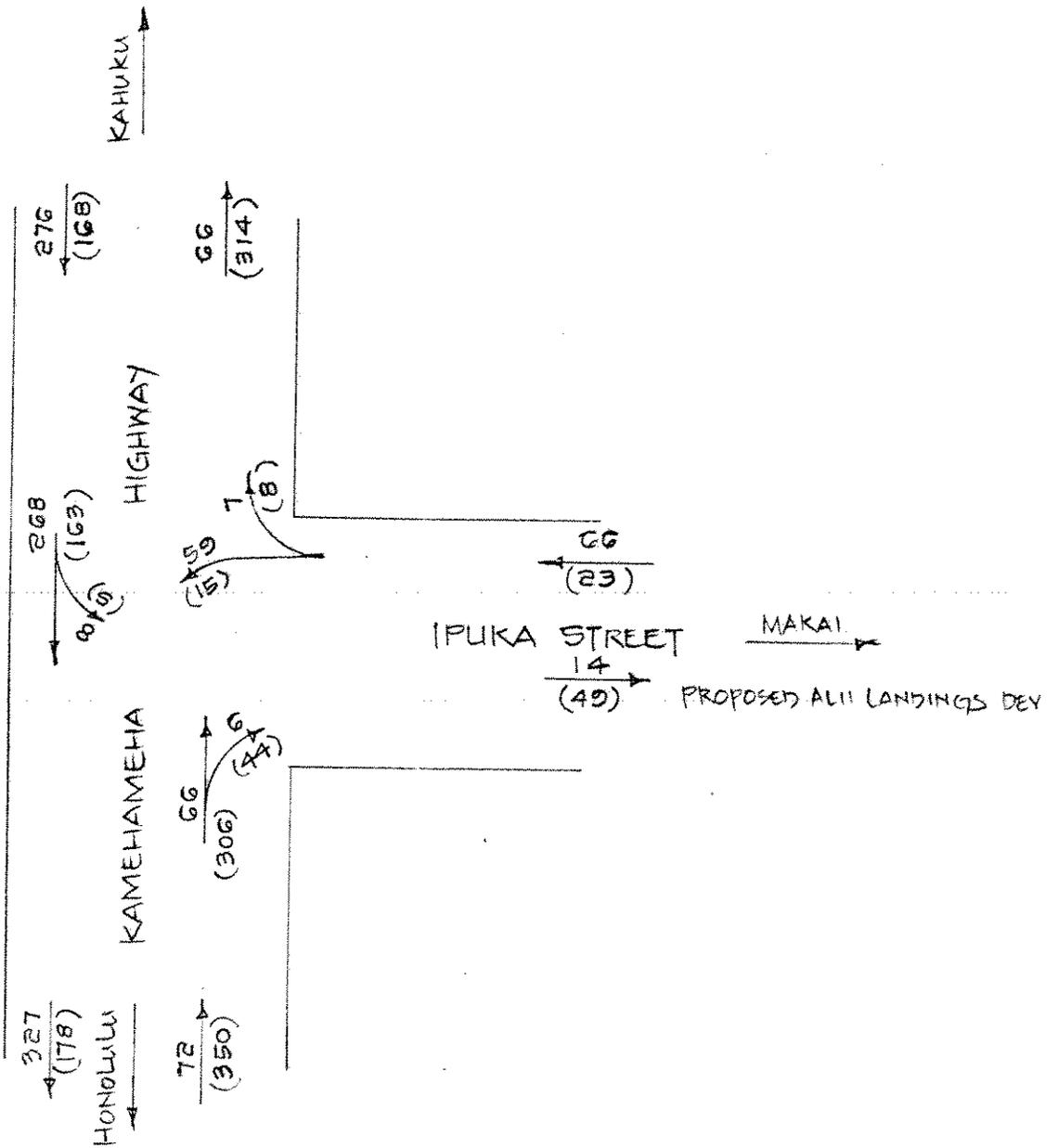
There is existing telephone service in the area such that service can readily be extended. All electric and telephone systems will be underground.

g. Traffic

Future traffic generated by the Alii Landing development is estimated to increase traffic along Kamehameha Highway as based on the following assumptions:

- a. Trip generation factor of 0.7 vehicles per peak hour per residence;
- b. Distribution factor of 80/20; and
- c. Turning movement distribution factor of 90/10.

The predicted traffic generated by the proposed action is then combined with the existing traffic count, the results of which are shown on Figure 15. Based on these volumes, there is ample capacity on Kamehameha Highway to assimilate the peak traffic generated in the area. (Typically, a two-lane road such as Kamehameha Highway can accommodate a peak hourly volume of 1,000 vehicles in each direction.) Figure 15 illustrates the predicted traffic at the intersection of Kamehameha Highway and Ipuka Street.



Additional Residences:

Proposed Alii Landings Development = 54 Residences

Additional Peak Hour Traffic:  $0.7 \times 54 = 38$  Vehicles

LEGEND:

A.M. Peak (6:30 - 7:30) Hour Count = 268

P.M. Peak (4:15 - 5:15) Hour Count = (163)

PREDICTED TRAFFIC AT INTERSECTION  
OF KAMEHAMEHA HIGHWAY AND IPUKA STREET

FIGURE 15

The direction of peak-hour traffic which will have the largest increase in vehicular movement on Kamehameha Highway will be in the Honolulu-bound lane in the morning and in the Kahuku-bound lane in the afternoon. Vehicular traffic from Alii Landings Cluster is expected to increase the present morning peak-hour from 296 vehicles to 327 vehicles, which is about a 10% increase. The afternoon peak-hour traffic is expected to increase approximately 8%, from 325 vehicles to 350 vehicles.

The traffic from the 54 new units will, therefore, not appreciably affect peak-hour traffic and Kamehameha Highway has the capacity to accommodate this increase. The cumulative effect of all new developments, however, will potentially affect peak-hour traffic and may require road-widening improvements on Kamehameha Highway in the future. It is not expected that street improvement such as traffic lights and turning lanes to Ipuka Street and Kamehameha Highway are needed to support the proposed project due to Alii Landing Cluster.

h. Recreation

The proposed action will place additional pressures on the recreational opportunities in the Kaneohe region. However, it should be noted that while the site in its present state has little or no recreational value, the proposed development will include the construction of a paddle tennis court and patio. The proposed recreational facilities which will be for the Alii Landing Association are presently under review by the Department of Parks and Recreation, City and County of Honolulu, in determining the adequacy of the facilities in fulfilling the requirements of Park Dedication Ordinance No. 4621. Since the project site cannot accommodate a larger recreational facility, any further requirements will be satisfied by payment of fees.

E. SOCIAL IMPACTS

The social ramifications of the proposed action are generally secondary in nature. Aside from the direct social implications on items like public services and increasing population, indirect and secondary effects include changes in lifestyle and land use. It should be emphasized

that these secondary effects are cumulative and not the result of any one particular project such as the proposed action.

The development of the proposed project will change the topography and therefore make it more difficult for present residents and future generations to study the history of the region.

The present lifestyle of the existing eight residents on the project site will be altered although the site has no subsistence, agricultural, or economic value. Lifestyles of the predominately newer residents in the Heeia area will not be significantly affected by the project. The newer residents who will be affected can be described as those who purchased or rented their home in an area zoned residential and are disturbed by a newer project brought about by continued intensification of land use.

The exposure of the new residents to the existing lifestyles of the area can be expected to change the newcomers' pattern of life. Also, interaction could have a positive social impact to the existing community in the areas of economics, politics, recreation and education.

The design concept of the project as a planned development should meld the homeowners into a mini-community with its own social identity within the greater Heeia community. This would result in the realization of the developer's objective of providing a good home in a suitable living environment for each resident family.

The project should have no significant impact on the level of physical illnesses, but there will be a slightly greater demand on health care facilities on the Windward area created by the proposed action. There will be a possibility of increased traffic accidents from additional traffic generated by the project. Also, it is conceivable that children's play will not be confined to yard and recreation areas but will extend to the potentially hazardous fishpond.

#### F. ECONOMIC IMPACTS

Economic impact of the proposed action will be both short and long-term. Construction activities related to the project will generate employment. This phase of the project will also provide employment for people associated with the handling and purchasing of construction materials.

After its completion and occupation, the project will not change the overall regional pattern of employment, such as commuting to areas outside

of Kaneohe town. However, the project will generate employment opportunities for service-oriented trades for maintenance of the project. Additional revenue will be generated for the government through taxation of the wages and materials used.

Sources of subsistence livelihood and agricultural employment will not be reduced by the project because there are no agricultural lands that will be displaced by the proposed action.

Future real property tax collections are anticipated with the development. Because new City-constructed roads and utilities are not necessary to serve the development (the developer would have to pay for facilities not present which would serve his development), and because City-provided maintenance is limited, it is expected that the real property taxes generated by the development would pay for City services during the early years of occupancy.

VI. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS  
WHICH CANNOT BE AVOIDED

A. ADVERSE AND UNAVOIDABLE PHYSICAL EFFECTS

1. Drainage

The proposed project will increase the amount of storm water drainage generated on-site by a factor of 15 percent. The primary adverse environmental effect of increased damage is increased potential flood hazard.

2. Erosion

The proposed project will involve earth-moving activities. Exposed earth surfaces will allow for soil loss and erosion.

3. Water Quantity

Soil erosion during construction will transplant additional sediments to Kaneohe Bay. In addition, pavement surfaces of the finished project will collect hydrocarbons and car emissions. These surfaces will be washed during rainfall periods and ultimately enter Kaneohe Bay.

4. Air

Internal combustion engines utilized during construction will increase the air emissions in the area. Automobiles of project residents will also add emissions to the atmosphere.

5. Noise

Construction activities will increase the ambient noise levels in the area.

B. ADVERSE AND UNAVOIDABLE BIOLOGICAL EFFECTS

All existing vegetation, with the exception of major trees, will be removed. The removal of the existing flora represents an adverse environmental effect since the flora will retain soil and minimize soil erosion.

C. ADVERSE AND UNAVOIDABLE EFFECTS ON PUBLIC UTILITIES, PUBLIC SERVICES AND TRAFFIC SYSTEMS

1. Public Utilities

The proposed project will put an additional demand on water supply facilities, Hawaiian Electric and Hawaiian Telephone. The increased demand is small with respect to the respective utilities' total service demand; however, any increase in demand represents an adverse environmental effect.

2. Public Services

Public services which include solid waste collection, fire protection, police protection and school systems will have increased commitments to adequately serve the proposed project. The increased service commitments will diminish available human resources, increase use of service equipment and add to the usage of physical structures such as schools.

3. Traffic Systems

The proposed project will generate additional traffic which must be assimilated into the existing roadway system. The increase in traffic represents an adverse environmental effect.

D. ADVERSE AND UNAVOIDABLE SOCIAL EFFECTS

The existing property has undergone a series of land use transformation with time. Each time the land use changes, the ability to explore preceding land use characteristics becomes diminished. While there is no significant value of the project site with respect to historical events, the proposed land alteration hinders the potential for retrieval of additional historical information.

The proposed land use transformation will further change the character of the parcel from vacant and undeveloped to a residential complex. This change with respect to social effects is both adverse as well as positive. In deference to that segment of the population which prefer open space and less development, the proposed project represents an adverse social effect.

E. RATIONALE FOR PROCEEDING WITH THE PROPOSED ACTION

The magnitude of all adverse environmental effects of the Alii Landing project are small. In addition, all of the adverse effects associated with the subject project are characteristic of any residential housing project of a similar size and similar location. Based on the fact that these are existing environmentally sound, socially acceptable and economically successful projects within the Kaneohe Bay area, there is no basis to conclude the subject project has extraordinary environmental factors or considerations.

The proposed action will stimulate the economy through expenditures related to construction and operation of the project as well as supply dwelling units into a housing market which indicates there is a strong demand for housing. The housing and economic benefits outweigh the adverse environmental effects.

VII. ALTERNATIVES TO THE PROPOSED ACTION

A. NO ACTION

No development would preclude most of the adverse environmental effects summarized in the preceding section. The no-action alternative would be to retain the site in its present vacant and undeveloped condition. The site however, has been zoned for residential use and this alternative would be an underutilization of the property in terms of existing governmental policies for the district. In addition, the retention of the project site in its present rural and relatively undeveloped state would eliminate the future annual real property tax collections anticipated with the development. Besides, the no-action alternative would not attain the objectives of the proposed action.

B. ALTERNATIVES FOR THE ACTION WHICH COULD FEASIBLY  
ATTAIN THE OBJECTIVES OF THE ACTION

1. Redevelopment to a Lower Density Use

Although this alternative is possible, it would possibly result in a higher per unit sales cost. Maximum allowable development for the 5.264 acre site under the R-6 zoning would be 61 units. The proposed project contains 54 residential units and therefore lies below the maximum level.

2. Redevelopment to a Higher Density Use

This alternative will create a more crowded site and amplify the adverse environmental effects outlined in the previous section.

3. Alternative Site

Moving the proposed action to an alternative site is essentially the same as no action. The developer would have to arrange new development rights with a different landowner at a site which will more than likely have environmental characteristics unique to the site. Thus, the construction of the proposed action at an alternative site will have differing environmental impacts, some of which will be less or more severe than the proposed action.

4. Alternative Measures to Provide for Compensation of Fish and Wildlife Losses, Including the Acquisition of Land, Waters, and Interest Therein

As there will be no fish or wildlife losses attributable to the proposed action, there is no need to provide compensation.

VIII. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT  
AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Inherent in any intensification of land use is a trade-off between short-term environmental gains at the expense of long-term losses and vice versa. The construction of this project is no exception. The proposed action forecloses future options in the sense that the site is anticipated to be committed for the life of the structures. Given our present-day economics, it is not feasible that at the end of the useful life of the structures, the buildings and paved roadways be torn up and the parcel returned to rural-type land use. It should be noted though that the project site is zoned "residential" and, therefore, the proposed action shall commit the site to its intended use.

The long-term benefits associated with the proposed project are the provision of safe, sanitary, decent housing for a growing Windward Oahu population and the future annual real property tax collections anticipated with the development. It will also provide many local jobs during the construction phase.

The proposed action poses no long-term risks to health or safety.

IX. MITIGATION MEASURES PROPOSED TO MINIMIZE ADVERSE ENVIRONMENTAL EFFECTS

A. MITIGATION MEASURES PROPOSED TO REDUCE ADVERSE PHYSICAL EFFECTS

1. Drainage

The project site drainage system will be designed and constructed according to the Drainage Standards of the City and County of Honolulu Department of Public Works. The proposed drainage system will adequately mitigate potential flood hazard affecting safety and property.

2. Erosion

Erosion during construction activities will be mitigated by use of sediment traps, retention basins, berms, and rock filters. The permanent drainage system and landscape cover will mitigate soil erosion during the project life.

3. Water Quality

Sedimentation to Kaneohe Bay will be mitigated by use of the foregoing erosion control features.

4. Air

Increased air emissions caused by construction equipment and the project's automobiles will be mitigated by use of properly functioning internal combustion engines and appropriate air emission devices as required by law.

5. Noise

Construction noise will be controlled and mitigated by a noise permit which the contractor will obtain from the Noise and Radiation Branch of the State of Hawaii Department of Health. There will also be no use of non-vehicular equipment prior to 6:45 a.m.

B. MITIGATION MEASURES TO REDUCE ADVERSE BIOLOGICAL EFFECTS

The loss of the existing site vegetation will be mitigated by use of erosion control procedures during earth-moving activities and replacement with new vegetation cover after site grading.

C. MITIGATION MEASURES TO REDUCE ADVERSE EFFECTS ON PUBLIC UTILITIES,  
PUBLIC SERVICES AND TRAFFIC SYSTEMS

1. Public Utilities

The proposed project will pay a water development charge which is proportionate to the depletion of the existing source capacity resulting from the project. The additional draw on Hawaiian Electric and Hawaiian Telephone service capacity will be mitigated by the project owners in terms of monthly fees.

2. Public Services

The depletion of public services will be mitigated in the form of taxes paid by the project homeowners.

3. Traffic Systems

No specific improvements are proposed to the major traffic arteries of the Kaneohe area. The cost for additional roadway maintenance to public roads will be paid by the project homeowners in the form of taxes.

D. MITIGATION MEASURES TO REDUCE ADVERSE SOCIAL EFFECTS

The loss of being able to view and analyze the historical value of the existing parcel has been mitigated by the preparation of an archaeological reconnaissance.

The adverse social effect of development as a whole is mitigated by transforming the land use in conformance with the applicable land use designations as well as zoning.

X. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

Construction of the proposed project will commit the site from its present undeveloped state to residential use for the expected life of the structures. As explained earlier, this in a sense irreversibly curtails the range of potential uses of the environment. The permanently altered landscape will make it difficult for present residents and future generations to study the history of the region; otherwise, there will be no loss of cultural resources.

The commitment of resources required to accomplish the project includes labor, materials, and energy, which are mostly unrenowable and irretrievable. After the project is completed, the new residents will consume potable water and petroleum-generated electricity which also represents the irretrievable commitment of resources.

XI. AN INDICATION OF WHAT OTHER INTERESTS AND CONSIDERATIONS OF GOVERNMENTAL POLICIES ARE THOUGHT TO OFFSET THE ADVERSE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTION

There is at least one governmental policy which is thought to offset the adverse environmental effects of the proposed action. This policy is guideline (8)(D), Chapter 344-4, HRS "Foster safe, sanitary, and decent homes." It should be noted that the adverse effects expected with the proposed project are associated with the construction and the operation of housing in general and therefore the benefits of housing are thought to offset the costs to the environment.

There is only one reasonable alternative to the proposed action that would realize the stated countervailing benefit and would also avoid some or all of the adverse environmental effects. The alternative of development to a lower density use would feasibly attain the objectives of the proposed action and reduce some of the related adverse effects, but this alternative will possibly result in a higher per unit development cost and consequently higher per unit sales cost. Higher sales cost will decrease the number of potential buyers and ultimately can make the project economically prohibitive.

The alternative of no-action would not reasonably satisfy the objectives of the proposed project. The proposed action located at an alternate site will have differing environmental consequences, some of which will be less or more severe than the proposed action. Obviously, the alternative of redevelopment to a higher density use will not avoid some or all of the adverse environmental effects associated with the proposed project but rather amplify them.

## XII. ORGANIZATIONS AND PERSONS CONSULTED

The EIS Preparation Notice was prepared by the Department of Land Utilization, City and County of Honolulu, based on the Environmental Assessment submitted by the applicant. The EIS Preparation Notice is dated January 29, 1981. In accordance with the "Environmental Impact Statement Regulations," the Notice was provided to the State of Hawaii Environmental Quality Commission (EQC). The Commission published the preparation notice under the Register of Shoreline Protection Act Documents in the February 8, 1981 EQC Bulletin. Upon a preparation notice's appearance in the EQC Bulletin, regulations stipulate that, if requested, interested parties be provided with a copy of the EIS Preparation Notice. If a request is received to review the Notice, the reviewer is given 30 days (from the date of the request) to provide comments. In addition to reviewers requesting a copy of the Preparation Notice, the applicant is expected to circulate to various governmental and civic agencies a copy of the Notice. In compliance with the latter regulation, copies of the EIS Preparation Notice were mailed out on May 29, 1981 to the organizations and persons identified in Table 4.

Fourteen letters were received in response to the EIS Preparation Notice. All the written responses offered comments to the Notice. Of those comments that identified specific concerns that should be addressed in the EIS, these included traffic impacts, proximity to Heeia wetlands, air quality, descriptions of the proposed sewage system, drainage and grading operations, provisions for public access, conformance with land use regulations, proposed expansion of the Heeia-Kea Boat Harbor, objectives of the Hawaii Coastal Zone Management Program and erosion control. Table 4 identifies the organizations and persons to whom copies of the EIS Preparation Notice were sent, the date of comment, if any, (definite no comments verified through informal contact are also indicated), and the date of the response to the comment.

In addition, attempts at telephone contact with Mr. Lehman Henry, the Kaneohe Neighborhood Board, the Kaneohe Outdoor Circle and the Kaneohe Bay Community Association were unsuccessful. Informal contact with the State of Hawaii Department of Land and Natural Resources yielded some comments that are expected to be sent in written form at a later date. It was indicated that the comments will be concerned with public access to the shoreline, preservation of the scenic qualities of the Fishpond and any archaeological features, erosion control and marine biota. Although the comments are not in written form to be submitted in the EIS and inspected by reviewers, it should be noted that these topics are addressed in the EIS.

TABLE 4

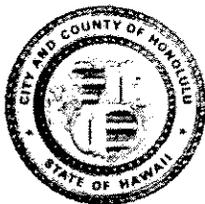
AGENCIES AND PERSONS INVOLVED IN THE CONSULTATION PERIOD

<u>Agency</u>	<u>Date Notice Mailed</u>	<u>Date of Comment</u>	<u>Date of Response</u>
<u>City and County of Honolulu</u>			
Honolulu Fire Department	5/29/81	6/05/81	6/23/81
Department of General Planning	5/29/81	6/25/81	7/08/81
Department of Parks & Recreation	5/29/81	6/10/81	7/08/81
Board of Water Supply	5/29/81	6/16/81	7/01/81
Honolulu Police Department	5/29/81	6/09/81	6/23/81
Department of Public Works	5/29/81	6/18/81	7/01/81
Department of Transportation Services	5/29/81	6/10/81	6/23/81
<u>State</u>			
Department of Agriculture	5/29/81	6/12/81	6/23/81
Department of Transportation	5/29/81	6/26/81	7/08/81
Department of Planning and Economic Development	5/29/81	6/30/81	7/08/81
Department of Land and Natural Resources	5/29/81	--	--
Department of Health	5/29/81	6/15/81	6/23/81
Office of Environmental Quality Control	5/29/81	None	--
Environmental Center, University of Hawaii	5/29/81	None	--
Water Resources Research Center, University of Hawaii	5/29/81	None	--
<u>Federal</u>			
Department of the Army, Corps of Engineers	5/29/81	6/18/81	6/30/81
U.S. Department of the Interior, Fish & Wildlife	5/29/81	7/02/81	7/08/81
<u>Other</u>			
Mr. Lehman Henry	5/29/81	--	--
Life of the Land	5/29/81	None	--
American Lung Association of Hawaii	5/29/81	6/01/81	7/08/81
Kaneohe Neighborhood Board No. 30	5/29/81	--	--
Kaneohe Outdoor Circle	5/29/81	--	--
Kaneohe Bay Community Association	5/29/81	--	--

FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

1455 S. BERETANIA STREET, ROOM 305  
HONOLULU, HAWAII 96814

EILEEN R. ANDERSON  
MAYOR



Date Recd: \_\_\_\_\_  
File: 871-  
To: DIB/LS ✓  
Action: \_\_\_\_\_  
\_\_\_\_\_

M. M. NONAKA  
CHIEF

June 5, 1981

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 So. King Street, Rm. 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

RE: Alii Landings EIS Preparation Consultation

We have no objections to the proposed project. The Kaneohe and Kahaluu fire stations will be providing fire protection to the proposed project with supportive service from Aikahi station.

Sincerely, -

A handwritten signature in cursive script, appearing to read "Melvin M. Nonaka".

Melvin M. Nonaka,  
Fire Chief

MN:LS:clt

June 23, 1981

Mr. Melvin M. Nonaka, Fire Chief  
Fire Department  
City & County of Honolulu  
1455 South Beretania Street, Room 305  
Honolulu, Hawaii 96814

SUBJECT: EIS Preparation Notice for the  
Proposed Alif Landings Project

Dear Mr. Nonaka:

This is in response to your comments of June 5, 1981 on the above mentioned EIS Preparation Notice. In the EIS, we will indicate the proposed addition of five fire hydrants (there are none on the site now).

We appreciate your review and response on this matter.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

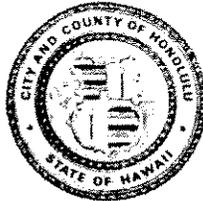
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Daniel S. C. Hong

DB:vs:mp

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



EILEEN R. ANDERSON  
MAYOR

Date Received JUN 20 1981  
File: 811-1  
To: DB/RS  
Action: \_\_\_\_\_  
WILLARD T. CHOW  
CHIEF PLANNING OFFICER  
DGP6/81-1863

June 25, 1981

Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

Alii Landings EIS Preparation Notice

Our specific areas of interest are as follows:

1. Additional Project Information

The type of residential units being proposed when reference is made to "a 54-unit cluster development," e.g., cluster single-family units, cluster apartment units, cluster duplexes.

The sewage disposal system, including size and capacity of the pump station being provided, sewage load anticipated, hook up with municipal facilities, etc.

Provisions for public access to Kaneohe Bay, if any. Although the shoreline fronting the project site consists of mudflats which are unsuitable for swimming and sunbathing, other forms of ocean recreation may be desirable, such as shoreline crabbing and fishing.

2. Conformance with Land Use Regulations

The Kaneohe-Kualoa Detailed Land Use Map designations for the site include (1) a cemetery use and (2) provisions for a 56-foot right-of-way as a service road.

Gray, Hong & Associates, Inc.  
Page 2  
June 25, 1981

(section 21 - 2.80)

Per CEC, cluster development allowed  
in areas zoned "R-1 through R-7 Residential"

The R-6 zoning code restricts residential developments  
to single-family and duplex units.

Sincerely,

*Ralph Kawamoto*

RALPH KAWAMOTO  
Planner

APPROVED:

*Willard T. Chow*  
WILLARD T. CHOW

July 8, 1981

Mr. Willard T. Chow, Director  
Department of General Planning  
City & County of Honolulu  
650 South King Street, 8th Floor  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Chow:

We have reviewed your letter of June 25, 1981, commenting on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

1. Alii Landings Cluster Development will consist of "duplexes" and "multiple-family dwellings" containing up to eight units.
2. A description of the proposed sewage system will be included in the EIS.
3. The developer will comply with Ordinance No. 4311 relating to public access to the shoreline. This will be stated in the EIS.
4. While the General Plan Detailed Land Use Map for the project site show cemetery use and provisions for a right-of-way, the developer is anticipating the adoption of the Proposed Development Plan in the fall of 1981. No cemetery or right-of-ways are shown on the Proposed Development Plan. In the event that the Development Plan is not adopted before necessary approvals are required, the developer will seek an amendment to the Detailed Land Use Map.
5. According to the Comprehensive Zoning Code (section 21-2.80), cluster development is allowed in areas zoned R-1 through R-7 Residential. The site is zoned R-6 with a small portion of the property to the Northern extreme in P-1 zoning. No work is proposed within the P-1 portion of the parcel.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

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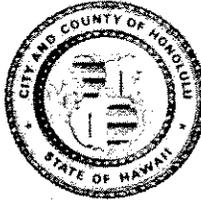
Brian L. Gray

EB:mp:mp  
871-1

DEPARTMENT OF PARKS AND RECREATION  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

EILEEN R. ANDERSON  
MAYOR



DATE RECEIVED 1  
FILE: 871-1  
TO: DB/DC ✓  
ACTION: \_\_\_\_\_

ROBERT K. MASUDA  
DIRECTOR

June 10, 1981

Mr. Brian L. Gray  
Gray, Hong and Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

SUBJECT: ALII LANDINGS EIS PREPARATION CONSULTATION

The proposed Alii Landings cluster development will be subject to compliance with Park Dedication Ordinance No. 4621 and Ordinance No. 4311, relating to public access to the shoreline.

Please contact Mr. Jason Yuen of our Advance Planning Section at 523-4884 for further consultation.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Robert K. Masuda".

ROBERT K. MASUDA, Director

RKM:vc

July 8, 1981

Mr. Robert K. Masuda, Director  
Department of Parks & Recreation  
City & County of Honolulu  
650 South King Street, 10th Floor  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Masuda:

This is in response to your comments of June 10, 1981, on the above mentioned EIS Preparation Notice. As indicated in your comments, the developer must comply with Park Dedication Ordinance No. 4621 and Ordinance No. 4311, relating to public access to the shoreline; this will be stated in the EIS.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

871-1

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA

HONOLULU, HAWAII 96843

Received 6/16/81  
EILEEN ANDERSON, Mayor  
YOSHIE H. FUJINAKA, Chairman  
DAT QUON PANG, Vice Chairman  
RYOKICHI HIGASHIONNA  
Donna M. Howard  
Michael J. Chun  
ROBERT A. SOUZA  
CLAUDE T. YAMAMOTO  
le: 071-1  
o: DIB/DC  
Action:

June 16, 1981

KAZU HAYASHIDA  
Manager and Chief Engineer

Mr. Brian L. Gray  
Gray, Hong & Associates  
116 South King Street, Rm. 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Your Letter of May 29, 1981, On  
The Alii Landings Project

We are not making any advance water commitments for proposed projects. The determination on the availability of water will depend on the status of our system when the construction plans are submitted for our approval.

All action required by the Department of Land Utilization must be completed before we will take any action on any proposed development.

Should water be made available to the project, the developer will be required to pay our water development charge for the source, reservoir, and transmission main needed to provide service to his project.

If you have any questions, please contact Lawrence Whang at 548-5221.

Very truly yours,



KAZU HAYASHIDA  
Manager and Chief Engineer

July 1, 1981

Mr. Kazu Hayashida  
Manager & Chief Engineer  
Board of Water Supply  
City & County of Honolulu  
630 South Beretania Street  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Hayashida:

This is in response to your comments on June 16, 1981 on the above mentioned EIS Preparation Notice. We appreciate the information provided on the potable water considerations for the proposed project. All potable water demands will be coordinated between the project's engineer and your office to insure compliance with applicable code requirements. This EIS will note that the construction plans must be reviewed and approved by the Board of Water Supply. In addition, the developer will comply with the requirement to pay the water development charge for the water delivery system at the time of application for building permit.

We appreciate your review and comments on this EIS Preparation Notice.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

June 23, 1981

Mr. Francis Keala, Chief  
Honolulu Police Department  
City & County of Honolulu  
1455 South Beretania Street  
Honolulu, Hawaii 96814

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Keala:

This is in response to your comments of June 9, 1981 on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

- 1) A traffic study will be conducted and incorporated into the Environmental Impact Study.
- 2) Vehicular traffic will be safely accommodated during the construction period; this will be stated in the EIS.
- 3) The suggested architectural design features for the protection of occupants and property will be forwarded to the project architect.

We appreciate your review and response on this EIS Preparation Notice.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

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Daniel S. C. Hong

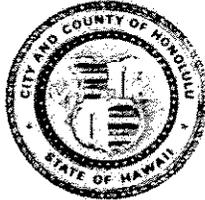
DB:vs:mp

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

1455 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96814 - AREA CODE (808) 955-8111

EILEEN R. ANDERSON  
MAYOR

FRANCIS KEALA  
CHIEF



Date Received 4 15 1981

File: 871-1

To: DIS/RS

Action: XC Design Associates  
Gregg Duggan

June 9, 1981

OUR REFERENCE EC-JS

Gray, Hong & Associates, Inc.  
116 South King Street, Rm. 508  
Honolulu, Hawaii 96813

Gentlemen:

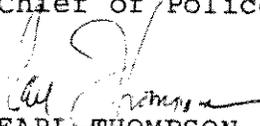
Re: Alii Landings EIS Preparation Consultation

The Honolulu Police Department's main concern with the proposed project is the addition of a population of 189 people and the corresponding increase in vehicular traffic in the immediate vicinity of King Intermediate School. Serious consideration must be given to traffic safety in the area and to the impact of additional vehicles using Kamehameha Highway.

Architectural design features incorporated into this cluster development, with the intention of minimizing criminal activity, are suggested. Visibility of entrances and placement of shrubbery, prudent use of louvers to deny access to door locks, and installation of sufficient lighting in parking areas are some of these features. Other safety and security features should be considered.

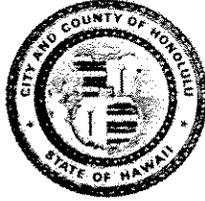
Sincerely,

FRANCIS KEALA  
Chief of Police

By   
EARL THOMPSON  
Assistant Chief  
Administrative Bureau

DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



EILEEN R. ANDERSON  
MAYOR

REC'D JUN 19 1981  
Received  
File: \_\_\_\_\_  
To: LB ✓  
Action: \_\_\_\_\_  
MICHAEL J. CHUN  
DIRECTOR AND CHIEF ENGINEER  
ENV 81-224

June 18, 1981

Mr. David B. Bills  
Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Bills:

Re: Alii Landings EIS Preparation Notice

We request that the EIS for the subject project include a  
→ discussion on the proposed sewer system, drainage and grading  
→ operation. The map showing the proposed connection to the  
municipal sewers should be included. An "Information for  
Sewer Connection" form should be submitted to the Division of  
Wastewater Management so that they can determine the adequacy  
of the existing system. Forms can be obtained by the Public  
Service Section of the Division.

Also, we request that a preliminary drainage plan and report  
→ for the development be submitted to the Drainage Section,  
Division of Engineering, for review.

included as Appendix III  
EIS.

Me ke aloha pumehana,

Handwritten signature of Michael J. Chun in cursive.

MICHAEL J. CHUN  
Director and Chief Engineer

cc: Div. of Engineering  
Div. of Wastewater Management

July 1, 1981

Mr. Michael Chun  
Director & Chief Engineer  
Department of Public Works  
City & County of Honolulu  
650 South King Street, 11th Floor  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Chun:

We have reviewed your letter of June 18, 1981, commenting on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

1. A general description of the proposed action's technical characteristics including the sewer system, drainage, and grading operation will be found in this EIS. In addition, an off-site sewer plan, which will illustrate the proposed connection to the municipal sewers will be included.
2. Formal review and approval of the adequacy of the existing sewer system has already been given. Please see enclosed correspondence from our respective offices which demonstrates the coordinated effort to insure the adequacy of the present system.
3. The project engineer has completed a drainage report for the proposed Alii Landings Cluster Development. This report has been submitted to the Drainage Section, Division of Engineering on June 23, 1981 for review and will be included in the Appendices of the EIS.

We appreciate your review and response to this EIS Preparation Notice.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

Enclosures: (4)



June 23, 1981

Mr. Roy A. Parker, Director  
Department of Transportation Services  
City & County of Honolulu  
650 South King Street, 3rd Floor  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Parker:

This is in response to your comments of June 10, 1981 on the above mentioned EIS Preparation Notice. As recommended, a traffic study will be conducted and incorporated into the Environmental Impact Statement.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

GEORGE R. ARIYOSHI  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF AGRICULTURE  
1428 SO. KING STREET  
HONOLULU, HAWAII 96814

JOHN FARIAS, JR.  
CHAIRMAN, BOARD OF AGRICULTURE

Date Received JUN 12 1981  
File: 071-1  
To: DB/DS ✓  
Action: \_\_\_\_\_

June 12, 1981

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, HI 96813

Dear Mr. Gray:

Subject: Alii Landings EIS Preparation Consultation

The Department of Agriculture has reviewed the subject EIS Preparation Notice and offers the following comments.

The Environmental Impact Statement should address any potential impacts on the wetlands located mauka and north of the project site.

Thank you for the opportunity to comment.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "John Farias, Jr.", written over a horizontal line.

JOHN FARIAS, JR.  
Chairman, Board of Agriculture

June 23, 1981

Mr. John Farias, Jr., Chairman  
Board of Agriculture  
State of Hawaii  
Department of Agriculture  
1428 South King Street  
Honolulu, Hawaii 96814

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Farias:

We have reviewed your letter of June 12, 1981, commenting on the above mentioned EIS Preparation Notice. The project is located makai and west of Heeia wetlands and is not expected to adversely effect the wetlands. We will include in the EIS maps and an in-depth description of the project location for further clarification.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp



Date Received JUN 29 1981

File: \_\_\_\_\_

To: D13

Action: \_\_\_\_\_

STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
155 KUALAHELE STREET  
HONOLULU, HAWAII 96813

JOSEPH B. BASS  
JAMES H. GILLES  
ANTHONY J. GIBSON  
JAMES E. M. TERRY  
JONATHAN K. SHIMADA  
IN REPLY REFER TO:

STP 8.7374

June 26, 1981

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 So. King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

EIS Preparation Notice  
Alii Landings

This updates our comments to you on June 19, 1981, concerning the subject matter.

While the affected portion of Kamehameha Highway fronting the proposed action is under the jurisdiction of the City and County of Honolulu, it serves, among others, commuters to our Heeia-Kea Boat Harbor.

We plan to expand the harbor and since harbor generated vehicular and trailer boat traffic may be affected by the proposed 54-unit cluster development, we recommend the EIS discuss the impact the 54-unit housing development will have on traffic circulation in the selected location.

Very truly yours,

*Ryokichi Higashionna*

Ryokichi Higashionna  
Director of Transportation

7/1/81

- ✓ Ah Leong Kwan: T48-6527 DOT Planning
  - address traffic at Kam Hwy / Ipuka st. increase due to Alii landings
- Danny Tanaka: T48-2559 DOT - Harbors Division
  - Mention future expansion to Heeia-Kea Boat Harbor is planned (5+ years)
  - negligible amount of traffic from Alii landings cluster, eq assume 10% +, to Harbor
  - traffic from Boat Harbor <sup>at Kam Hwy / Ipuka st</sup> not known at this time but will be considered in Harbor EIS.

July 8, 1981

Mr. Ryokichi Higashionna, Director  
State of Hawaii  
Department of Transportation  
869 Punchbowl Street  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Higashionna:

We have reviewed your letter of June 26, 1981, commenting on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

1. The information provided on the future expansion of the Heeia-Kea Boat Harbor will be mentioned in the EIS.
2. It is expected that the traffic from the proposed 54 units will not appreciably affect peak hour traffic.
3. At this time, it is difficult to determine the amount of traffic that will be generated from the future expansion of the Heeia-Kea Boat Harbor. It may be more appropriate to discuss the impact of harbor-generated traffic in the Heeia-Kea Boat Harbor EIS.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp



DEPARTMENT OF PLANNING  
AND ECONOMIC DEVELOPMENT

GEORGE R. ARIYOSHI  
Governor

HIDETO KONO  
Director

FRANK SKRIVANEK  
Deputy Director

Kamamalu Building, 250 South King St., Honolulu, Hawaii • Mailing Address, P.O. Box 2359, Honolulu, Hawaii 96804

June 30, 1981

Date Received JUL 2 1981

File: \_\_\_\_\_

To: DB Ref. No. 3326

Action: \_\_\_\_\_

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 South King Street, Rm. 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Alii Landing, EIS Preparation Notice

Thank you for your letter of May 29, 1981, which informed us of the proposed project to construct a 54-unit cluster development on a 5.264-acre parcel situated at Heeia, Oahu.

As you are aware, the Hawaii Coastal Zone Management (CZM) Program provides legislative objectives and policies relating to land and water uses within the coastal zone. While the subject Preparation Notice does not specifically address the CZM concerns, we trust that they will be more clearly assessed in the completed environmental impact statement.

Sincerely,



Hideto Kono

cc: Office of Environmental Quality Control

July 8, 1981

Mr. Hideto Kono, Director  
State of Hawaii  
Department of Planning & Economic Development  
250 South King Street  
Honolulu, Hawaii 96813

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Kono:

This is in response to your comments of June 30, 1981, on the above mentioned EIS Preparation Notice. As recommended, the objectives of the Hawaii Coastal Zone Management Program and how the proposed project relates to them will be incorporated into the EIS.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

GEORGE R. ARIYOSHI  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HEALTH

P.O. BOX 3378  
HONOLULU, HAWAII 96801

June 15, 1981

REC JUN 17 1981  
Date Received

File: 071-  
To: D13/87 N. ✓  
Action:

GEORGE A. L. YUEN  
DIRECTOR OF HEALTH

JOHN F. CHALMERS, M.D.  
DEPUTY DIRECTOR OF HEALTH

HENRY N. THOMPSON, M.A.  
DEPUTY DIRECTOR OF HEALTH

MELVIN K. KOIZUMI  
DEPUTY DIRECTOR OF HEALTH

ABELINA MADRID SHAW, M.A., J.D.  
DEPUTY DIRECTOR OF HEALTH

In reply, please refer to:  
File: EPHS-SS

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 S. King St., Rm. 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Request for Comments on Proposed Environmental Impact Statement  
(EIS) for Alii Landings, Heeia, Koolaupoko, Oahu

Thank you for allowing us to review and comment on the subject  
proposed EIS.

The subject EIS should describe the proposed sewage system and how  
existing or potential problems in regard to the sewage pump station will  
be addressed.

We realize that the statements are general in nature due to preliminary  
plans being the sole source of discussion. We, therefore, reserve the  
right to impose future environmental restrictions on the project at the  
time final plans are submitted to this office for review.

Sincerely,

For

MELVIN K. KOIZUMI  
Deputy Director for  
Environmental Health

June 23, 1981

Mr. Melvin K. Koizumi, Deputy Director  
Environmental Health  
State of Hawaii  
Department of Health  
P. O. Box 3378  
Honolulu, Hawaii 96813

Dear Mr. Koizumi:

SUBJECT: EIS Preparation Notice for The  
Proposed Alii Landings Project

We have reviewed your letter of June 15, 1981, commenting on the above mentioned EIS Preparation Notice. A description of the proposed sewage system and a discussion of existing or potential problems attributable to the sewage pump station will be included in the EIS.

We appreciate your review and comments on this EIS Preparation Notice.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DBWS:mp

- 821 Department of



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858

Received 27 JUN 1981  
File: 071-  
To: D B / D S  
Action:

PODED-PV

18 June 1981

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

Thank you for providing us with the Environmental Impact Statement (EIS) Preparation Notice, dated 29 May 1981, for the Alii Landings development (Inclosures 1 - 3), Heeia, Oahu, Hawaii. We have reviewed the material submitted and we provide the following comments to assist you with preparation of the draft EIS.

a. From the information provided, it cannot be determined whether the project will require a Department of the Army (DA) permit. A DA permit will be required for any work in the waters of Kaneohe Bay.

b. According to the Flood Insurance Study for the Island of Oahu prepared by the Federal Insurance Administration, the project site is not situated in any designated tsunami or riverine flood hazard area. The site is in an area of minimal flooding of Zone C designation. See the attached Flood Insurance Rate Map (Inclosure 4) identifying the flood prone areas in the Heeia area. Floodproofing requirements are not applicable for structures in Zone C areas.

We would appreciate the opportunity to review the draft EIS when it becomes available.

Sincerely,

  
KISUK CHEUNG  
Chief, Engineering Division

4 Incl  
As stated

June 30, 1981

Mr. Kisuk Cheung, Chief  
Engineering Division  
Department of the Army  
U. S. Army Engineer District, Honolulu  
Ft. Shafter, Hawaii 96858

**SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project**

Dear Mr. Cheung:

This is in response to your comments of June 18, 1981, on the above mentioned EIS Preparation Notice. We would like to provide the following responses to your comments:

- a. No work is proposed in the waters or wetlands of Kaneohe Bay; this will be stated in the EIS.
- b. We will include information provided in the EIS being prepared; additionally, we will include the Flood Insurance Rate Map as a means of further identifying the flood prone areas surrounding the project site.

Be assured that your office will be forwarded a copy of the draft EIS when it is completed.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp



United States Department of the Interior

FISH AND WILDLIFE SERVICE

300 ALA MOANA BOULEVARD  
P. O. BOX 50167  
HONOLULU, HAWAII 96850

IN REPLY REFER TO:

ES  
Room 6307

REC'D JUL 01 1981  
Date Received \_\_\_\_\_

File: \_\_\_\_\_

To: G.W. DB

Action: \_\_\_\_\_

JUL 2 1981

Gray, Hong & Associates  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Re: EIS Preparation  
Notice-Alii Landings,  
Heeia, Koolauoko,  
Honolulu County, Hawaii

Gentlemen:

We have reviewed the EIS Preparation Notice you provided and inspected the site. From the fish and wildlife standpoint there will be no significant impact on the terrestrial environment. There may be a significant impact on the marine environment due to project design and construction practices. These should be addressed, along with mitigation for them, in the EIS.

If shore stabilization is required to prevent erosion, we recommend ungrouted rip-rap with at least a 3:1 grade.

We appreciate this opportunity to comment.

Sincerely yours,

Lucian Kramer  
Acting Project Leader  
Office of Environmental Services

cc: NMFS  
HDF&G  
EPA, San Francisco



Save Energy and You Serve America!

July 8, 1981

Mr. Lucian Kramer, Acting Project Leader  
Office of Environmental Services  
United States Department of the Interior  
Fish and Wildlife Service  
P.O. Box 50167  
Honolulu, Hawaii 96850

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Kramer:

This is in response to your comments of July 2, 1981, on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

1. We will include information provided on the terrestrial flora and fauna in the EIS being prepared.
2. No work is proposed in the waters of Kaneohe Bay; this will be stated in the EIS. In addition, provisions for erosion control including small on-site retention/infiltration facilities, filter berms along the shoreline and sediments basins on mauka areas, will be stated in the EIS.

Thank you for your review and comments.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

AMERICAN  LUNG ASSOCIATION *of Hawaii*

EIS-011  
871-1  
D B

June 1, 1981

Mr. Brian L. Gray  
Gray, Hong & Associates  
116 South King Street, Rm 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

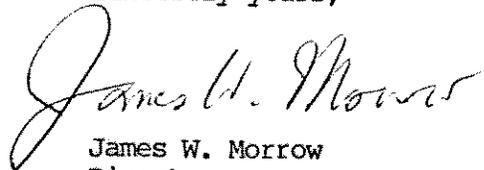
Subject: Alii Landings (TMK: 4-6-04: 11 and 4-6-05: 5)

Thank you for contacting us with regard to EIS preparation for the subject project. At this time we have the following suggestions for analyzing the impacts which are of particular interest to our Association.

1. A thorough analysis of the project's impact on traffic in the area should be included. This analysis should address both short and long term impact on peak-hours and average daily traffic volumes as well as highway service level. Particular attention should be paid to intersections.
2. An air quality analysis consisting of at least the following should be incorporated:
  - a. An analysis of the effect on the level of regulated pollutants during the construction period.
  - b. An analysis of the effect of increased traffic in the project area on the concentrations of regulated pollutants. The cumulative impact of this project, other approved projects, and existing sources of traffic should be assessed. Impacts should be reported as increased emissions and ambient concentrations. Highway intersections are generally considered 'hotspots' for pollutant concentrations and should receive special attention.
  - c. The indirect impacts on air quality resulting from increased fuel combustion to meet the increased electrical demand of the project should also be assessed.

- d. Finally, any air quality impact associated with solid waste disposal should also be examined and reported.

Sincerely yours,



James W. Morrow  
Director  
Environmental Health

JWM:jm  
CL/L06

cc: DLJ

July 8, 1981

Mr. J. James W. Morrow, Director  
American Lung Association of Hawaii  
245 North Kukui Street  
Honolulu, Hawaii 96817

SUBJECT: EIS Preparation Notice for the  
Proposed Alii Landings Project

Dear Mr. Morrow:

We have reviewed your letter of June 1, 1981, commenting on the above mentioned EIS Preparation Notice. We would like to provide the following comments to your concerns:

1. A traffic study will be conducted and incorporated into the Environmental Impact Statement.
2. The present maximum peak hourly flow on Kamehameha Highway in any direction does not exceed 350 vehicles per hour. The anticipated increase in peak hour vehicles will not exceed 35 vehicles per hour. The resulting increase in traffic may also increase automobile emissions by 10%. However, based on the type of intersection and the prevailing winds, there is no basis to anticipate that the proposed project will increase auto emissions to dangerous levels. Based on a volume/capacity ratio of 0.4, the total 1-hour carbon monoxide impact will be less than 3ppm. The 1-hour standard is 40ppm.
3. It is not anticipated that there will be any onsite burning of solid waste material, however, the effects of solid waste generation will be felt elsewhere, namely the Kapar Sanitary Landfill. A statement to that effect will be included in the EIS.

We appreciate your expeditious review and reply on this EIS Preparation Notice.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

871-1

XIII. LIST OF NECESSARY APPROVALS

A. FEDERAL GOVERNMENT

None

B. STATE OF HAWAII

1. Department of Health - Noise Permit, Disinterment Permit, Construction Plan Approval

C. CITY AND COUNTY OF HONOLULU

1. Department of Land Utilization - Shoreline Management Area Use Permit, Construction Plan approval, Subdivision Approval (for consolidation)
2. Department of Public Works, Engineering Division - Grading Permit, Construction Plan Approval
3. Department of Transportation, Traffic Engineering - Construction Plan Approval
4. Department of Public Works, Division of Wastewater Management - Construction Plan Approval
5. Board of Water Supply - Construction Plan Approval
6. Fire Department - Construction Plan Approval
7. Department of Parks and Recreation - Construction Plan Approval

D. PRIVATE

1. Hawaiian Electric Company - Construction Plan Approval
2. Hawaiian Telephone Company - Construction Plan Approval

XIV. ORGANIZATIONS AND PERSONS INVOLVED IN THE PUBLIC REVIEW PERIOD

Included within this section are all comments received during the thirty (30) day review period as well as the responses to the comments. A total of twenty-two (22) written comments were received and responses were prepared. In addition, follow-up telephone contacts were made with all agencies and persons involved in the consultation period to verify if written comments were forthcoming if not received at the end of the thirty (30) day public notice period. Four (4) agencies indicated an intent to forward comments; however, as of September 8, 1981, no comments have been received. Subsequently, the revised EIS was formalized.

The only physical change to the Draft EIS has been the enclosure of all consultation comments into the text. The Draft EIS was issued with the consultation comments loosely appended.

This section includes all modifications to Section I through XIII in the form of responses. This approach has been utilized since all suggested revisions were for clarification rather than omissions or significant exceptions to the information presented in the Draft EIS.

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

1455 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96814 - AREA CODE (808) 955-8111

EILEEN R. ANDERSON  
MAYOR

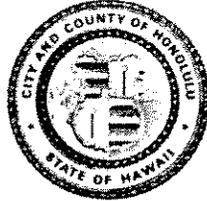
Date Received \_\_\_\_\_ FRANCIS KEALA  
CHIEF

File: \_\_\_\_\_

To: DB

Action: approved

OUR REFERENCE EC-JS



July 27, 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

Draft Environmental Impact Statement  
Alii Landings  
Tax Map Keys: 4-6-04: 11 and 4-6-05: 5

We have reviewed the Draft Environmental Impact Statement for the referenced project. We have no comments to add to those provided in response to the earlier EIS preparation notice.

Sincerely,

FRANCIS KEALA  
Chief of Police

By Earl Thompson  
EARL THOMPSON  
Assistant Chief  
Administrative Bureau

August 12, 1981

Mr. Francis Keala, Chief of Police  
Honolulu Police Department  
City & County of Honolulu  
1455 South Beretania Street  
Honolulu, Hawaii 96814

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
Tax Map Key: 4-6-04: 11 & 4-6-05: 5

Dear Mr. Keala:

We have received your comments of July 27, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

971-1

GEORGE R. ARIYOSHI  
GOVERNOR



Date Received JUL 29 1981

File: \_\_\_\_\_

To: RS/DE

HIDEO MURAKAMI  
COMPTROLLER

Action: \_\_\_\_\_

MIKE N. TOKUNAGA  
DEPUTY COMPTROLLER

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
DIVISION OF PUBLIC WORKS  
P. O. BOX 119, HONOLULU, HAWAII 96810

LETTER NO. (P)1618.1

JUL 29 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96818

Gentlemen:

Subject: Draft EIS for Alii Landings  
TMK: 4-6-04:11 and 4-6-05:05

Thank you for this opportunity to review and comment on the subject project.

The project will not have any adverse environmental effect on any existing or planned facilities serviced by our department.

Very truly yours,

RIKIO NISHIOKA  
State Public Works Engineer

MI: jm

August 12, 1981

Mr. Rikio Nishioka  
State Public Works Engineer  
State of Hawaii  
Department of Accounting & General Services  
Division of Public Works  
P. O. Box 119  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
Tax Map Key: 4-6-04: 11 & 4-6-05: 5

Dear Mr. Nishioka:

We have received your comments of July 29, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB;vs:mp

871-1



GEORGE R. ARIYOSHI  
GOVERNOR OF HAWAII

PROJECT OFFICES

WAIMEA OFFICE  
P. O. BOX 125  
KAMUELA, HAWAII 96743

KEAUKAHA OFFICE  
P. O. BOX 833  
HILO, HAWAII 96720

STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS

P. O. BOX 1879  
HONOLULU, HAWAII 96805

July 31, 1981

Date Received JUL 31 1981

File: \_\_\_\_\_

To: RS/DB \_\_\_\_\_

Action: \_\_\_\_\_

PROJECT OFFICES

MAUI OFFICE

P. O. BOX 22  
KAHULUI, MAUI 96732

MOLOKAI OFFICE

P. O. BOX 198  
HOOLEHUA, MOLOKAI 96729

KAUAI OFFICE

P. O. BOX 332  
LIHUE, KAUAI 96766

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Sir:

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
Tax Map Keys: 4-6-04:11 and 4-6-05:5

The Department of Hawaiian Home Lands has reviewed the Draft Environmental Impact Statement for the subject project and offers the following comment.

The Draft Environmental Impact Statement should address what potential noise impacts the Kaneohe Marine Corp Air Station aircrafts landings and takeoffs would have on the proposed cluster development.

Thank you for the opportunity to review and comment.

Sincerely yours,

GEORGIANA K. PADEKEN  
Chairman

GKP:GW:kt

August 26, 1981

Ms. Georgianna K. Padeken, Chairman  
State of Hawaii  
Department of Hawaiian Home Lands  
P. O. Box 1879  
Honolulu, Hawaii 96805

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Ms. Padeken:

This is in response to your comments of July 31, 1981, on the above mentioned Draft EIS. As indicated in your comments, the potential noise impacts of existing aircraft noise from Kaneohe Marine Corps Air Station (KMCAS) will be found in the Section "Organizations and Persons involved in the Public Review Period" of the revised EIS. Informal contact with the public relations officer of KMCAS has indicated that flight lines and times are regulated, as found in the Air Installations Compatible Use Zones (AICUZ), Kaneohe Marine Corps Air Station, Oahu, Hawaii policy statement. In essence, the policies dictate that flights do not occur over residential areas and are confined to daytime hours. In the event that it is anticipated that extra aircraft activity will take place during night time hours, announcements are made through the media to that effect.

We appreciate your review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

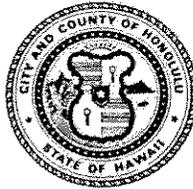
DB:vs:pp

BUILDING DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

HONOLULU MUNICIPAL BUILDING  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

F AUG 5 1981  
Date Received \_\_\_\_\_  
File: 871  
To: DB ✓  
Action: \_\_\_\_\_

EILEEN R. ANDERSON  
MAYOR



ROY H. TANJI  
DIRECTOR AND BUILDING SUPERINTENDENT

PB 81-648

July 28, 1981

Mr. David Bills  
Gray, Hong & Associates, Inc.  
116 S. King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Bills:

Subject: Draft Environmental Impact Statement  
Alii Landings  
Tax Map Key: 4-6-04:11 and 4-6-05:5

We have reviewed the Draft Environmental Impact Statement for Alii Landings and have no comments to offer.

Very truly yours,

A handwritten signature in cursive script, reading "Roy H. Tanji".

ROY H. TANJI  
Director and Building Superintendent

AF:vk  
cc: J. Harada

August 12, 1981

Mr. Roy H. Tanji  
Director & Building Superintendent  
Building Department  
City & County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Aii Landings  
Tax Map Key: 4-6-04: 11 & 4-6-05: 5

Dear Mr. Tanji:

We have received your comments of July 28, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

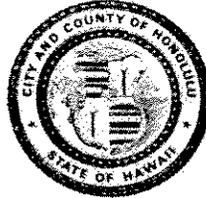
Brian L. Gray

DB:vs:mp

871-1

DEPARTMENT OF PUBLIC WORKS  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813



EILEEN R. ANDERSON  
MAYOR

MICHAEL J. CHUN, PH.D.  
DIRECTOR AND CHIEF ENGINEER

ENV 81-235

August 3, 1981

Gray, Hong and Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

Re: DEIS for Alii Landings, Kaneohe, Oahu, Hawaii

We have reviewed the subject DEIS and have the following comments.

1. The drainage report is satisfactory and was approved on July 17, 1981. The existing storm drain easement must be respected.
2. We note that the roads within the development will be private. Has it been designed to accommodate heavy duty private refuse collection vehicles? Also, what are the conditions and improvement needs (pavements, sidewalks, gutters, etc.) of the existing street systems surrounding the proposed project?
3. The area should not be mass graded because the site is adjacent to Kaneohe Bay. Provisions for small on-site retention/ infiltration facilities may not be sufficient and should receive more attention. Filter berms if installed may be needed along the entire ocean frontage.
4. The proposed off-site sewer plan (Figure 6) is not acceptable. The plan that has been tentatively approved by the Division of Wastewater Management consists of a private force main that will be connected directly to the 27-inch Heeia interceptor sewer on Kamehameha Highway. Connection to the existing 6 and 8-inch force mains will not be permitted.

Me ke aloha pumehana,

A handwritten signature in cursive script, appearing to read "Michael J. Chun".

MICHAEL J. CHUN  
Director and Chief Engineer

cc: DLU  
Engineering  
WWM (Public Service)  
(Planning Sec.)

September 1, 1981

Mr. Michael J. Chung  
Director & Chief Engineer  
Department of Public Works  
650 South King Street  
Honolulu, Hawaii 96813

SUBJECT: Environmental Impact Statement  
Alii Landings Cluster Development  
Tax Map Key: 4-6-04: 11  
4-6-05: 5  
Kaneohe, Oahu, Hawaii

Dear Mr. Chun:

The following is in response to your review and comments for the draft environmental impact statement, as stated in your letter of August 3, 1981.

1. The on-site improvements will include a subsurface drainage system which will discharge the runoff at the shoreline setback. The existing drainage easement, which is favor of the City, will be realigned to generally follow the roadway to the shoreline setback.
2. The project's on-site roadways will be able to accommodate heavy duty private refuse collection vehicles.

Ipuka Street will be extended to the entrance of Alii Landings Cluster with full road improvements in conformance with City Standards.

3. During the construction phase, the grading operation will be done with adequate erosion control measures to prevent silt and other undesirable matter from entering Kaneohe Bay. Sediment basins will be sized and located throughout the site such that water quality into Kaneohe Bay is not affected. Filter berms will be constructed along the entire ocean frontage. A temporary erosion control plan will be subject to review and approval by the City and County of Honolulu prior to any construction.
4. A 4-inch force main will run through the project site and along Ipuka Street to Kamehameha Highway where a connection to the 27-inch Heeia interceptor sewer is proposed. This entire system up to the sewer connection will be maintained by the Alii Landings Homeowner's Association. Figure 6 (off-site sewer plan) illustrates the proposed sewer system.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

\_\_\_\_\_  
Brian L. Gray

RS:mp  
871

Enclosed as above

XIV - B5

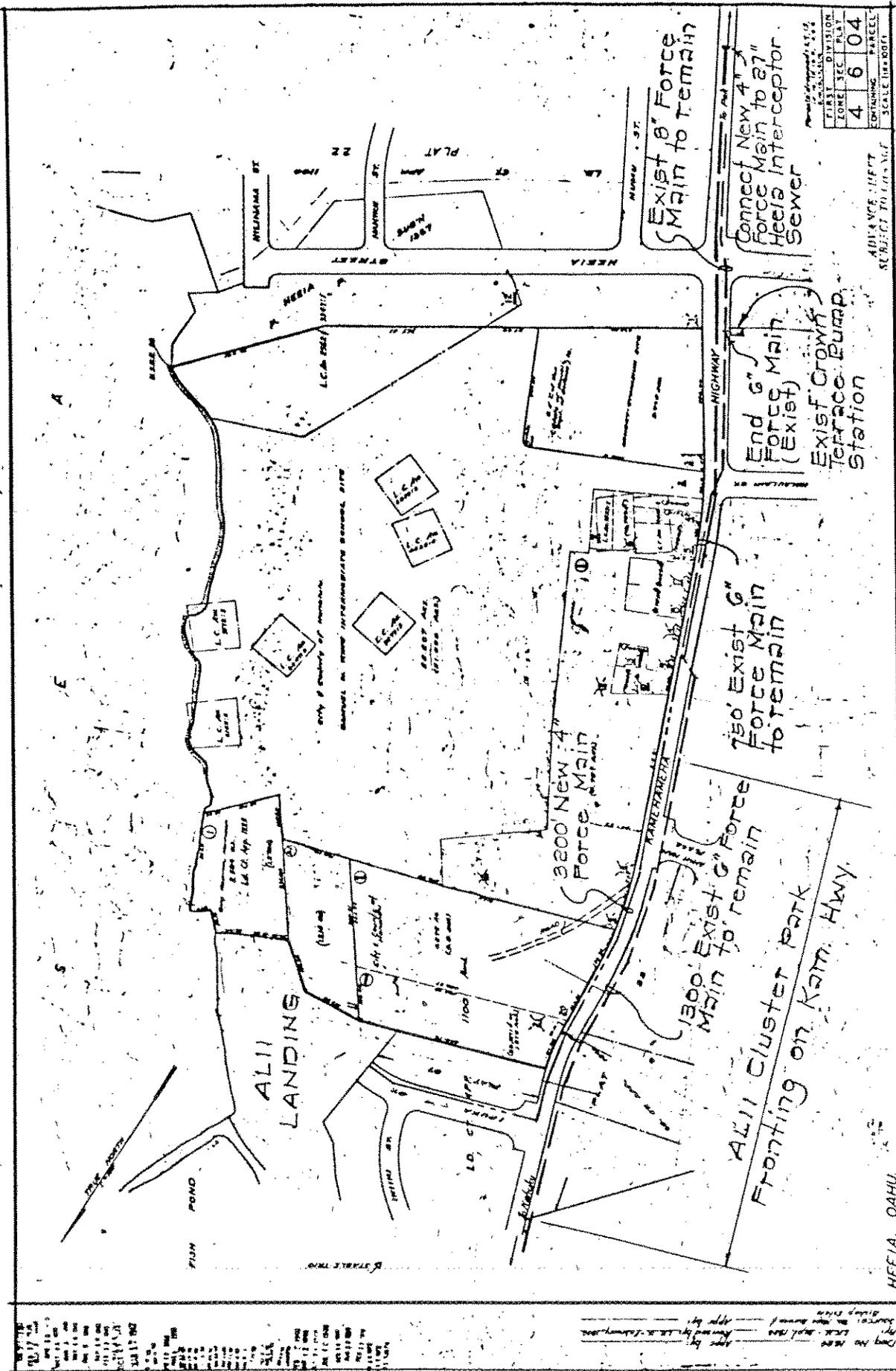
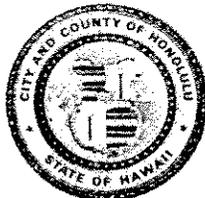


FIGURE 6  
OFF-SITE SEWER PLAN

DEPARTMENT OF PARKS AND RECREATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

Date Received: AUG 12 1981  
File: 6741  
To: DB 1/10/81  
Action: XC Design Assoc  
ROBERT K. MASUDA  
DIRECTOR

EILEEN R. ANDERSON  
MAYOR



July 31, 1981

Gray, Hong and Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Attention: Mr. David Bills

Gentlemen:

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT  
ALII LANDINGS CLUSTER DEVELOPMENT - KANEOHE  
TMK: 4-6-04: 11 AND 4-6-05: 5

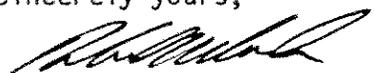
We have reviewed the Draft Environmental Impact Statement (EIS) for the proposed Alii Landings Cluster Development and offer the following comments and recommendations.

We have determined that the private park method is acceptable for the project to comply with the Park Dedication Ordinance No. 4621. Because the project is located in an area where no public parks are nearby, it is essential that adequate recreational amenities be provided to serve the project's needs. We recommend that a children's play equipment area be provided in addition to the proposed paddle tennis and patio facilities to meet the park dedication requirements..

We have also determined through further study of the project area that a public access is not needed. Therefore, the project will not be subject to compliance with the Public Access Ordinance No. 4311.

Thank you for allowing our Department to comment on the Draft EIS for the proposed Alii Landings Cluster Development.

Sincerely yours,

  
ROBERT K. MASUDA, Director

RKM:vc

September 3, 1981

Mr. Robert K. Masuda, Director  
Department of Parks & Recreation  
City & County of Honolulu  
650 South King Street, 10th Floor  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Masuda:

We have reviewed your letter of July 31, 1981, commenting on the above mentioned Draft EIS. We would like to provide the following comments to your concerns:

1. Discussions between the project architect and a representative from your department has resulted in the determination that the installation of "tot lots" - sandboxes with children's play equipment, will be provided to meet park dedication requirements.
2. We appreciate the information provided on the determination that the project is not subject to compliance with the Public Access Ordinance No. 4311. This and the above information will be incorporated in the Revised EIS, in the section, "Organizations and Persons involved in the Public Review Period."

We appreciate your review and comments on this Draft EIS.

V

Very truly yours,

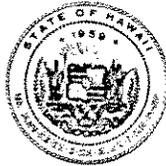
GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

GEORGE R. ARIYOSHI  
GOVERNOR



CHARLES G. CLARK  
SUPERINTENDENT

STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P. O. BOX 2360  
HONOLULU, HAWAII 96804

Date Received AUG 12 1981  
File: 871-1  
To: DB/NE/RS ✓  
Action: REPLY

OFFICE OF THE SUPERINTENDENT

August 7, 1981

Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Attn: Mr. David Bills

Gentlemen:

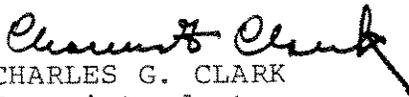
SUBJECT: Draft EIS - Alii Landings

Our review of the subject EIS, for 5.264 acres located at  
TMK: 4-6-04:11 and 4-6-05:5, with a proposal for a 54-unit  
cluster development indicates the following enrollment which can  
be accommodated at the listed schools.

<u>SCHOOL</u>	<u>GRADE</u>	<u>APPROXIMATE ENROLLMENT</u>
Heeia Elementary	K-6	8 - 15
King Intermediate	7-9	2 - 6
Castle High	10-12	2 - 6

Should there be any questions, please contact Mr. Howard  
Lau at 737-5231.

Sincerely,

  
CHARLES G. CLARK  
Superintendent

CGC:HL:jl

cc: Windward District  
Mr. Michael McElroy, Land Utilization  
Mr. James Edington

August 26, 1981

Mr. Charles G. Clark, Superintendent  
State of Hawaii  
Department of Education  
P. O. Box 2360  
Honolulu, Hawaii 96804

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05; 5

Dear Mr. Clark:

This is in response to your comments on August 7, 1981 on the above mentioned Draft EIS. We appreciate the information provided on the adequacy of Heeia Elementary, King Intermediate, and Castle High schools to accommodate the expected enrollment generated by the proposed project. This information will be incorporated in the Revised EIS, in the section, "Organizations and Persons involved in the Public Review Period".

We appreciate your review and comments on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

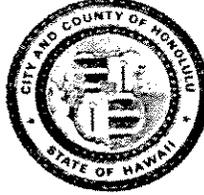
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Daniel S. C. Hong

DB:vs:mp

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813  
PHONE 523-4161



EILEEN R. ANDERSON  
MAYOR

Date Received: AUG 4 5 1981  
File: 071-1 JOSEPH K. CONANT  
To: D/S/V/S/D.S. DIRECTOR  
Action: RECEIVED

August 7, 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street  
Honolulu, Hawaii 96813

Gentlemen:

Subject: Draft Environmental Impact Statement  
Alii Landings  
Tap Map Keys: 4-6-04: 11 and  
4-6-05: 5

We have reviewed the subject draft environmental impact statement and have no comment.

However, should the developers wish to provide units for low- and moderate-income families, please have them contact Mr. James Miyagi, phone 523-4264.

Thank you for forwarding the draft EIS for our review.

Sincerely,

*for Charles K. Conant*  
JOSEPH K. CONANT

August 24, 1981

Mr. Joseph K. Conant, Director  
Department of Housing and Community Development  
City & County of Honolulu  
650 South King Street, 5th Floor  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Conant:

We have received your comments of August 7, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

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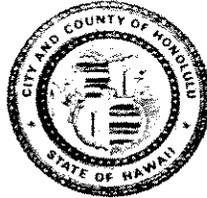
Daniel S. C. Hong

DB:vs:mp

DEPARTMENT OF GENERAL PLANNING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

Aug 13 1981



EILEEN R. ANDERSON  
MAYOR

Date Received \_\_\_\_\_

File: 071-1

To: DB/45/125

Action: REMOVED

WILLARD T. CHOW  
CHIEF PLANNING OFFICER

DGP7/81-2485

August 12, 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

Alii Landings Draft EIS

We have no further comments on the subject environmental impact statement. Our earlier comments have been acknowledged by the applicant and are discussed in the EIS.

Sincerely,

*Ralph Kawamoto*

RALPH KAWAMOTO  
Planner

APPROVED:

*W. T. Chow*

WILLARD T. CHOW

cc: DLU

August 24, 1981

Mr. Willard T. Chow, Chief Planning Officer  
Department of General Planning  
City & County of Honolulu  
650 South King Street, 8th Floor  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Chow:

We have reviewed your comments of August 12, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

GEORGE R. ARIYOSHI  
GOVERNOR OF HAWAII



REC'D AUG 14 1981

Date Received \_\_\_\_\_

GEORGE A. L. YUEN  
DIRECTOR OF HEALTH

File: 071-1

To: DB/VG/RS ✓

JOHN F. CHALMERS, M.D.  
DEPUTY DIRECTOR OF HEALTH

STATE OF HAWAII  
DEPARTMENT OF HEALTH

Action: 1

HENRY N. THOMPSON, M.A.  
DEPUTY DIRECTOR OF HEALTH

P.O. BOX 3378  
HONOLULU, HAWAII 96801

MELVIN K. KOIZUMI  
DEPUTY DIRECTOR OF HEALTH

August 11, 1981

ABELINA MADRID SHAW, M.A., J.D.  
DEPUTY DIRECTOR OF HEALTH

In reply, please refer to:  
File: EPHS-SS

MEMORANDUM

To: Mr. Michael M. McElroy, Director of Land Utilization  
City & County of Honolulu

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Alii Landings  
Cluster Development

Thank you for allowing us to review and comment on the subject EIS. On the basis that the project will comply with all applicable Public Health Regulations, please be informed that we do not have any objections to this project.

We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

*Melvin K. Koizumi*  
For MELVIN K. KOIZUMI

cc: Office of Environmental Quality Control  
Gray, Hong & Associates ✓

August 24, 1981

Mr. Melvin K. Koizumi  
Deputy Director of Health  
State of Hawaii  
Department of Health  
P. O. Box 3378  
Honolulu, Hawaii 96801

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-7-05: 5

Dear Mr. Koizumi:

We have reviewed your comments of August 11, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU

630 SOUTH BERETANIA STREET

HONOLULU, HAWAII 96843

Date Received

AUG 17 1981

EILEEN R. ANDERSON, Mayor

Re:

871-1

-

DB/MS/NS ✓

Action:

YOSHIE H. FUJINAKA, Chairman  
Robert A. Souza, V-Chm.  
MICHAEL J. CHUN  
RYOKICHI HIGASHIONNA  
DONNA M. HOWARD  
Dat Quon Pang  
CLAUDE T. YAMAMOTO

August 7, 1981

KAZU HAYASHIDA  
Manager and Chief Engineer

Mr. Brian Gray  
Gray, Hong, and Associates, Inc.  
116 South King Street  
Room 508  
Honolulu, Hawaii 96813

Attention: Mr. David Bills

Dear Mr. Gray:

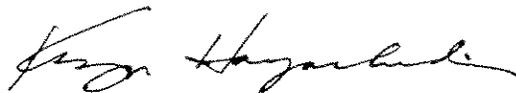
Subject: Draft Environmental Impact  
Statement for Alii Landings,  
TMK: 4-6-04: 11 and 4-6-05: 5

We have the following comments in addition to those  
already appended to the environmental document:

1. There are no existing water services in the project area.
2. All domestic and fire meters shall be installed in the public right-of-way.
3. Water system construction plans must be submitted for our review and approval.

If you have any questions, please contact Lawrence Whang  
at 548-5221.

Very truly yours,



KAZU HAYASHIDA  
Manager and Chief Engineer

cc: Mr. Sampson Mar  
Division of Land Utilization

August 26, 1981

Mr. Kazu Hayashida  
Manager & Chief Engineer  
Board of Water Supply  
630 South Beretania Street  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Hayashida:

We have reviewed your letter of August 7, 1981, commenting on the above mentioned Draft EIS. We would like to provide the following responses to your concerns:

1. We appreciate the information provided. As we understand it, water availability will be determined at the time that a building permit is requested.
2. All domestic and fire meters will be installed in the public right-of-way. This information will be found in the section, "Organizations and Persons involved in the Public Review of the Revised EIS".
3. As noted in the Draft EIS, please be assured that the water system construction plans will be submitted for Board of Water Supply review and approval.

We appreciate your review and comments on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp

Date Received AUG 20 1981  
File: 871  
To: DB  
Action: 177

August 19, 1981

AMERICAN  LUNG ASSOCIATION of Hawaii

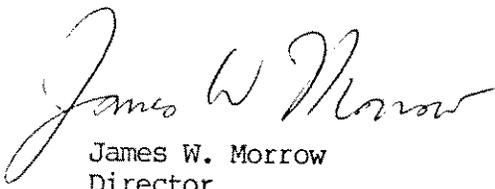
Gray, Hong & Associates Inc.  
116 South King Street - Rm 508  
Honolulu, Hawaii 96813

Dear Sir:

Subject: Draft EIS for the Alii Landings Development  
TMK: 4-6-04: 11 and 4-6-05: 5

We have reviewed the subject EIS with particular attention to those sections pertaining to air quality impacts and have found that those impacts have been adequately assessed. Thank you for providing a copy of the EIS for review.

Sincerely yours,



James W. Morrow  
Director  
Environmental Health

JWM: jm  
C1/L24

August 24, 1981

Mr. James W. Morrow  
Director of Environmental Health  
American Lung Association of Hawaii  
245 North Kukui Street  
Honolulu, Hawaii 96817

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Morrow:

We have received your comments of August 19, 1981 on the above mentioned project. We appreciate your review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp



Date Received AUG 24 1981

File: \_\_\_\_\_

To: DB

Action: \_\_\_\_\_

# University of Hawaii at Manoa

Water Resources Research Center  
Holmes Hall 283 • 2540 Dole Street  
Honolulu, Hawaii 96822

19 August 1981

Gray, Hong & Associates  
Consulting Engineers  
116 South King Street  
Honolulu, HI 96813

Gentlemen:

Subject: Draft EIS Alii Landings  
TMK 4-6-04:11 and 4-6-05:5

We have reviewed the subject DEIS and have no comment to offer. This material was reviewed by WRRC personnel. Thank you for the opportunity to comment.

Sincerely,

*Edwin T. Murabayashi*  
Edwin T. Murabayashi  
EIS Coordinator

ETM:jm

cc: H. Gee  
Y.S. Fok

August 24, 1981

Mr. Edwin T. Murabayashi  
EIS Coordinator  
University of Hawaii at Manoa  
Water Resources Research Center  
Holmes Hall Room 283  
2540 Dole Street  
Honolulu, Hawaii 96822

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TRK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Murabayashi:

We have received your comments of August 19, 1981 on the above mentioned project. We appreciate your review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp



# United States Department of the Interior

## FISH AND WILDLIFE SERVICE

300 ALA MOANA BOULEVARD  
P. O. BOX 50167  
HONOLULU, HAWAII 96850

IN REPLY REFER TO:  
ES  
Room 6307

July 24, 1981

Date Received: REC'D: JUL 25 1981  
File: 871-1  
To: RS/DR  
Action: approved

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

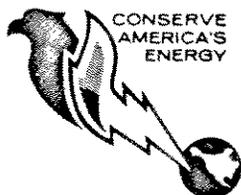
Re: DEIS, Aii Landings  
Kaneohe, Oahu, Hawaii

We have reviewed the subject DEIS. The proposed project will have no impact on significant fish and wildlife resources.

We appreciate this opportunity to comment.

Sincerely yours,

Ernest Kosaka  
Project Leader  
Office of Environmental Services



Save Energy and You Serve America!

August 12, 1981

Ernest Kosaka, Project Leader  
Office of Environmental Service  
United States Department of the Interior  
Fish & Wildlife Service  
P. O. Box 50167  
Honolulu, Hawaii 96850

SUBJECT: Draft Environmental Impact Statement  
Aii Landings  
Tax Map Key: 4-6-04: 11 & 4-6-05: 5

Dear Mr. Kosaka:

We have received your comments of July 24, 1981 on the above mentioned project. We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Brian L. Gray

DB:vs:mp

871-1

GEORGE R. ARIYOSHI  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF AGRICULTURE  
1428 SO. KING STREET  
HONOLULU, HAWAII 96814

JACK K. SUWA  
CHAIRMAN, BOARD OF AGRICULTURE

AUG 25 1981  
Date Received \_\_\_\_\_  
File: \_\_\_\_\_  
To: DLU  
Action: \_\_\_\_\_

August 24, 1981

MEMORANDUM

To: Gray, Hong & Associates, Inc.  
Subject: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04:11 and 4-6-05:5 Heeia, Koolaupoko, Oahu

The Department of Agriculture has reviewed the subject EIS and finds that our concerns have been addressed.

Thank you for the opportunity to comment.

*Jack K. Suwa*  
JACK K. SUWA, Chairman  
Board of Agriculture

cc: DLU

August 27, 1981

Mr. Jack K. Suwa, Chairman  
Board Of Agriculture  
State of Hawaii  
Department of Agriculture  
1428 South King Street  
Honolulu, Hawaii 96814

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Suwa:

We have received your comments of August 24, 1981 on the above mentioned project. We appreciate your review and reply on this Draft EIS.

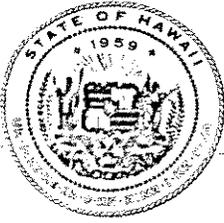
Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

---

Daniel S. C. Hong

DB:vs:mp



Date Received AUG 24 1981  
GEORGE R. ARIYOSHI  
Governor

DEPARTMENT OF PLANNING  
AND ECONOMIC DEVELOPMENT

File: \_\_\_\_\_  
To: \_\_\_\_\_  
Action: \_\_\_\_\_  
HIDETO KONO  
Director  
FRANK SKRIVANEK  
Deputy Director

Kamamalu Building 250 South King St. Honolulu, Hawaii • Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

August 14, 1981

Ref. No. 3472

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 South King Street, Rm. 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

Subject: Draft Environmental Impact Statement for the Proposed Alii  
Landing Cluster Development

We have reviewed the subject draft EIS and offer the following comments with respect to the objectives and policies of the Hawaii Coastal Zone Management Program, as well as other planning considerations.

Recreational Resources:

CZM Policy:

Provide coastal recreational opportunities accessible to the public.

Comment:

Recreational uses of the shoreline abutting the property appear to be limited to private fishing and boating. Since no public access exists, the applicant has agreed to provide a pedestrian access if it is determined that shoreline access will be required. The draft EIS does not discuss whether the existing private roadways connecting the private homes on the property to Kamehameha Highway will be retained for continued use by residents of the site. Through a site visit, CZM staff learned that individuals residing on the property are concerned regarding their continued access to the highway during and after construction. The final EIS should address this issue.

Mr. Brian L. Gray  
Page 2  
August 14, 1981

Historic Resources:

CZM Policy:

Protect, preserve, and, where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture.

Comment:

The applicant should adhere to the recommendations of the archaeology consultant that the development of the parcel does not interfere with or in any way modify the existing construction of the Heeia Fishpond.

It is also recommended that due consideration be given to this archaeological site, one of the few remaining examples of pre-contact fish farming, in any public access design for the project (EIS, Appendix II).

Scenic and Open Space Resources:

CZM Policy:

Protect, preserve, and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Comment:

The project should be designed to minimize the alteration of natural landforms in the area. Since this project can potentially improve public views of the shoreline, including the Heeia Fishpond and Kaneohe Bay, the commitment to improve scenic resources is a positive step in this direction (page 34, EIS).

Coastal Ecosystems:

CZM Policy:

Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal ecosystems.

Comment:

The impacts of the increased storm water drainage, earth erosion, and sewage disposal as they affect marine life in Kaneohe Bay and Heeia Fishpond should be discussed in the final EIS.

Mr. Brian L. Gray  
Page 3  
August 14, 1981

Other Concerns

1. It is questionable that the project will alleviate the local demand for housing since unit costs will range from \$250,000 to \$300,000 (EIS, pages 13 and 48).
2. The final EIS should discuss existing plans, if any, for restoring Heeia Fishpond to aquacultural use. The DLNR should be consulted in this regard.
3. We suggest that the EIS contain a map clearly identifying the location of the subject development relative to the State Land Use District Boundaries. The discussion should clearly indicate what developments if any, would occur within the Conservation District and which would occur in the Urban District. The necessary approvals for development in these districts should also be indicated.

We appreciate this opportunity to comment on the draft EIS for this proposal.

Sincerely,



Hideto Kono

cc: Office of Environmental Quality Control

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. Hideto Kono, Director  
State of Hawaii  
Department of Planning & Economic Development  
P. O. Box 2359  
Honolulu, Hawaii 96804

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Kono:

We have reviewed your letter of August 14, 1981 commenting on the above mentioned Draft EIS. We would like to provide the following comments to your concerns with respect to the objectives and policies of the Hawaii Coastal Zone Management Program:

1. "Provide coastal recreational opportunities accessible to the public."

The Department of Parks & Recreation, City & County of Honolulu, has determined that the project will not be subject to compliance with the Public Access Ordinance No. 4311.

The existing eight residents on the project site will be displaced by the proposed action. The residents have already been notified by the applicant of his intentions to develop the subject parcel.

2. "Protect, preserve, and where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawaiian and American history and culture."

The applicant will adhere to the recommendations of the archaeology consultant and will not interfere with or in any way modify Heeia Fishpond.

As referenced above, shoreline access will not be required for this project.

3. "Protect, preserve, and where desirable, restore and improve the quality of coastal, scenic and open space resources."

One of the reasons why the cluster development scheme was selected over a residential subdivision alternative was to minimize the alteration of natural land forms in the area.

We appreciate the endorsement of the applicant's commitment to improve public views of the shoreline. The Department of Land Utilization will require visual studies of the project in conjunction with the Special Management Permit processing.

Mr. Hideto Kono, Director  
Department of Planning & Economic Development  
September 3, 1981  
Page Two

4. "Protect valuable coastal ecosystems from disruption and minimize adverse impact on all coastal ecosystems."

The impacts of storm water drainage, soil erosion, and sewage disposal on Kaneohe Bay were addressed in the section, "The Probable Impact of the Proposed Action on the Environment" of the EIS. It should be noted that in their review of the Draft EIS, the Office of Environmental Services, U. S. Department of the Interior, Fish and Wildlife Service, made the determination that the proposed project will have no impact on significant fish and wildlife resources. In addition, no sewage or treated sewage effluent will enter Kaneohe Bay. The project will hook-up to the municipal sewer system and ultimately enter the ocean via the Mokapu ocean outfall.

5. Unfortunately, the project will do nothing to alleviate the demand for low and moderate income housing. However, the project is located on one of the few pieces of shoreline remaining on Oahu which can be developed.

Therefore, the land commands considerable value. The project site also has considerable aesthetic value for future residents. It is not feasible or consistent to develop low and moderate income housing on such a piece of land.

As presented in the Draft EIS, the proposed selling prices are not incompatible with selling prices of existing houses in the immediate neighborhood.

6. As of September 2, 1981 (the deadline for public review of Draft EIS was August 20, 1981), the Department of Land & Natural Resources has not yet submitted any written responses. However, the proposed project will not physically effect any portion of Heeia Fishpond. No drainage resulting from the project will enter Heeia Fishpond, nor will any improvements encroach upon the pond. The proposed project, therefore, should not alter any plans for restoring Heeia Fishpond or creating aquaculture within the pond.
7. Enclosed is a map identifying the location of the subject development relative to the State Land Use District Boundaries. The proposed action will only occur within the Urban District. While a small portion of the parcel to the Northern extreme is in the Conservation District, no work is proposed within the boundaries of or immediately adjacent to the pond. The Conservation District is wholly described by the boundary of the pond.

The above information will be incorporated in the Revised EIS, in the section, "Organizations and Persons involved in the Public Review Period."

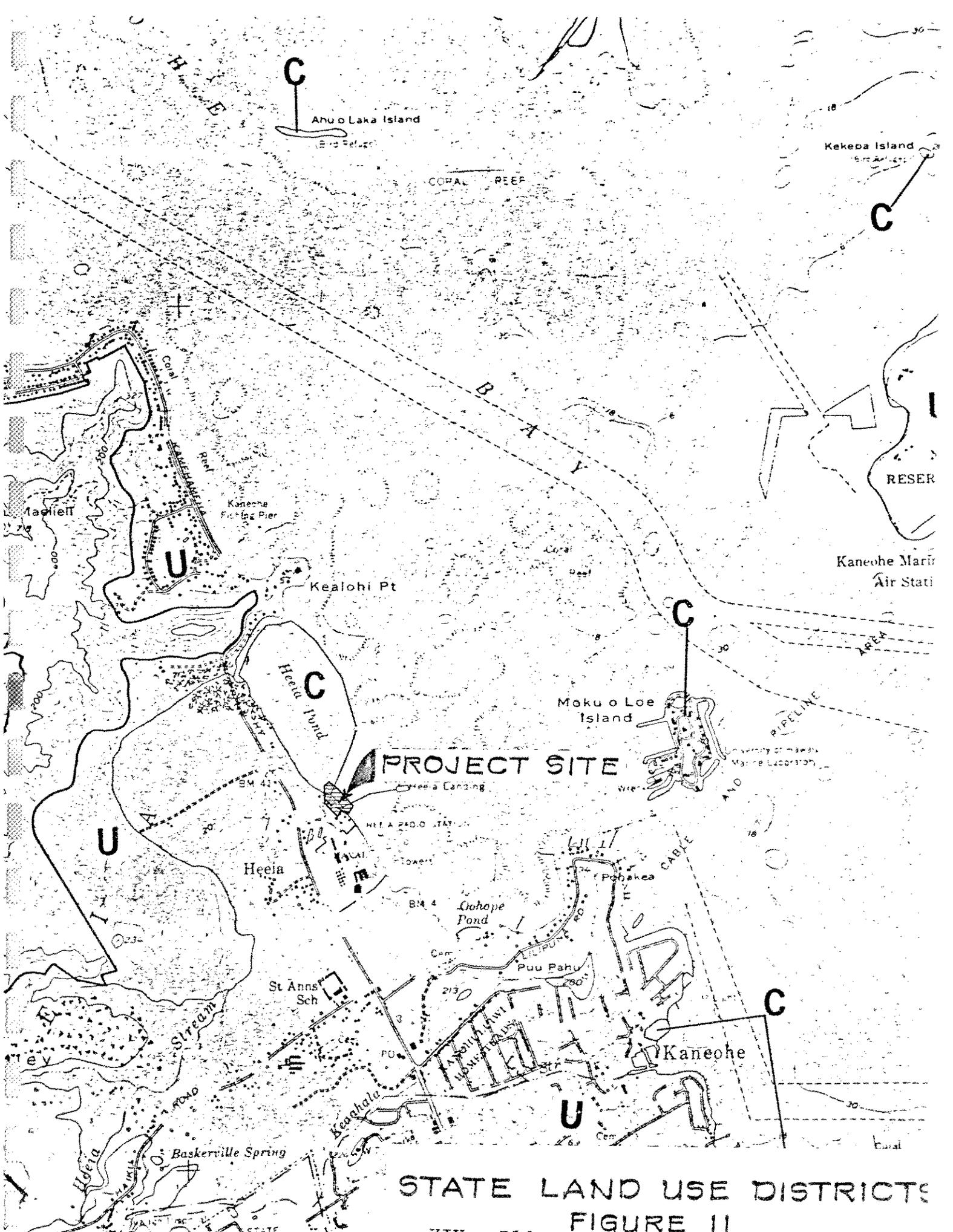
We appreciate your review and comments on this Draft EIS.

Very truly yours,  
GRAY, HONG & ASSOCIATES, INC.

  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp  
Enclosure: State Land Use District  
Boundary Map

XIV - B16



STATE LAND USE DISTRICTS  
 FIGURE II

Date Received AUG 23 1981  
File: 121-1  
To: BB | VG  
Action: 60 DF

# Citizens Against Noise

548 Kapahulu Avenue  
Honolulu, Hawaii 96815  
Telephone: 735-3506

August 19, 1981

## DIRECTORS

William J. Atkinson, Jr.  
Blair M. Bennett  
Desmond J. Byrne  
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Robert J. Terry  
Donald H. Wolbrink

Gray, Hong and Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813  
Attention: David Bills

Gentlemen:

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
Tax Map Keys: 4-6-04:11  
and 4-6-05:5

The Draft Environmental Impact Statement for your 54-unit Alii Landings cluster development project was transmitted to us for comment by a letter dated July 21, 1981 from the City and County of Honolulu, Department of Land Utilization.

## Officers

Chairman of the Board  
Joan Hayes  
President  
William J. Atkinson, Jr.  
Vice President  
Desmond J. Byrne  
Secretary  
Stuart Lillico  
Treasurer  
Garet P. Pai

We have noted the discussions of noise sources and noise impacts resulting from the proposed project construction and from the future project-generated traffic. We also noted on page 52 that "noise will be controlled and mitigated by a noise permit" to be obtained from the Noise and Radiation Branch of the State Department of Health. We believe the burden of responsibility would be clearer if wording somewhat like the following were used: "The developers, engineers and architects intend to incorporate into the plans and specifications for the project the requirement that each contractor and subcontractor minimize construction noise by applying for noise permits and complying with the intent and requirements of all noise permits issued for operations that may exceed the limits set forth in Public Health Regulations Chapter 44B, Community Noise Control for Oahu."

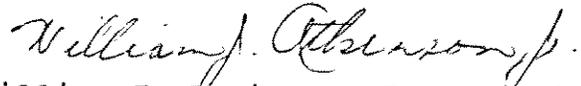
To fully describe the environmental setting of this project (EQC Regs 1:426), some noise level readings should be obtained prior to the start of the project. As part of this effort, we suggest that you determine if the aircraft noise from the Kaneohe Marine Corps Air Station (KMCAS) will be heard by the project's future residents. If there is a potential adverse impact, we recommend that this fact be properly disclosed to prospective buyers. If the architects have designed the structures to minimize these adverse impacts or if there is no possible adverse impact from the KMCAS aircraft, this fact could then be used in the sales-promotion literature.

Gray, Hong and Associates, Inc.  
Page 2  
August 19, 1981

With respect to the intra- and inter-unit noise impacts on future residents of your project that will result from the activities of the residents themselves, we suggest the engineers, architects and interior designers design and/or specify materials, construction details, plumbing fixtures, appliances, and surfaces that minimize noise production and transmission and/or maximize sound absorption within the limits generally considered good practice by the well-informed in each specialty. Again, if your project units will meet good criteria for creating a pleasant acoustical environment for the project residents, this fact can be used to advantage in the marketing of the units. Also, the best sales promotion often comes from satisfied clients (residents).

We appreciate this opportunity to make comments on your project. If we can be of any further help, please feel free to contact us at 735-3506. If because of our current shortage of staff you get a recorded message, please leave a message on our telephone tape recorder.

Yours very truly,



William J. Atkinson, Jr., President  
Citizens Against Noise

Enclosure: "All You Ever Want to Know About Noise" Bibliography

cc: Governor George Ariyoshi  
Dept. of Land Utilization, City and County  
Mr. Roy H. Tanji, Building Superintendant, City and County  
State Dept. of Health Noise and Radiation Branch  
Office of Environmental Quality Control, Dept. of Health  
1st Marine Brigade, FMF, FPO San Francisco

## all You Ever Want To Know About Noise

### Sources of Information

#### UNIFORM BUILDING CODE

##### Architectural Graphic Standards, Seventh Edition

Background Noise Design Criteria	67
- STC Design Criteria	68
Impact Noise Design Criteria	71
STC for Masonry Wall Construction	209
STC for Gypsum Wallboard Wood Framed Part.	469
STC for Gypsum Wallboard Metal Framed Part.	470
STC for Shaft Walls and Solid Gyp. Part.	471
STC for Gyp. Construction Sections	472
STC for Gyp. Floors and Ceilings	473
NRC for Acoustical Ceiling Materials	484
STC for Floor Structure Assemblies	586
STC for Roof Structure Assemblies	588
STC for Exterior Wall Assemblies	590
Mechanical Equipment Noise Control	676
Other misc. information	

##### Proceedings: 1978 International Conf. on Noise Control Engineering:

Standards and Criteria for Noise  
Control

##### Handbook of Noise Measurement Standards

##### Acoustic Noise Measurements

U.S. Measurement of Sound Transmission  
Loss and Building Acoustics

##### HUD Publications:

Noise Assessment Guidelines

Noise Abatement and Control Policy

A Guide to Impact Noise Control in Multifamily

Dwellings: This includes laboratory studies of  
various construction assemblies and details of  
installation.

National Bureau of Standards: Quieting: A Practical Guide  
to Noise Control

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. William J. Atkinson, Jr., President  
Citizens Against Noise  
548 Kapahulu Avenue  
Honolulu, Hawaii 96815

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Atkinson:

We have reviewed your letter of August 19, 1981 commenting on the above mentioned Draft EIS. We would like to provide the following comments to your concerns:

1. Construction plans and contract specifications will be prepared which specifically require the contractor to obtain a noise permit from the Noise and Radiation Branch of the Department of Health. The Contractor, when applying for the noise permit, must identify the project location, times of operation for equipment exceeding 55 decibels, period that construction activities will occur and the methods that noise will be reduced such as mufflers and enclosures. Based on the information submitted, the Department of Health will issue a noise permit with conditions as well as periodically monitor the job site. Basic permit conditions include the ability to inspect and make recommendations to reduce noise levels. The Department of Health also has the ability to stop work because of excessive noise.
2. Informal contact with the public relations officer of KMCAS has indicated that flight lines and times are regulated, as found in the Air Installations Compatible Use Zones (AICUZ), Kaneohe Marine Corps Air Station, Oahu, Hawaii policy statement. In essence, the policies dictate that flights do not occur over residential areas and are confined to daytime hours. In the event that it is anticipated that extra aircraft activity will take place during night time hours, announcements are made through the media to that effect.
3. The project architects have been forwarded your comments regarding intra and inter-unit noise. The project final design will consider separation distances, landscaping, exterior material surfaces and privacy/buffer architectural elements to increase sound shielding and absorption.

Mr. William J. Atkinson, Jr., President  
Citizens Against Noise  
September 3, 1981  
Page Two

The preceding information will be incorporated into the section entitled "Organizations and Persons involved in the Public Review Period" of the Revised EIS.

We appreciate your review and comments on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp



PODED-PV

DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858

File: 871-1  
To: RS/DB  
Action: REPLY

3 August 1981

Mr. Brian L. Gray  
Gray, Hong, and Associates,  
116 South King Street, Room 508  
Honolulu, HI 96813

Dear Mr. Gray:

Thank you for providing us with the Draft Environmental Impact Statement (DEIS) dated May 1981 for the Aiiu Landings Development, Heeia, Oahu, Hawaii. We have reviewed the material submitted. Based upon our review, we provide the following comments:

a. Our comments on the EIS Preparation Notice dated 18 June 1981 (Incl 1) are still appropriate.

b. Regarding the statements made on page 33 of the DEIS, the waters and reefs offshore from the project site are important recreational areas. The reef flats are popular for scoop netting and trapping for haole crab (Portunus sanguinalentus), fishing, wading, and limu gathering. The fishpond wall and adjacent waters are popular for sightseeing and picnicking, pole and line fishing, lay netting, crabbing, and limu restoration. A public right-of-way through the proposed project site would significantly enhance the public use of this prime recreational area, especially if access is provided to the nearshore terminus of the fishpond wall.

Sincerely,

CLARENCE S. FUJII  
Acting Chief, Engineering Division

1 Incl  
As stated

CF:  
Mr. Michael M. McElroy, Director  
Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, HI 96813



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96858

File: \_\_\_\_\_  
DB/RS ✓  
Action: \_\_\_\_\_

PODED-PV

18 June 1981

Mr. Brian L. Gray  
Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Gray:

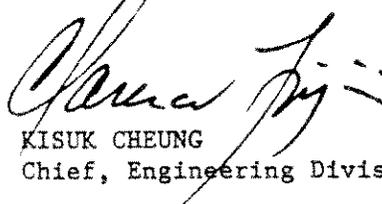
Thank you for providing us with the Environmental Impact Statement (EIS) Preparation Notice, dated 29 May 1981, for the Alii Landings development (Inclosures 1 - 3), Heeia, Oahu, Hawaii. We have reviewed the material submitted and we provide the following comments to assist you with preparation of the draft EIS.

a. From the information provided, it cannot be determined whether the project will require a Department of the Army (DA) permit. A DA permit will be required for any work in the waters of Kaneohe Bay.

b. According to the Flood Insurance Study for the Island of Oahu prepared by the Federal Insurance Administration, the project site is not situated in any designated tsunami or riverine flood hazard area. The site is in an area of minimal flooding of Zone C designation. See the attached Flood Insurance Rate Map (Inclosure 4) identifying the flood prone areas in the Heeia area. Floodproofing requirements are not applicable for structures in Zone C areas.

We would appreciate the opportunity to review the draft EIS when it becomes available.

Sincerely,



KISUK CHEUNG  
Chief, Engineering Division

4 Incl  
As stated

Rec 1

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. Clarence S. Fujii, Acting Chief  
Engineering Division  
Department of the Army  
U. S. Army Engineering District, Honolulu  
Fort Shafter, Hawaii 96858

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Fujii:

We have received your comments on the Alii Landings Draft EIS dated August 3, 1981. We are providing the following responses to your comments:

1. As stated in the Draft EIS, no work is proposed within wetlands adjacent to Heeia Fishpond or within the coastal waters of Kaneohe Bay. There is sufficient design flexibility to insure that the above statements can be achieved. However, the project will require a Special Management Permit which will be issued by the City and County of Honolulu Department of Land Utilization. The permit application will contain more detailed drawings to verify that a Department of the Army Permit will not be required. We understand that the Department of Land Utilization normally forwards a copy of the SMP application to your office for your review.
2. The City and County of Honolulu Department of Parks & Recreation has made a determination under Ordinance No. 4311 that shoreline access will not be required for this project. Adequate public access is available to the shoreline.

We appreciate your prompt review and reply on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp



# University of Hawaii at Manoa

Environmental Center  
Crawford 317 • 2550 Campus Road  
Honolulu, Hawaii 96822  
Telephone (808) 948-7361

Alii 4 0 1981  
Date Received \_\_\_\_\_  
File: 871-1  
To: RS/DB/  
Action: REPLY

Office of the Director

August 4, 1981

RE:0334

Gray, Hong & Associate, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813  
Attention: Mr. David Bills:

Dear Mr. Bills:

Draft Environmental Impact Statement  
Alii Landings Cluster Development  
Heeia, Koolaupoko, Oahu

The Environmental Center has received the above cited DEIS for review. A brief, in-house review of the draft has been prepared by Diana Shepherd and Jacquelin Miller of the Environmental Center staff. We offer the following comments for your consideration.

- 1) Unofficial Japanese Cemetary - Assuming that the stated actions and Department of Health regulations are followed, this issue seems adequately covered. While it is unfortunate that a cemetery must be disturbed it is apparent from the DEIS that the existing grave sites are in major disrepair. We assume that reinterment will provide a more permanent and appropriate solution. In the event that no next-of-kin are located where will the bodies be reinterred?
- 2) Traffic Impact - Concern has been expressed by the Department of Transportation Services as to the impact of increased traffic on Kahekili and Likelike Highways. This issue should be addressed in the revised EIS. If problems arise which require mitigation at the Ipuka Street - Kamehameha Highway intersection, who will be responsible for financing solutions, and what alternative measures would be available? The Honolulu Police Department has raised some serious questions regarding the increased vehicular traffic in the immediate vicinity of King Intermediate School. What alternative with regard to traffic safety in the area, have been considered? Has the construction of a pedestrian-overpass on Ipuka Street and/or Kamehameha Highway between King Intermediate School and surrounding residential areas been considered? The traffic section of the revised EIS should include a more detailed account of the possible mitigation measures which may be instituted should the traffic impacts of this development prove to have a significant negative impact on the existing community.

Gray, Hong & Associate, Inc.

-2-

August 4, 1981

We appreciate the opportunity to provide these brief comments and look forward to your response.

Yours truly,

  
Diane C. Drigot, Ph.D.  
Acting Director

SMN

cc: OEQC  
Michael McElroy, DLU  
Jacquelin Miller  
Diana Shepherd

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Ms. Diane C. Drigot, Acting Director  
Environmental Center  
University of Hawaii at Manoa  
Crawford 317  
2550 Campus Road  
Honolulu, Hawaii 96822

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Ms. Drigot:

We have reviewed your letter of August 4, 1981, commenting on the above mentioned Draft EIS. We would like to provide the following comments to your concerns:

1. In the event that no next-of-kin are located, the bodies will be re-interred to a cemetery or memorial park. Record of the body's location will be kept at a cemetery and at the State Department of Health, Research and Statistics Office. The cost of reinterment will be assumed by the applicant.
2. As of September 2, 1981 (the deadline for public review of the DEIS was August 20, 1981), the Department of Transportation Services has not yet submitted any written comments. Your comments reiterate the comments generated by the Department of Transportation Services and the Honolulu Police Department during the consultation period of the Draft EIS preparation. The Draft EIS contained a traffic analysis to illustrate the impact of the project on Kamehameha Highway. Kam Highway has sufficient capacity to accommodate the anticipated 10% increase in traffic resulting from the project. It is, therefore, a reasonable assumption that the impact of the project on Kam Highway traffic is not a significant negative impact on the existing community. The Honolulu Police Department has responded during the Draft EIS review period and we are enclosing their response for your review.

With respect to your comments reiterating the Department of Transportation Services consultation comments, we have not received public review comments from this agency. However, based on telephone conversation follow-ups to determine the adequacy of our traffic analysis of the Draft EIS, the Department of Transportation Services has not raised any points that appear to be significant negative impacts. The Department of Transportation Services has indicated that a review of the bus schedules in the immediate project area may be desirable and that traffic analysis at intersections more remote from the project may also be advantageous. However, based on the small amount of traffic generated at the Ipuka Street and Kam Highway intersection, it does not appear reasonable that the proposed project could seriously

Ms. Diane C. Drigot, Acting Director  
Environmental Center  
University of Hawaii at Manoa  
September 3, 1981  
Page Two

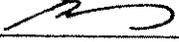
alter traffic patterns at a more remote intersection.

Should the Department of Transportation Services have additional concerns which are considered appropriate for review and additional detailing, the proposed project further requires a Special Management Permit and Cluster Permit. Both permits require this agency's review prior to approval.

We appreciate your review and response on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp

Enclosed as above

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

1455 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96814 - AREA CODE (808) 955-8111

EILEEN R. ANDERSON  
MAYOR



OUR REFERENCE EC-JS

Date Received \_\_\_\_\_ FRANCIS KEALA  
CHIEF

File: \_\_\_\_\_

To: \_\_\_\_\_ DB

Action: answered

July 27, 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

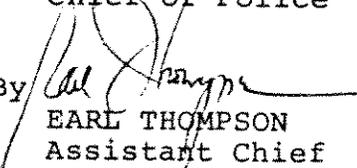
Gentlemen:

Draft Environmental Impact Statement  
Alii Landings  
Tax Map Keys: 4-6-04: 11 and 4-6-05: 5

We have reviewed the Draft Environmental Impact Statement for the referenced project. We have no comments to add to those provided in response to the earlier EIS preparation notice.

Sincerely,

FRANCIS KEALA  
Chief of Police

By   
EARL THOMPSON  
Assistant Chief  
Administrative Bureau

GEORGE R. ARIYOSHI  
GOVERNOR



Stamp: AUG 24 1981  
Label: Label Received  
Title: \_\_\_\_\_  
To: 123  
Action: \_\_\_\_\_

PAUL A. TOM  
EXECUTIVE DIRECTOR

STATE OF HAWAII  
DEPARTMENT OF SOCIAL SERVICES AND HOUSING  
HAWAII HOUSING AUTHORITY

P. O. BOX 17907  
HONOLULU, HAWAII 96817

IN REPLY REFER

to: 0-158.1/2398

August 17, 1981

Gray, Hong & Associates, Inc.  
Consulting Engineers  
116 So. King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

Subject: Draft EIS, Alii Landings

The Hawaii Housing Authority has reviewed the Draft Environmental Impact Statement and offer the following comments:

1. The proposed high-priced units will do nothing to address the current housing problem for the low- and moderate-income families on Oahu.
2. On page 44, under Social Impacts, the EIS states that, "The present lifestyle of the existing eight residents on the project site will be altered although the site has no subsistence, agricultural, or economic value". The EIS should indicate how their lifestyles will be changed and by what actions. Also, the EIS should indicate whether mitigative measures will be taken.
3. On page 55, to make the statement that governmental policy, "offsets" adverse environmental impacts is inaccurate. The policy (8)(D), Chapter 344-4 does nothing to offset, mitigate or create a balance to the impacts to the environment, otherwise known as "internalizing impacts".

The statement should describe the policy and the action of providing housing as a tradeoff, because the impacts remain though housing is created. The statement that, "the benefits of housing are thought to offset the costs to the environment", should be changed to read, "the benefits of housing are thought to outweigh the costs to the environment."

Gray, Hong & Associates, Inc.  
Page 2  
August 17, 1981

Thank you for allowing us the opportunity to comment on this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "Paul A. Tom".

PAUL A. TOM  
Executive Director

cc: DSSH

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. Paul A. Tom, Executive Director  
State of Hawaii  
Department of Social Services & Housing  
Hawaii Housing Authority  
P. O. Box 17907  
Honolulu, Hawaii 96817

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. Tom:

We have reviewed your letter of August 17, 1981 commenting of the above mentioned Draft EIS. We would like to provide the following comments to your concerns:

1. Unfortunately, your statement that the proposed units will do nothing to address the current housing problem for the low and moderate income families on Oahu is partly correct. However, it should be realized that there is very little shoreline available on Oahu that can be developed. As such, the site commands considerable value. In addition, the site terrain will allow highly desirable and aesthetically pleasing views for future residents. It is, therefore, not feasible to develop low and moderate income housing on a site which has such substantial economic and aesthetic value. The projected costs are not out of line with real estate prices in the project area.

However, it should additionally be noted that the creation of new housing can initiate a recycling process within the existing housing supply. A portion of homeowner's tend to upgrade as families expand and as income increases. When an existing homeowner purchases a new home, the existing home becomes available to another homeowner or a first-time homeowner. This recycling and operating can potentially provide low and moderate income housing.

2. The existing eight residents on the project site will be displaced by the proposed action. However, it should be noted that the site has no subsistence, agricultural or economic value.

The existing eight residents have already been notified by the applicant of his intentions to develop the subject parcel.

3. We concur with your suggested change in wording. The statement should read, "the benefits of housing are thought to outweigh the costs to the environment. This and the above information will be incorporated in the

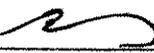
Mr. Paul A. Tom, Executive Director  
State of Hawaii  
Department of Social Services & Housing  
September 3, 1981  
Page Two

the Revised EIS, in the section "Organizations and Persons involved in the Public Review Period."

We appreciate your review and comments on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

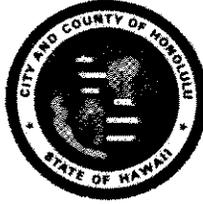
  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp

871-1

DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813 • (808) 523-4411

EILEEN R. ANDERSON  
MAYOR



Date Received REC'D AUG 31 1981  
File: 871-1  
To: DB/v  
Action: \_\_\_\_\_  
MICHAEL M. MCELROY  
DIRECTOR  
80/SMA-109(SM)

August 20, 1981

Mr. David Bills  
Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Dear Mr. Bills:

Draft Environmental Impact Statement (EIS)  
Aalii Landings, Heeia, Koolauapoko, Oahu  
Tax Map Keys: 4-6-04: 11; 4-6-05: 5

We have reviewed the above and offer the following comments:

1. Reference: Page 2.

Comment: Nowhere in the description of the proposed project is data regarding the number of attached dwelling units per building, square footage of the units, number of bedrooms, materials to be used in construction, height of the structures, or project amenities.

2. Reference: Page 6.

Comment: At the time that a Special Management Area Use Permit (SMP) application is submitted for this project, preliminary plans for grading, drainage, and erosion control must be submitted. These plans would also include cost data, time required for completion, phasing (if applicable), and responsibility for operation and maintenance of the particular system.

Should any portions of the drainage system breach the shoreline makai, then a Conservation District Use Application from the Department of Land and Natural Resources (DLNR), and a Department of the Army Permit from the U.S. Army Corps of Engineers (COE) would be required.

3. Reference: Page 10.

Comment: Will any special landscaping be implemented along the shoreline? Will any shoreline stabilization be required, i.e., rip-rap at 3:1 grade (letter from U.S. Fish and Wildlife Service, July 2, 1981)?

4. Reference: Page 17.

Comment: A "1 horizontal: 1 vertical" slope is not 100% slope, but 45% slope.

5. Reference: Page 28.

Comment: What is the proposed Development Plan (DP) designation for the project site? Why would the developer "seek an amendment to the Detailed Land Use Map," if the DP is not adopted before the necessary approvals are required? The R-6 zoning is in effect at this time.

Also, a current certified shoreline survey and a detailed site Master Plan will be the ultimate determinate, if the proposed project lies outside the 40-foot Shoreline Setback Area. The statement of the project's non-adverse impact, because of the projects' not being situated in the Shoreline Setback Area, is premature at this time.

6. Reference: Page 35.

Comment: The discussion of drainage impacts should address storm runoff during the peak design storm, as this would be the basis for storm drain design. Yearly runoff data, while interesting, does not reflect the design condition.

7. Reference: Page 35.

Comment: Because the SMP is concerned with visual impacts from makai to mauka, a visual study from the sea toward the site showing the proposed dwelling units, grading, landscaping, etc. will be required at the time of the submittal of the SMP application.

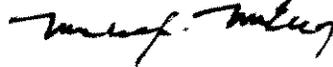
8. Reference: Page 35.

Comment: The alternatives section could be strengthened by discussing the rationale of why a cluster development scheme was selected over a residential subdivision scheme.

9. General Comment: There is a possibility that the SMP and the Cluster Development Permit can be processed concurrently. However, this should be coordinated with this department.

If there are any further questions, please contact Sampson Mar of our staff at 523-4077.

Very truly yours,



MICHAEL M. McELROY  
Director of Land Utilization

MMM:sl

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 3, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. Michael M. McElroy, Director  
Department of Land Utilization  
City & County of Honolulu  
650 South King Street, 7th Floor  
Honolulu, Hawaii 96813

SUBJECT: Draft Environmental Impact Statement  
Alii Landings  
TMK: 4-6-04: 11 and 4-6-05: 5

Dear Mr. McElroy:

We have reviewed your letter of August 20, 1981, commenting on the above mentioned Draft EIS. We would like to provide the following comments to your concerns:

1. The Architect indicates that the preliminary schematic design calls for:

<u>UNIT TYPE</u>	<u>NO.</u>	<u>INTERIOR AREA</u>	<u>GARAGE SPACE SQ. FOOTING</u>
A	16	2010+ Sq. Ft.	380 Sq. Ft.
B	10	2050+ Sq. Ft.	380 Sq. Ft.
C	26	2010+ Sq. Ft.	380 Sq. Ft.
D	2	1800+ Sq. Ft.	380 Sq. Ft.

All units are proposed to have three (3) bedrooms with the exception of Type D units which will have two (2) bedrooms.

The materials which are anticipated for construction are as follows:

- Walls - Stucco, glass, wood and gypsum drywall
- Roofs - Built-up, metal or shake, safety glass and plexiglass
- Trims - Wood and/or bronzed metal
- Floors - Concrete, wood, tile and carpet

The project consists of 10 clusters of buildings with maximum and minimum number of units per cluster of 6 and 2, respectively. The maximum height of any cluster will be 25'0".

Project amenities include a paddle tennis court for active recreation and a paved deck pavillion as well as trellised view areas for passive recreation. In addition, three sites will be provided for family facilities. These family facilities will take the form of tots lots and picnic tables.

2. We appreciate the information provided on the requirements of the SMP application and criteria which determines the necessity of obtaining a Conservation District Use Application and a Department of the Army Permit.

Mr. Michael M. McElroy, Director  
Department of Land Utilization  
September 3, 1981  
Page Two

At the time that an SMP application is submitted, preliminary plans for grading, drainage, and erosion control will be submitted. Also, please be assured that in the event that any portions of the drainage system is planned to breach the shoreline makai, the necessary government approval will be obtained. As stated in the EIS, no work is proposed in the waters of Kaneohe Bay or in Heeia wetlands. The preliminary projection that no work will be conducted within the shoreline area is based on a shoreline survey conducted October 23, 1980.

3. Landscaping at the shoreline area, as indicated in the preliminary plan, includes lawn and ground cover, naupaka, relocated and existing coconut trees as well as medium trees, such as Singapore, Plumeria, Aviograph, Formusan Koa and Cigar Box. No "special" landscaping is contemplated. It is intended that the landscaping be compatible with project as well as shoreline environment. No shoreline stabilization is required i.e. rip-rap.
4. It is believed that a 1 horizontal: 1 vertical slope is a 100% slope or a 45° slope. Your comments suggested that a 1:1 slope was not 100%, but rather 45%.
5. The proposed Development Plan designation for the project site is Residential. Informal contact with the Department of General Planning, City & County of Honolulu, has indicated that an amendment to the DLUM will be necessary in the event that the DP is not adopted before necessary approvals are required. The General Plan amendment is necessary to delete the Master Planned Roadway from the site as indicated on the project DLUM.

The statement within the Draft EIS that the project will not be located within the 40-foot setback was based on the preliminary plans and a shoreline survey dated October 23, 1980. It is believed this information allows an accurate projection that no encroachment within the 40-foot setback will occur. It is further intended that buildings can shift slightly if required during the design stage of the project to ensure that there is no encroachment. A Revised Preliminary Grading and Utility Plan - Figure 4 has been enclosed to emphasize the vegetation line and 40-foot setback.

6. The Drainage Report (Appendix III) of the Draft EIS, has specifically analyzed the project site and existing drainage system which crosses the site in accordance with the City & County of Honolulu's Drainage Standards. The report indicates that the existing drainage system must be upgraded from an 18" diameter system to a 24" diameter system to accommodate the existing off-site conditions above the site and the improvements within the site. The report also provides for a portion of the project to be drained by surface runoff i.e. swales. The purpose of the Drainage Report is to analyze surface and subsurface water to ensure there will be no drainage to street facilities, structures or ground and cause no serious interruption of normal traffic. In addition, the purpose of the Drainage Report

Mr. Michael M. McElroy, Director  
Department of Land Utilization  
September 3, 1981  
Page Three

is to ensure that runoff exceeding the design storm is disposed of in a manner which will cause a minimum amount of damage to surrounding property. We, therefore, believe the Draft EIS (Appendix III) has addressed your concern regarding storm drainage design.

The secondary impacts of storm drainage are water quality related. The Draft EIS (Section V.A.2 - Urbanization and Kaneohe Bay - Drainage and Erosion) specifically has addressed this area. The key points of this section are:

1. The primary sources of water quality degradation to Kaneohe Bay are perennial streams and sewage outfalls. However, two previously existing sewage outfalls discharging into the Bay have been eliminated.
2. Site improvements will increase runoff to the Bay by 0.95 million gallons annually. This represents 0.003 percent increase in the total runoff to Kaneohe Bay. The volume increase is negligible and the resulting increased sedimentation and decreased water quality will be proportional.
3. The calculation of the severity rating for soil erosion is 4,800. The maximum allowable rating is 50,000. Therefore, the anticipated soil loss is substantially below the maximum allowable rating.
4. The cumulative impact of runoff to the Bay in the project area (including mauka to the Koolaus) has been substantially achieved since the drainage area has been substantially urbanized.

We believe this summary clarifies that storm drainage design addresses the appropriate peak design storm and that the impacts on property, structures and water quality have been addressed.

7. At that time that an SMP application is submitted, a visual study will be submitted.
8. An additional alternative to the proposed project is a residential subdivision. In fact, this alternative has been considered in the past. Design requirements for residential subdivisions have structured standards for roadway layouts and grades, lot configurations and building placement within the various lots. The more structured requirements of subdivision design result in substantially increased grading requirements to create roadways and approximately 25 lots. The most significant impact of a residential subdivision would be additional scarring of the land through mass grading and loss of most or all of the existing trees on the site.
9. We appreciate the information provided on the possibility that the SMP Cluster Development Permit can be processed concurrently. We are taking action to investigate this possibility.

Mr. Michael M. McElroy, Director  
Department of Land Utilization  
September 3, 1981  
Page Four

The above information will be incorporated in the Revised EIS, in the section  
"Organization and Persons involved in the Public Review Period."

We appreciate your review and comments on this Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

*Dal Bull*

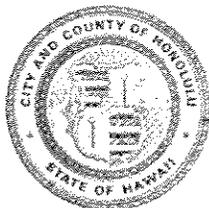
for Brian L. Gray

DB:vs:mp

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**

HONOLULU MUNICIPAL BUILDING  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813

EILEEN R. ANDERSON  
MAYOR



ROY A. PARKER  
DIRECTOR

TE7/81-2207

August 28, 1981

Gray, Hong & Associates, Inc.  
116 South King Street, Room 508  
Honolulu, Hawaii 96813

Gentlemen:

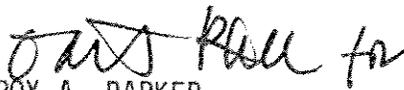
Subject: Draft Environmental Impact Statement for  
Alii Landing Cluster Development  
TMK: 4-6-04: 11 and 4-6-05: 5

We have reviewed the Draft EIS for this project and offer the following comments:

1. City bus service is presently available on Kamehameha Highway. The EIS should address the impact of the project on this service and should also mention other transportation services such as State school buses and handi-vans.
2. On future vehicle trip generation, the EIS should address the impact of this project on the surrounding streets from the total vehicle trips that will be generated during a 24-hour period.

If there are any questions, please contact Dexter Eji of my staff at 523-4199.

Very truly yours,

  
ROY A. PARKER  
Director

GRAY, HONG & ASSOCIATES, INC.  
CONSULTING ENGINEERS

September 8, 1981

BRIAN L. GRAY, PE  
DANIEL S.C. HONG, PE  
DAVID B. BILLS, PE  
RAYMOND M. SANTO, PE  
GARY K. WATANABE, PE

Mr. Roy A. Parker, Director  
Department of Transportation Services  
City & County of Honolulu  
650 South King Street, 3rd Floor  
Honolulu, Hawaii 96813

SUBJECT: Alii Landings  
Draft Environmental Impact Statement

Dear Mr. Parker:

We have reviewed your comments of August 28, 1981 and we are providing the following information:

1. City bus stops are presently located at Ipuka Street and 0.20 miles on each side of Ipuka Street for both Kahuku and Kaneohe bound riders. Presently, there is development on both sides of Kam Highway, and based on the project's location directly at the end of Ipuka Street, it is not anticipated that pedestrian movements will change as a result of the project. The volume of pedestrian movement walking up to Ipuka Street to Kam Highway bus stops may increase. Based on an average of 4 persons per unit, the population of the project may be 200 persons. Based on economic incomes necessary to purchase and reside at the project, it is anticipated that the increased bus usage will be minor. Should increased bus service become a necessity, it is generally implemented after rider complaints or after spot checks reveal chronic bus overloads.
2. The total trips generated for the project during a 24-hour period is 432 based on an average trip generation of 8 trips per day per unit. This corresponds to an hourly trip generation of 18 trips per hour as compared to 38 trips per peak hour presented in the Draft EIS. The effect of the project on peak-hour traffic is not significant since the projected traffic flow will be a maximum 350 peak hour vehicles on a street with a projected capacity of 1,000 peak hour vehicles in each direction. The corresponding effect on average daily traffic will be reduced as compared to peak hour traffic.

The Draft EIS analyzed the intersection of Ipuka Street and Kam Highway. This intersection provides access to the project and will provide the most concentrated increases in traffic resulting from the project. Surrounding intersections at greater distances will receive diminished congestion in comparison to Ipuka Street as a result of the project. Thirty-eight (38) peak hour vehicles can add a maximum of 30 peak hour vehicles at any surrounding intersection. After distributing a maximum of 30 peak hourly vehicles into any neighboring intersection distribution pattern, it appears relatively clear that the impact of the project on that intersection will be minor. This analogy is correspondingly true for the average daily traffic.

Mr. Roy A. Parker, Director  
Department of Transportation Services  
City & County of Honolulu  
September 8, 1981  
Page Two

The foregoing information will be included in the Revised EIS within the section entitled "Organizations and People involved in the Public Review Period." We thank you for your comments on the Draft EIS.

Very truly yours,

GRAY, HONG & ASSOCIATES, INC.

  
\_\_\_\_\_  
Brian L. Gray

DB:vs:mp

871-1..

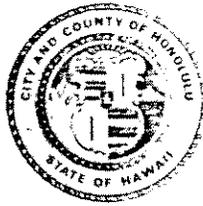
APPENDIX I

ENVIRONMENTAL IMPACT STATEMENT

PREPARATION NOTICE

80/SMA-109 (SM)

DEPARTMENT OF LAND UTILIZATION  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET  
HONOLULU, HAWAII 96813 • (808) 523-4411



EILEEN R. ANDERSON  
MAYOR

MICHAEL M. McELROY  
DIRECTOR  
80/SMA-109(SM)

January 29, 1981

Mr. Gregory M. Duggan  
841 Bishop Street, #2009  
Honolulu, Hawaii 96813

Dear Mr. Duggan:

Shoreline Management Permit  
Recorded Owner : Guy Kearney Harrison  
Tax Map Keys : 4-6-04: 11, 4-6-05: 05  
Request : To construct a 54-unit cluster develop-  
ment on a 5.264-acre parcel of land, with  
roadways, drainage and water systems, a  
sewage pump station and force main, and  
landscaping

---

We have reviewed your Request for Assessment for the proposed project and have determined that, under Ordinance No. 4529, an EIS is required. Attached is a copy of our Environmental Impact Statement (EIS) Preparation Notice which notes the particular areas of concern.

An accepted EIS should be submitted with a completed application for a Special Management Area Use Permit (SMP) with your \$100 filing fee.

If there are any further questions, please contact Sampson Mar of our staff at 523-4077.

Very truly yours,

A handwritten signature in cursive script, reading "Michael M. McElroy".

MICHAEL M. McELROY  
Director of Land Utilization

MMM:sl  
attach.

Department of Land Utilization  
80/SMA-109(SM)  
January 29, 1981

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

Approving Agency : City & County of Honolulu  
Department of Land Utilization  
Applicant : Guy Kearney Harrison  
Agent : Gregory M. Duggan  
Project Location : Off the end of Ipuka Street--  
Heeia, Koolauoko, Oahu  
Tax Map Keys : 4-6-04: 11 and 4-6-05: 5  
Request : Shoreline Management Permit  
Determination : EIS Required

I. Proposed Action

The applicant proposes to construct a 54-unit cluster development on a 5.264-acre parcel of land in Heeia, Koolauoko, Oahu. The development will include the on-site construction of roadways, drainage and water systems, a sewage pump station, force main and landscaping.

A. Technical Characteristics

1. Approximately 1,540 feet of 22-foot wide paved roadway will be constructed. Also open parking areas will be provided.
2. The land use of the proposed project can be broken down as follows: residential units - 1.48 acres, driveways and parking areas - 1.66 acres, recreation area (paddle tennis court and patio) - .43 acre, and open space - 1.69 acres.

B. Socio-Economic Characteristics

1. The proposed project will attract a new population of 189 people into this area at project completion.
2. The cost of the proposed project is estimated at \$1.1 million.
3. The anticipated time required for construction is 2 years.

C. Environmental Characteristics

The 5.264-acre parcel of land presently contains three rural residential structures, which are provided access to Ipuka Street and Kamehameha Highway via dirt roads on the project site. There is also a now-defunct Japanese cemetery on the project site; however, most of the site is overgrown with weeds and scrub vegetation. The proposed project will convert this site into a multi-family residential community with landscaping, paved internal roadways and parking spaces.

III. Affected Environment

The project site is bounded on the makai side by Kaneohe Bay and Heeia Fishpond. The shoreline fronting the project site consists of shallow mudflats, which are unsuitable for swimming and sunbathing. Directly south of the project site is King Intermediate School; west of the project site are the City and County of Honolulu and Board of Water Supply Corporation Yards, and a single-family residential subdivision, which borders much of the western boundary of Heeia Fishpond. Therefore, the area surrounding the project site has been previously urbanized.

The project site is presently zoned R-6, except for a small corner of the site adjacent to Heeia Fishpond which is zoned P-1. The existing Detailed Land Use Map (DLUM) designates the project site for low-density residential use, with a small portion as a cemetery. The proposed Development Plan designates the project site for single-family residential use. The entire site is located within the Special Management Area (SMA).

A. Major Impacts to the SMA

The potential environmental impacts, as related to the significance criteria set forth in Ordinance Nos. 4529 and 77-100, are briefly identified in the following discussion. These and other impacts will be thoroughly addressed in the final EIS document.

1. The proposed project will create physical impacts to the site and its surroundings during construction and after the project has been completed. The project site is adjacent to Kaneohe Bay, which is classified as Class AA waters by the State Department of Health. In addition, the project site is adjacent to Heeia Fishpond, which is an important cultural, environmental, recreational and aesthetic resource. Wetlands, as designated by the U.S. Army Corps of Engineers, are located mauka and north of the project site.
2. The major impact will be the alteration of land form from relatively undeveloped and rural (only three structures on-site) to a multi-family residential community containing a 54-unit cluster development, paved roadways, drainage and water systems, a sewage pump station and force main, and landscaping.
3. Adequate access to and through the site must be addressed.
4. Adequate drainage will be provided, which will minimize adverse impacts to adjoining environmentally sensitive water areas.
5. The visual impact of the proposed project must be examined.
6. An archaeological/historical reconnaissance of the project site will be conducted to verify the existence or absence of such artifacts, due to its proximity to Heeia Fishpond.

B. Mitigation Measures

The applicant must adhere to all applicable City and County of Honolulu and State of Hawaii regulations which would govern the construction and operation of the proposed project.

In the environmental impact statement, it will be the responsibility of the applicant to address in a comprehensive manner all potential impacts of the proposed project and mitigating measures.

IV. Reasons Supporting Determination

The decision to require an EIS is based on the significance criteria found in Ordinance No. 77-100, Section 6. Specific considerations were as follows:

"In assessing the significance of a development within the Shoreline Management Area the Director should confine his criteria to the policies and guidelines in Sections 3 and 4 of this ordinance [No. 4529]."

Pertinent policies and guidelines, which are applicable to this determination include:

- A. The provision of adequate access to the shoreline and other recreational areas or wildlife preserves.
- B. The alteration of existing land forms and vegetation (grubbing and grading).
- C. Possible nearshore water quality degradation to Kaneohe Bay.
- D. Potential impacts to Heeia Fishpond.
- E. Possible existence of archeological/historical artifacts.

V. Suggested Agencies To Be Consulted in Preparation of EIS

City & County of Honolulu

Honolulu Fire Department  
Department of General Planning  
Department of Parks & Recreation  
Board of Water Supply  
Police Department  
Department of Public Works  
Department of Transportation Services

State of Hawaii

Department of Transportation  
Department of Planning & Economic Development  
Department of Land & Natural Resources  
Department of Health  
Office of Environmental Quality Control  
Department of Agriculture

University of Hawaii

Environmental Center  
Water Resources Research Center

Federal

U.S. Army Corps of Engineers  
U.S. Fish & Wildlife Service

Community Organizations

Life of the Land  
Kaneohe Outdoor Circle  
American Lung Association of Hawaii  
Kaneohe Neighborhood Board No. 30  
Kaneohe Bay Community Association

APPROVED



MICHAEL M. McELROY  
Director of Land Utilization

MMM:sl

APPENDIX II

AN ARCHAEOLOGICAL RECONNAISSANCE

at

HEEIA, KOOLAUPOKO, OAHU, HAWAII



JOSEPH KENNEDY  
*Archaeologist*

ARCHAEOLOGICAL CONSULTANTS  
of  
HAWAII

3060 Huelani Dr.  
Honolulu, Hawaii 96822  
(808) 988-6307

An Archaeological Reconnaissance  
at  
Heeia, Koolaupoko, Oahu, Hawaii

## Introduction

On March 30th, 1981, The Archaeological Consultants of Hawaii conducted an archaeological walk-through survey at Heeia, Koolaupoko, Oahu (TMK 4.6.04:11 & 4.6.05:5) for Gray, Hong & Associates Inc. This Phase I operation was designed to verify the existence or absence of archaeological/historical features in accordance with the request set forth on page #3, 80/SMA-109 (SM).

## Methodology

Because of the size of the parcel (5.264 acres) it was possible to cover the area on foot, in its entirety, in one day. In addition to the Principal Investigator, one assistant was used. The survey began with an examination of the area along the ocean. Initially, we were forced to move slowly through the mangrove thickets until we reached the southernmost boundary of the property ( where the subject parcel meets King Intermediate School ). At this point, we moved approximately 10-meters mauka (towards the mountains) and began a northerly sweep that ended when we reached the Heeia Fishpond. Once at the pond, we moved an additional 10-meter increment and proceeded south until we again reached the southern boundary of the subject parcel. This sweep pattern was repeated roughly ten times until the entire area was covered.

PHYSICAL SETTING

The subject parcel is located in the southeast corner of the Heeia Fishpond in the ahupua'a of Heeia. The entire coastal portion of the lot is covered with a thick stand of mangrove trees (Rhizophora mangle L). The interior of the property is relatively flat for a distance of approximately 30 meters and then abruptly rises to a height of just over 12 meters. A road cuts through the middle of the property and there are three current dwelling units, a carport and dog kennel located between the ocean and the 12 meter rise, In the area around the living units there are coconut trees (Cocos nucifera), mango trees (Mangifera indica), breadfruit trees (Artocarpus communis), macadamia trees (Macadamia integrifolia), and monkey pod trees (Samanea saman). Other plantings around the property include: paper mulberry (Melaleuca leucadendra) and bamboo (Bambusa vulgaris) in the vicinity of the cemetery. A large stand of sugar cane (Saccharum officinarum) remains in the southwest corner of the parcel and there are also dense patches of haole koa (Leucaena glauca) thickets and tall California grass (Setaria geniculata).

PREVIOUS ARCHAEOLOGICAL WORK

There does not appear to have been any previous archaeological work done in the immediate area, however, the close proximity of the Heeia Fishpond does require some discussion in this section.

Previous Archaeological Work (cont)

McAllister's archaeological survey of Oahu in 1930 indicated that, at that time, there were a total of 23 fishponds in the Kaneohe Bay area ( i.e. from Kuloa to Mokuapepe ). Presently, there are only four remaining and these ponds represent roughly two - thirds of the total number of fishponds remaining on the island of Oahu -- there were more than 100 in 1930. Consequently, these few remaining examples of pre-contact fish farming are of great importance when examining Hawaiian adaptations to their environment.

The Heeiea Fishpond is a particularly large one ( wall length measuring 1524-meters, encompassing about 88 acres ) and has a very rich history ( see Kelly's Loko I'a O He'eiea:1975 ). Accordingly, this site is an outstanding candidate for placement on the State and Federal Register of Historic Places. For these reasons, and because a portion of the subject parcel boundary carries into the south - east corner of the Heeiea Fishpond, it is recommended that no action resulting from construction on the subject parcel in any way modify or cause damage to this important archaeological site. Heeiea is an unusual pond in that it is walled on all sides so please note that this recommendation includes the inner or mauka wall which presently is silted over and covered with vegetation.

Japanese Cemetery

As indicated on the topographic map of the subject parcel, a Japanese cemetery still does exist as of the date of this survey. While in an advanced state of disrepair, it is still possible to determine that the graves are all historic and that there is no evidence that any of the interments predate European contact. I might add that the condition of the graves indicates some vandalism as tombstones have been uprooted in some cases and smashed and others have had name plates wrenched off. Some multi-tiered headstones have been toppled and scattered. It is recommended that the developer consult with The Department of Health and make arrangements for the reinterment of these bodies before any land modification within the boundaries of the cemetery takes place.

Conclusions and Recommendations

After a careful examination of the site, it has been determined that there are no above ground archaeological features located within the boundaries of the subject parcel nor any indication that significant features lie underneath it ( although this clearly is a possibility ). This can be substantiated by the fact that the land use documents for the past one hundred years indicate that the parcel has been modified to accommodate the production of sugar cane, pineapple, rice and other crops. It has also been altered by the construction of a road and three modern dwellings.

Conclusions and Recommendations (cont)

The Heeia Sugar Plantation, which once stood on or very near the subject parcel, has, at this writing, vanished without a trace -- as have some stables that were indicated on the Monsarrat Map of 1913. These facts, coupled with the on site inspection can be called on to recommend that no further archaeological action be required. As mentioned earlier, however, it is important that the development of this parcel does not interfere with or in any way modify the existing construction of the Heeia Fishpond. Also, the historic burials in the Japanese cemetery must be reinterred before any modification to that portion of the land takes place.



Joseph Kennedy  
Archaeologist  
Archaeological Consultants of Hawaii  
April 1, 1981

APPENDIX III

DRAINAGE REPORT

for

ALII LANDINGS CLUSTER DEVELOPMENT

DRAINAGE REPORT

FOR

ALII LANDINGS CLUSTER DEVELOPMENT

TAX MAP KEY: 4-6-04: 11  
4-6-05: 5

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116 South King Street, Room 508  
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December 17, 1980

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## LIST OF FIGURES

FIGURE 1 - Location Map

FIGURE 2 - Hydrologic Map - Existing Conditions (Offsite)

FIGURE 3 - Hydrologic Map - Existing Conditions (Overall)

FIGURE 4 - Hydrologic Map - After Improvements

## I. INTRODUCTION

A 54-unit cluster development at Heeia, Koolaupoko, Oahu, Hawaii on Lots 1 and B-1 of Tax Map Key 4-6-04: 11 and Lot 1037-B of Tax Map Key 4-6-05: 5 is proposed (see Location Map, Figure 1).

The site is bordered by Samuel Wilder King Intermediate School on its south boundary; City and County of Honolulu Corporation Yard, Ipuka Street and Alii Bluffs Subdivision on its west boundary; Heeia Fish Pond on its north boundary; and the Pacific Ocean on its east boundary.

In general, surface runoff from the project site presently sheet flows toward the Pacific Ocean.

This report reviews the hydrology and hydraulics of drainage for this area.

## II. DESCRIPTION OF EXISTING CONDITIONS

The elevations (mean sea level datum) of the project site varies from 4 feet at the 40-foot shoreline setback line to 56 feet at its southwest boundary. Runoff quantities were calculated by using the "Storm Drainage Standards", Department of Public Works, City and County of Honolulu.

Surface runoff from the City Corporation Yard collects at a 36-inch diameter drain inlet located on the southwest boundary corner, discharges into an earth swale along with additional runoff from adjoining areas, flows into an 18-inch diameter drain inlet

and eventually discharges into the Pacific Ocean; the entire alignment being within a 10-foot wide City drainage easement.

Since Ipuka Street does not have a subsurface drainage system, the runoff flows onto the project site and flows into the 18-inch diameter drain inlet as mentioned above. The remaining offsite drainage pattern enters the project site along its entire mauka boundary and sheet flows toward the ocean (see Hydrologic Map - Existing Conditions, Figures 2 and 3).

The project site lies within the geographic region which has a representative soil composition of Lolekaa silty clay (Sheet 59, "Soil Survey of Oahu", U. S. Department of Agriculture, Soil Conservation Service, August, 1972). For this type of soil the permeability is moderately rapid, runoff is medium and the erosion hazard is moderate.

### III. DESCRIPTION OF PROPOSED IMPROVEMENTS AND CONCLUSIONS

The existing drain inlet located on the southwest boundary corner will be replaced with a 24-inch diameter inlet (see Hydraulic Calculations). A subsurface drainage system will be installed on the project site and the general drainage volume and pattern will not be significantly changed, i.e. the runoff will discharge directly makai into the ocean (see Hydrologic Map - After Improvements, Figure 4).

IV. HYDROLOGIC DATA CALCULATIONS

A. EXISTING CONDITION (See Hydrologic Map - Figures 2 and 3)

$C = 0.6$   
 $L = 750'$  (offsite),  $300'$  (onsite)  
 $S_{AVE} = 5\%$  (offsite),  $17\%$  (onsite)  
 $T_c = 24.0$  min. (offsite),  $13.5$  min. (onsite)  
 $C.F. = 1.6$  (offsite),  $2.0$  (onsite)  
 $i_{50} = 4.0$  in./hr.  
 $i_{10} = 3.0$  in./hr.  
 $I_{50} = 6.4$  in./hr. (offsite),  $8.0$  in./hr. (onsite)  
 $I_{10} = 4.8$  in./hr. (offsite),  $6.0$  in./hr. (onsite)  
 $Q_{50/A} = 3.84$  cfs/Ac (offsite),  $4.84$  cfs/Ac (onsite)  
 $Q_{10/A} = 2.88$  cfs/Ac (offsite),  $3.60$  cfs/Ac (onsite)

B. AFTER ONSITE IMPROVEMENTS COMPLETE (See Hydrologic Map - After Improvements, Figure 4)

$C = 0.6$   
 $L = 300'$   
 $S_{AVE} = 17\%$   
 $T_c = 10$  min.  
 $C.F. = 2.3$   
 $i_{50} = 4.0$  in./hr.  
 $i_{10} = 3.0$  in./hr.  
 $I_{50} = 9.2$  in./hr.  
 $I_{10} = 6.9$  in./hr.  
 $Q_{50/A} = 5.52$  cfs/Ac  
 $Q_{10/A} = 4.14$  cfs/Ac

V. HYDRAULIC CALCULATIONS

Determine Inlet Size for Runoff from City Corporation Yard.

Entrance Control (Plate 19, "Storm Drainage Standard")

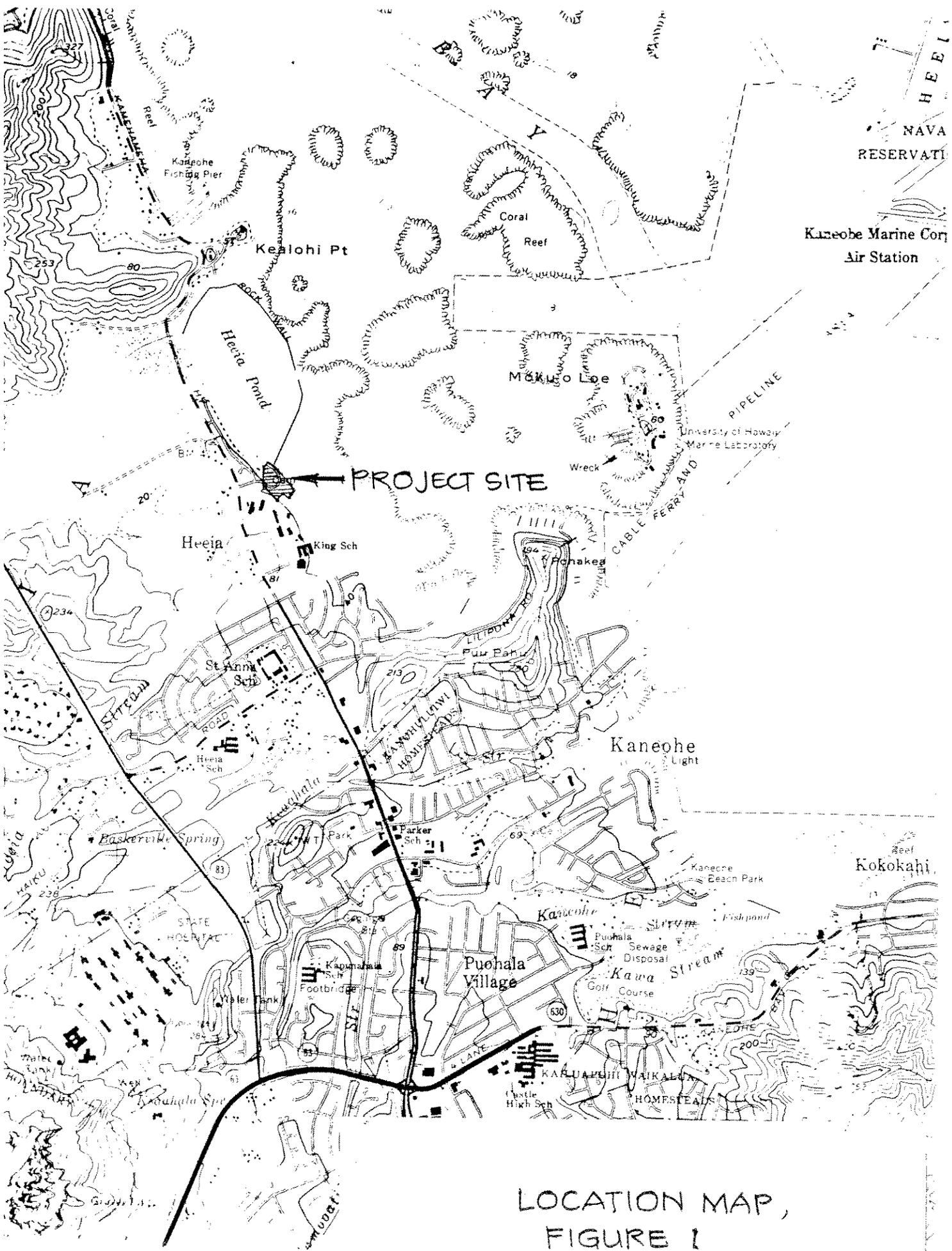
$$Q = 15.74 \text{ cfs}$$

$$H/D = 1.5$$

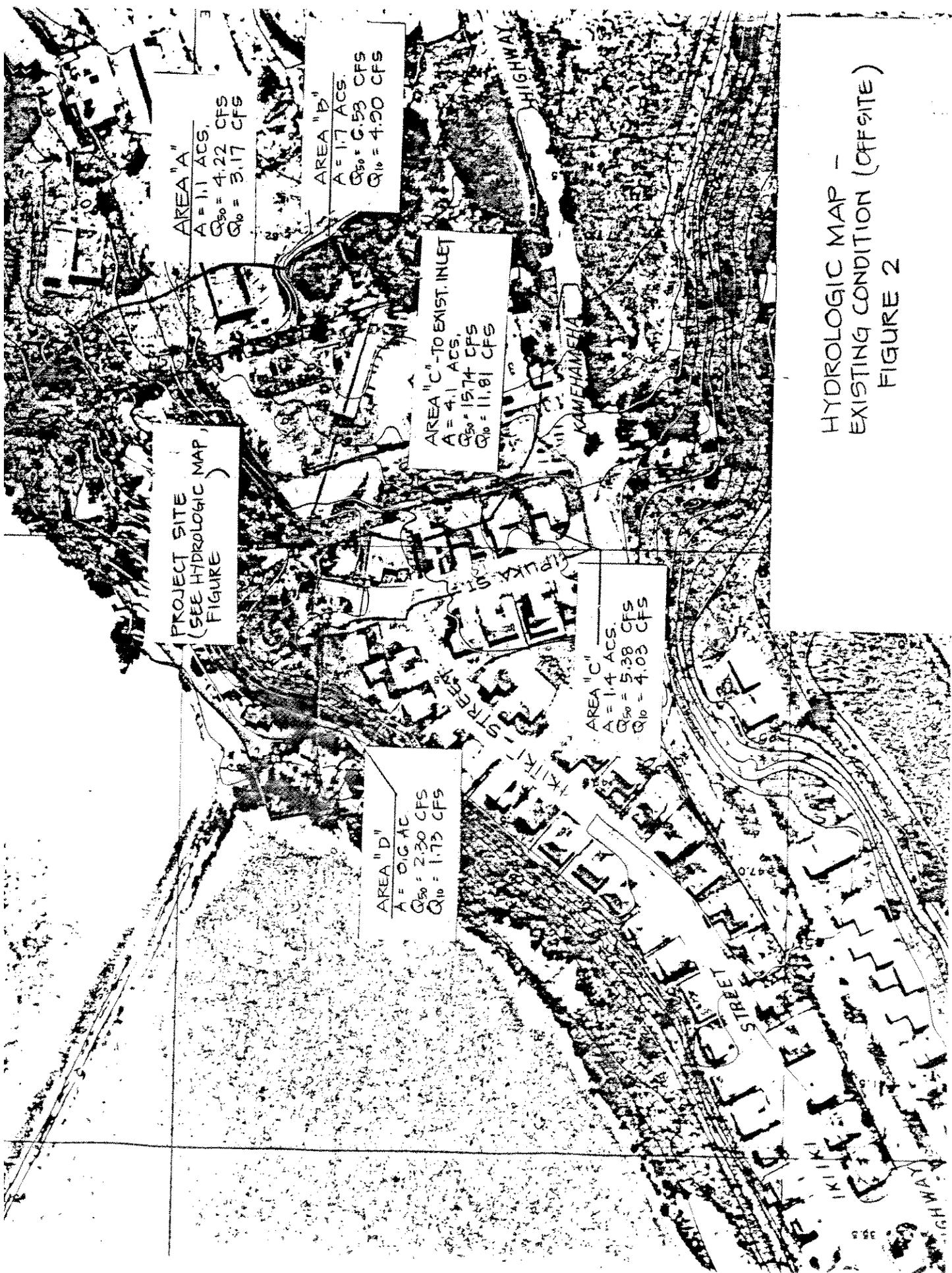
use 24" Diameter Inlet,  $H = 1.5 \times 2' = 3'$  (minimum)

$$Q_{24"} = 24 \text{ cfs} > 15.74 \text{ cfs} \quad (\text{ok})$$

∴ Replace existing 36" Inlet



LOCATION MAP,  
FIGURE 1



HYDROLOGIC MAP -  
EXISTING CONDITION (OFFSITE)  
FIGURE 2





APPENDIX IV

CALCULATION OF SOIL EROSION  
SEVERITY RATING NUMBER

CALCULATION OF SEVERITY RATING NUMBER

AT

ALII LANDINGS

$$H = (2 \text{ ft} + 3D) AE$$

$$F = 4 \text{ (Table 1, Exhibit 1)}$$

$$T = 1 \text{ year}$$

$$D = 2 \text{ (Table 2, Exhibit 1)}$$

$$A = 5.3 \text{ acres}$$

$$E = RK (LS) (CP)$$

$$R = 350 \times 0.70 = 245 \quad \text{(Exhibits 3 \& 4)}$$

$$K = 0.10 \quad \text{(Exhibit 5) Loekaa silty clay, 15\% to 25\% slopes}$$

$$(LS) = 4.45 \quad \text{(Exhibit 7)}$$

$$\text{Average slope} = 15\%$$

$$\text{Maximum uncontrolled length} = 300 \text{ feet}$$

$$(CP) = 0.75 \times 0.8 = 0.60$$

$$C = 0.75 \quad \text{(Exhibit 8)}$$

$$P = 0.8 \quad \text{(Filter berms \& sediment traps, Exhibit 8)}$$

$$E = 245 \times 0.10 \times 4.45 \times 0.60 = 65$$

$$H = \frac{(2 \times 4 \times 1) + (3 \times 2)}{5.3 \times 65} = 4,823$$

PERMANENT EROSION CONTROL MEASURES

1. Subsurface drainage system
2. Ground cover - landscaping
3. Earth swales

TEMPORARY EROSION CONTROL MEASURES

1. Ground cover for areas not to be graded for 30 days
2. Filter berms along the shoreline
3. Sediment basins on mauka areas