

November 8, 1978

MEMORANDUM

TO: Honorable Ryokichi Higashionna, Director
Department of Transportation

SUBJECT: Environmental Impact Statement for Proposed Farrington Highway
Widening

Based upon the recommendation of the Office of Environmental Quality Control, I am pleased to accept the subject document as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes, and the Executive Order of August 23, 1971. This environmental impact statement will be a useful tool in the process of deciding whether or not the action described therein should or should not be allowed to proceed. My acceptance of the statement is an affirmation of the adequacy of that statement under the applicable laws, and does not constitute an endorsement of the proposed action.

When you make your decision regarding the proposed action itself, I hope you will weigh carefully whether the societal benefits justify the environmental impacts which will likely occur. These impacts are adequately described in the statement, and, together with the comments made by reviewers, will provide you with a useful analysis of alternatives to the proposed action.


George R. Ariyoshi

bcc: Mr. Richard L. O'Connell
Mr. Donald A. Bremner, EQC

Office of Environmental Quality Control
Office of the Governor
550 Halekiauville Street
Tani Office Building, Third Floor
Honolulu, Hawaii 96813

REVISED ENVIRONMENTAL IMPACT STATEMENT
FOR THE PROPOSED
FARRINGTON HIGHWAY WIDENING
Lualualei Homestead Road to Jade Street

Project No. 93B-01-75

Waianae District, Island of Oahu
State of Hawaii

September, 1978

Land Transportation Facilities Division
Department of Transportation
State of Hawaii

September 20, 1978
Date

Ryobichi Higashionna
Director
Department of Transportation

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I. SUMMARY

A. Proposed Action

The proposed action involves the widening of a 2.4 mile section of Farrington Highway from Lualualei Homestead Road to the vicinity of Jade Street. The present two-lane, undivided highway will be widened to a four-lane, undivided highway. The highway will be widened within the existing 60 or 80 foot right-of-way. Additional lands will be required to increase some portions of the 60 foot right-of-way to an 80 foot right-of-way. The lands to be acquired for this purpose are owned either by the State or Federal government, and are vacant.

Other improvements include reconstruction of the drainage system, installation of highway lights and traffic signals, utility and driveway adjustments, widening of one bridge, replacement of one bridge, and all roadside improvements. A bike route is also planned.

B. Need for the Proposed Action

In 1969, the average daily traffic (ADT) between Kaupuni Bridge and Waianae Valley Road was 11,131; in 1973, the ADT increased by 52 percent to 16,932. It is estimated that the present ADT at Lualualei Homestead Road to Waianae Valley Road is 20,900. The Department of Transportation's traffic projections indicate that by 1980 and 1998, the ADT will be 21,800 and 36,800, respectively, at this location.

The widening project is being proposed because the present two-lane capacity of Farrington Highway is becoming severely congested during peak hours. Urban growth, (i.e. residential and commercial development, resort development) along with the expansion and improvement of beach parks in the area, has resulted in significantly increasing the number of vehicles traveling along this section of Farrington Highway.

C. Summary of Impacts

1. Construction activities will result in the following adverse environmental impacts: creation of fugitive dust during grading activities; potential erosion if heavy rainfall occurs during construction; noise from construction activities; traffic detours and congestion due to construction and related activities. These impacts are temporary and localized, and will constitute a nuisance to adjacent activities and residences, but should not result in any long-term significant adverse impacts.

2. Infiltration of rainfall will be reduced over the

highway due to additional paving. Some pollutants caused by cars (e.g. litter, rubber from tires) will be left on or alongside the road, these pollutants will likely enter the drainage system when there is heavy rainfall. The amount of increased water runoff will be negligible (due to the low rainfall) and the quality of the runoff is expected to be similar to other urban runoff presently being drained from the area served. Additionally, it is noted that the quantity and quality of the runoff is not only attributable to the highway, but that of other residential and recreational developments in the same area which also affect water quality. The widening will not affect any source of potable water.

3. The proposed project will have an insignificant impact on vegetation and wildlife. For the most part, the right-of-way is devoid of wildlife and vegetation. Other areas contain weed, shrub growth or cultivated plants.

4. Air quality will, in the long-term, be improved over the present condition. At one location, the State's one hour carbon monoxide standard is already being exceeded during peak hour periods. With less congestion envisioned for the four-lane highway, and the stricter automobile emission standards, compliance with the State's standards should be met by 1998 at this location. A no action alternative would result in more significant air emissions.

5. Noise levels, associated with traffic using the proposed four-lane highway, will increase. This increase will affect two portable classrooms at Waianae High School which are now located 83 feet from the highway's present curb. The noise consultant has recommended noise abatement measures to reduce noise levels in these classrooms to an acceptable level (L₁₀ - 50 dBA).

6. No residences and businesses will be displaced. No private lands will be acquired for the additional right-of-way.

7. The widening will provide savings over a no action alternative. The savings will accrue in the area of time savings and savings in operational costs.

8. The monies spent for construction will benefit, to a small degree, Hawaii's economy due to the construction costs and its multiplier effect.

9. The highway is not expected to significantly alter the present or future growth of the community, land use, and land use policies. The widening project is not expected to act as a primary catalyst to population growth or urbanization. It is felt that the urban designations and residential zoning are the primary catalyst to growth.

The project is consistent with the present land use of the roadway and surrounding area. The adjacent area is zoned primarily for residential use and the remaining uses are generally urban (this includes those areas identified for public uses). Unfortunately, although the highway is being widened to improve the existing traffic flow, it also will enhance decisions to urbanize the area it serves.

10. The highway widening will lessen the traffic congestion for both residents of the immediate area and for islandwide users of the Waianae beaches and recreational areas. The widening of the highway will accommodate an increase in traffic volume and may result in voluntary speeding between traffic signals.

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II. PROJECT DESCRIPTION

A. Location and Project Background

The proposed action consists of widening approximately 2.4 miles of Farrington Highway (Lualualei Homestead Road to Jade Street) from its present two lanes to four lanes, undivided. The project is located in the Waianae District on the island of Oahu from Waianae Town to Makaha, as shown in Figures 1 and 2.

Farrington Highway serves the Waianae Coast, and is the main vehicular arterial between the Waianae Coast and the rest of Oahu. The highway runs in a north-south direction from the terminus of H-1 (west end) to Makua where it ends. Farrington Highway consists of a four-lane highway from the terminus of H-1 to the intersection of Lualualei Homestead Road; from that point it narrows to two lanes.

Presently, the proposed portion to be widened consists primarily of an 80-foot right-of-way (a portion of the highway from Lualualei Homestead Road to beyond Kaupuni Bridge consists of a 60-foot right-of-way). From Lualualei Homestead Road to Kaupuni Bridge, the highway consists of a pavement of 35 to 40 feet with two lanes of travel; the remaining pavement is used for on-street parking. The highway from Kaupuni Bridge to Jade Street has a pavement width of 20 to 21 feet with 6 to 8 feet of unpaved shoulders on both sides.

The existing highway within the project bounds passes primarily through residential areas with numerous driveways and roads connecting onto the existing highway. It was observed that much of the weekday traffic is generated from residential areas located in the Waianae and Makaha valleys. During the weekends and holidays, much of the traffic generated is by beach park users.

B. Description of the Proposed Action

The proposed action will be State funded. The proposed project includes installation of highway lights and traffic signals, overhead utilities (i.e. telephone, electricity) will be relocated with easements for their guys and anchors (no monies from project funds are available for the undergrounding of utilities), driveway adjustments, widening of Kaupuni Bridge, replacement of East Makaha Stream Bridge, and all roadside improvements. Signalized intersections will include: Lualualei Homestead Road, Old Government Road, Waianae High School, Waianae Intermedidate School, and Makaha Valley Road. A bike route along the highway is also planned. (There will be no physical separation between the widened highway and bikeway.) Refer to page 6, Figure 2 (Vicinity Map) for bike route.

During the review period for the Draft EIS several comments were made relating to the improvement of the drainage system. The project will include minor adjustments to the drainage system but will not alter the current drainage conditions and problems.

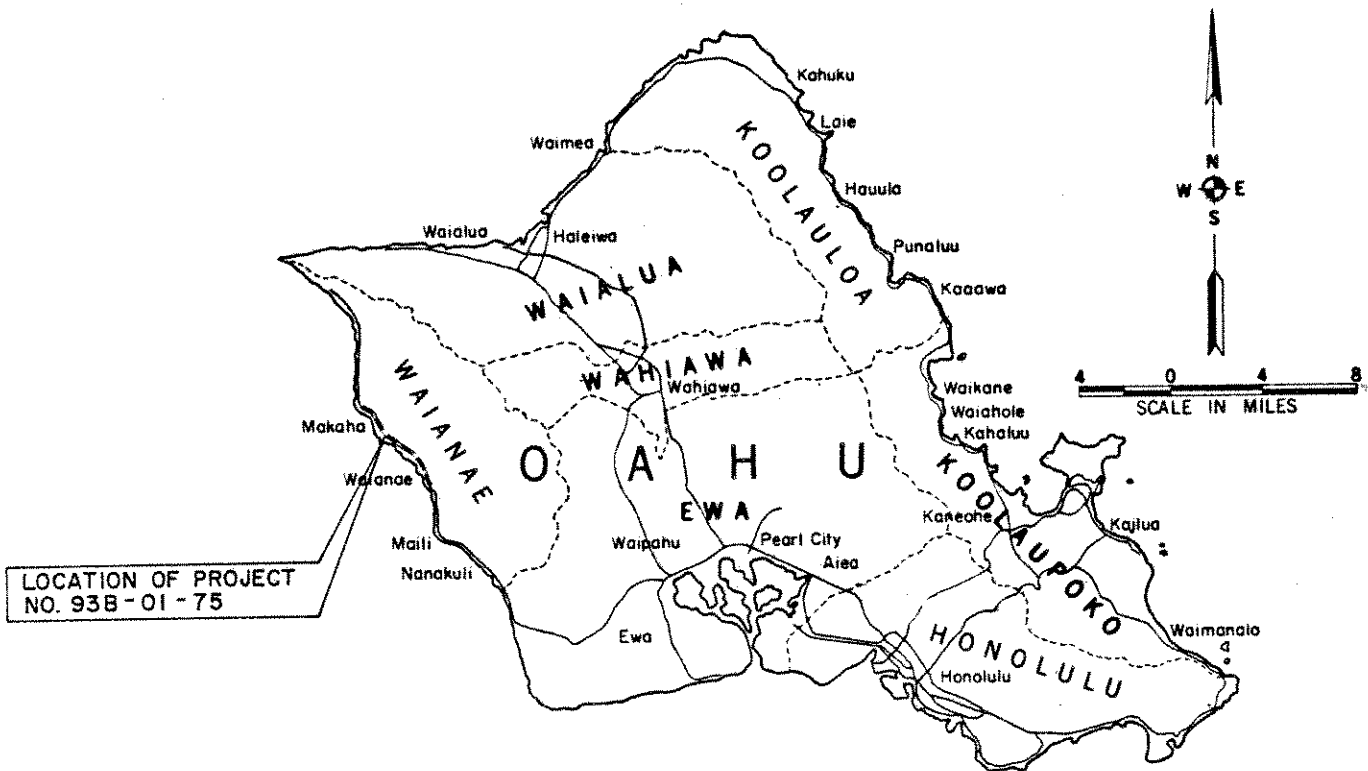


Figure 1
 Location of Project, Island of Oahu

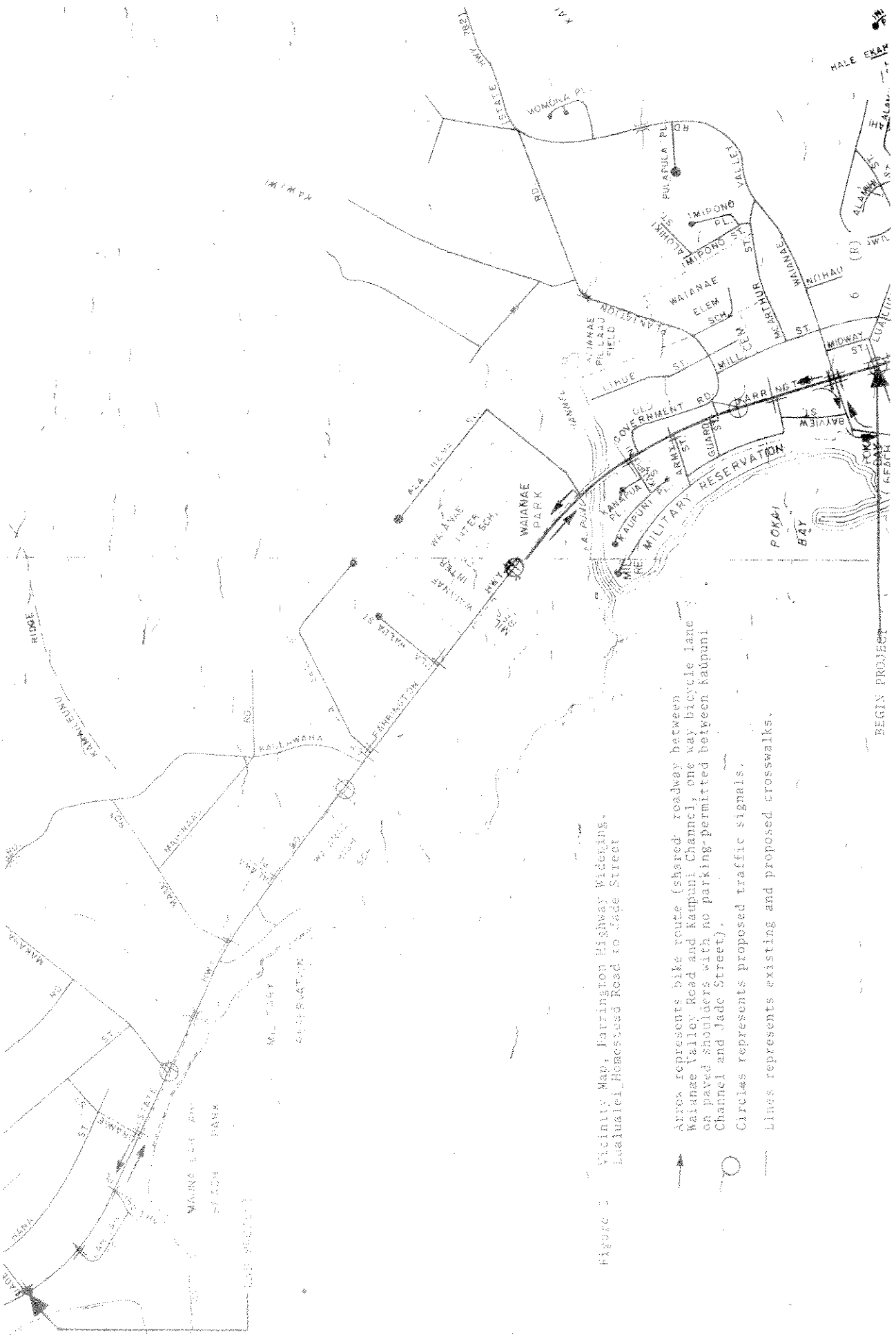


Figure 1 Vicinity Map, Farrington Highway Widening, Luālialel Homestead Road to Jade Street

Area represents bike route (shared roadway between Waiānae Valley Road and Naupuni Channel, one way bicycle lane on paved shoulders with no parking-permitted between Naupuni Channel and Jade Street).

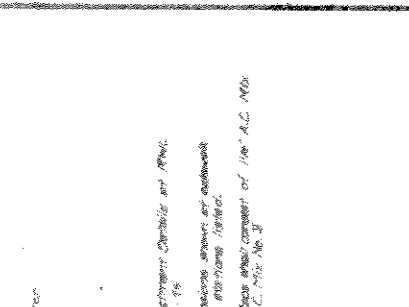
Circles represents proposed traffic signals.

Lines represents existing and proposed crosswalks.

BEGIN PROJECT

PROJECT NO.	NO. DRAWING	DATE	BY	CHECKED	SCALE
100-0-10	100-0-10	10/10/00	J.M.	J.M.	AS SHOWN

PROJECT NO. 100-0-10



4' Conc. Sidewalk
See Note on Set 1

2' Conc. Curb

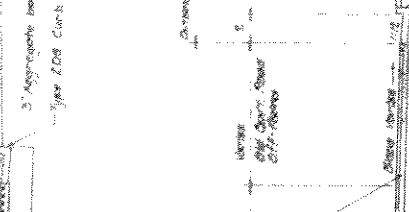
12' Asphalt Travel Lane
See Note on Set 1



4' Conc. Sidewalk

2' Conc. Curb

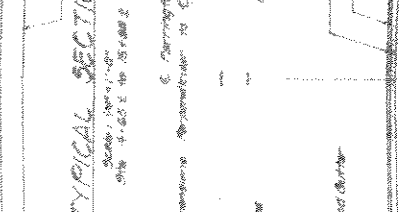
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

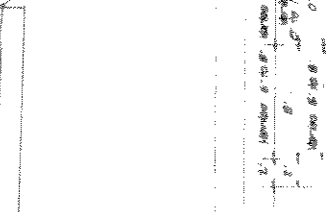
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

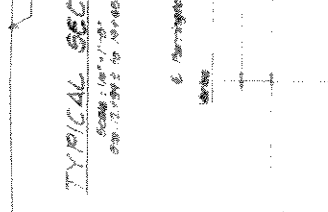
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

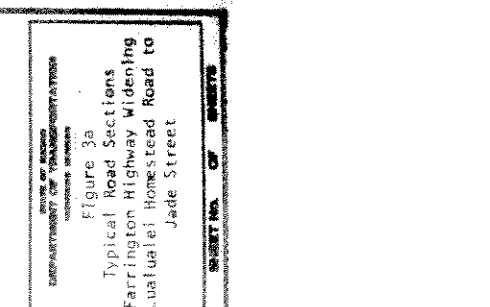
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

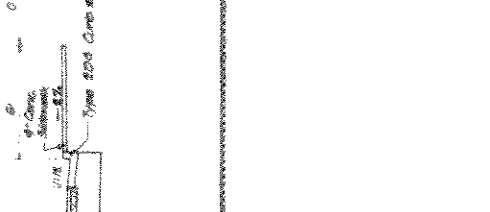
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

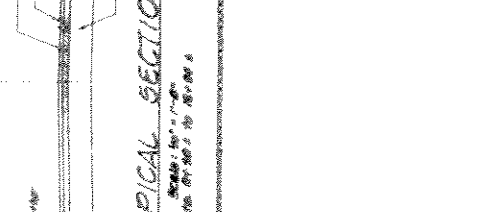
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

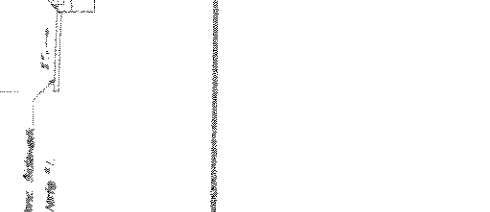
12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane



4' Conc. Sidewalk

2' Conc. Curb

12' Asphalt Travel Lane

TYPICAL SECTION C

Scale: 1" = 10'-0"

100-0-10 to 100-0-2

TYPICAL SECTION B

Scale: 1" = 10'-0"

100-0-10 to 100-0-2

TYPICAL SECTION A

Scale: 1" = 10'-0"

100-0-10 to 100-0-4

- Notes:
1. For Street Adjustment Curbs at RWL see drawing 100-0-10
 2. 8'-0" max. clearances above sidewalk and for traffic signals refer to 100-0-10 and 100-0-2
 3. 8'-0" max. clearances above sidewalk and for traffic signals refer to 100-0-10 and 100-0-2

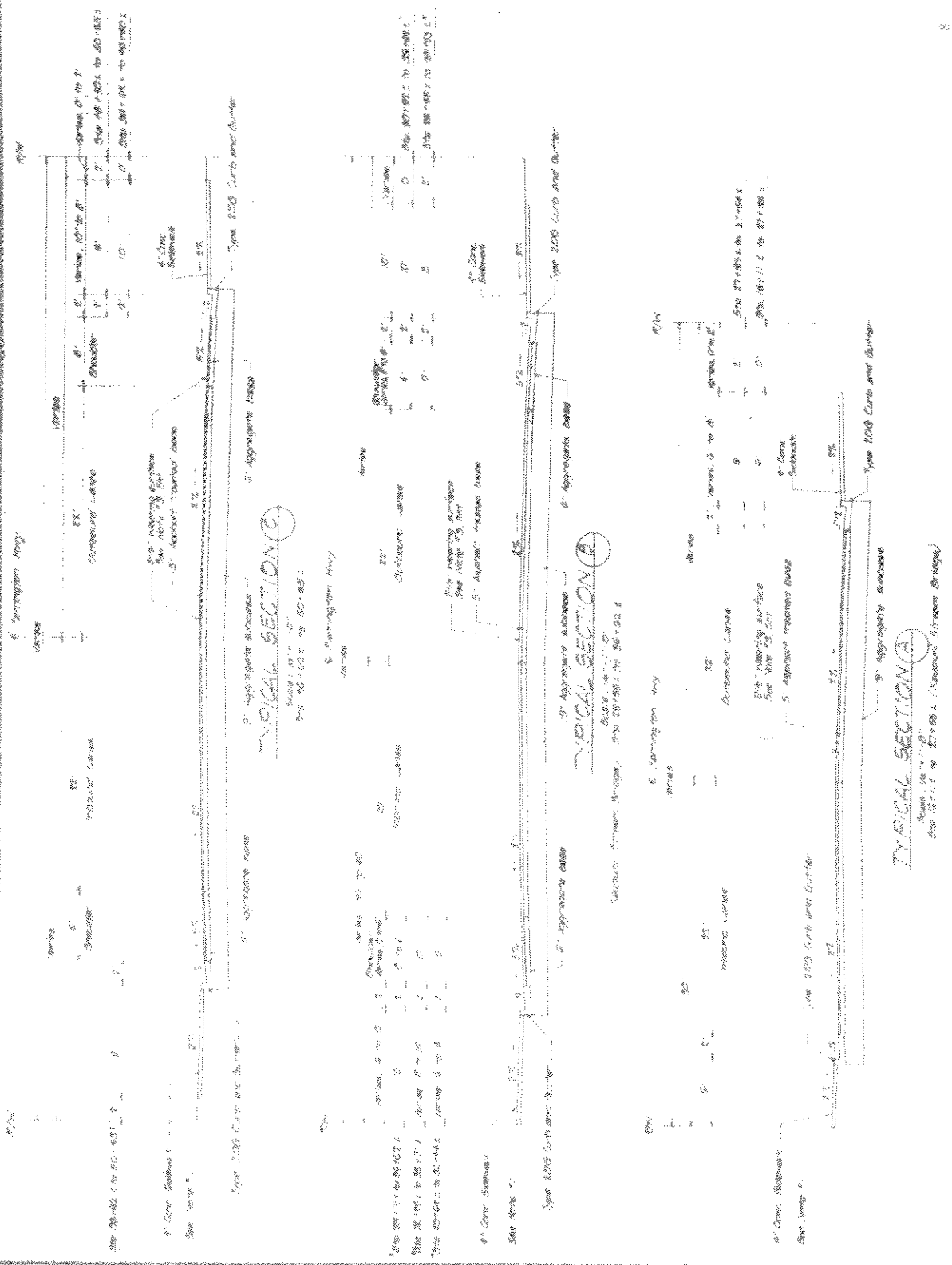
STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Figure 3a
Typical Road Sections
Farrington Highway Widening
Lualaba Homestead Road to
Jade Street

SHEET NO. 07

DATE	BY	CHKD BY	APP'D BY

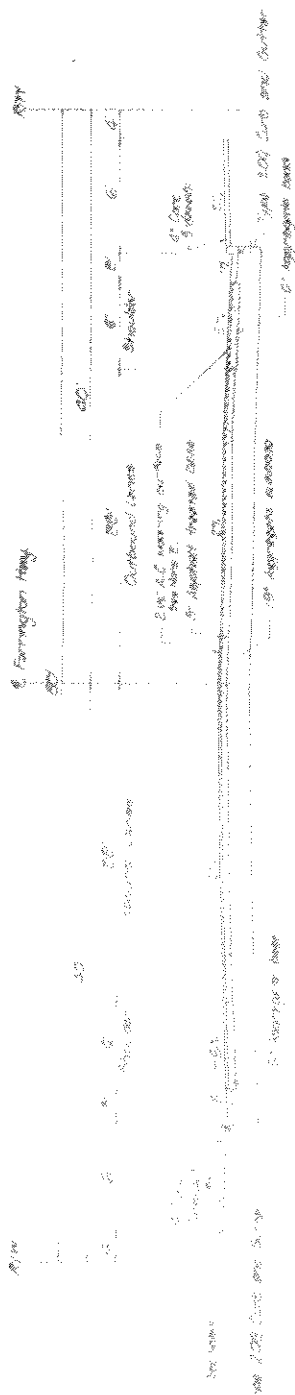
STATE OF MICHIGAN
DEPARTMENT OF TRANSPORTATION
Figure 3b
Typical Road Sections
Farrington Highway Widening
Luttwalder Homestead Road to
Jade Street



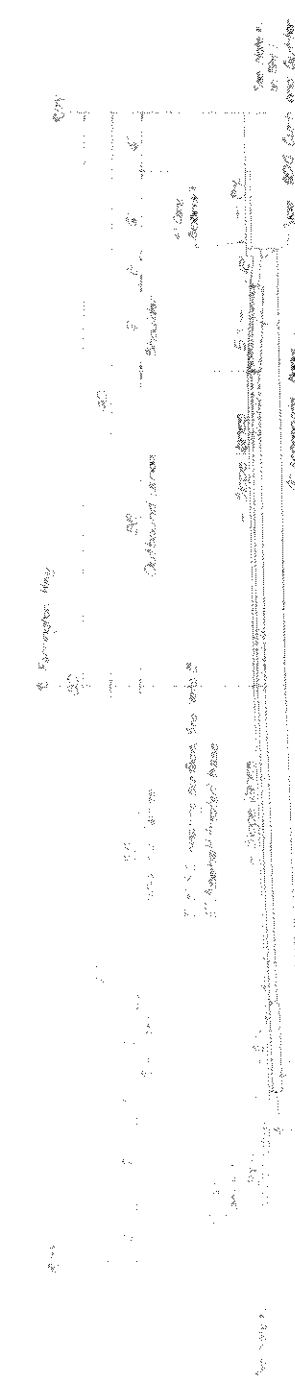
PROJECT NO. 100-10-100
SHEET NO. 30

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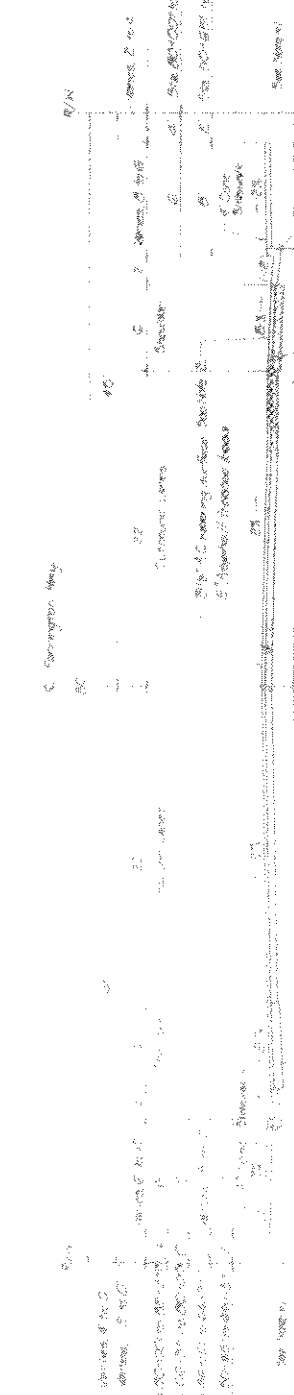
Notes:
 1. See details of subgrade and drainage at 1774.
 2. See details of subgrade and drainage at 1774.
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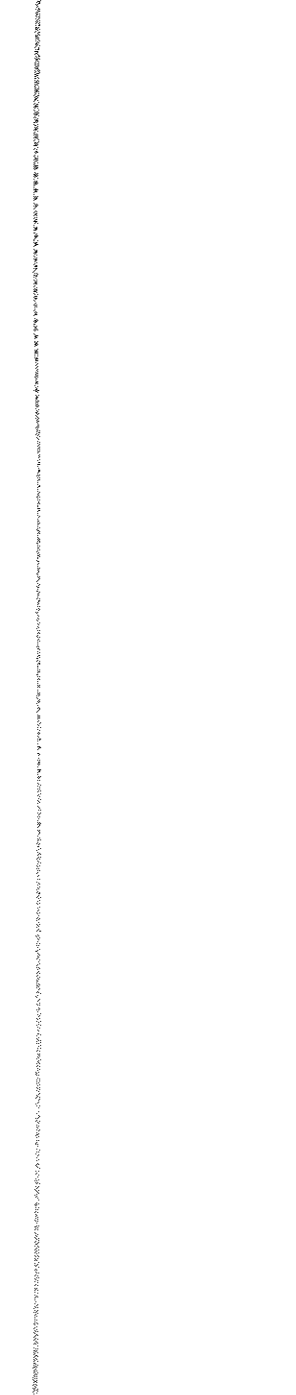
TYPICAL SECTION (A)
 Scale: 1/4" = 1'-0"
 See 1774 to 1775



TYPICAL SECTION (B)
 Scale: 1/4" = 1'-0"
 See 1775 to 1776



TYPICAL SECTION (C)
 Scale: 1/4" = 1'-0"
 See 1776 to 1777



DEPARTMENT OF TRANSPORTATION
 ROAD AND BRIDGE DIVISION
 Figure 37
 Typical Road Sections
 For the Highway Numbered
 Locally, from Road to
 State Street

NO. 1	NO. 2	NO. 3	NO. 4	NO. 5	NO. 6	NO. 7	NO. 8	NO. 9	NO. 10

PROJECT NO. 100-0-10

DATE: 10/1/50

BY: [Signature]

SCALE: 1" = 20'

SECTION: TYPICAL SECTION (A)

STA. 100+00 TO 100+50

SECTION: TYPICAL SECTION (B)

STA. 100+50 TO 100+75

SECTION: TYPICAL SECTION (C)

STA. 100+75 TO 100+100

SECTION: TYPICAL SECTION (D)

STA. 100+100 TO 100+125

SECTION: TYPICAL SECTION (E)

STA. 100+125 TO 100+150

SECTION: TYPICAL SECTION (F)

STA. 100+150 TO 100+175

SECTION: TYPICAL SECTION (G)

STA. 100+175 TO 100+200

SECTION: TYPICAL SECTION (H)

STA. 100+200 TO 100+225

SECTION: TYPICAL SECTION (I)

STA. 100+225 TO 100+250

SECTION: TYPICAL SECTION (J)

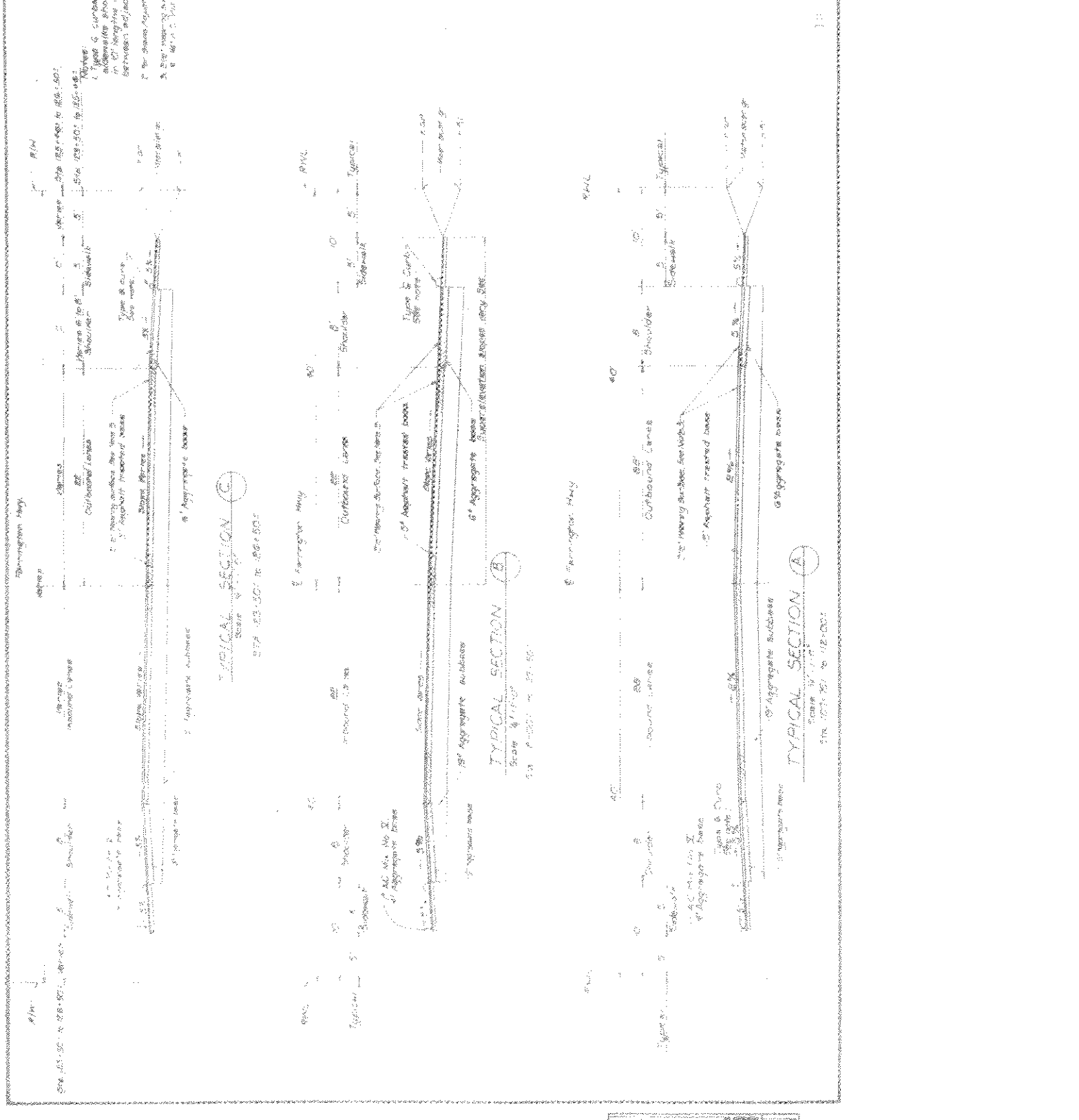
STA. 100+250 TO 100+275

SECTION: TYPICAL SECTION (K)

STA. 100+275 TO 100+300

DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 Figure 3d
 Typical Road Sections
 Harrison Highway Widening
 I-95 at Horsehead Road to
 Jade Street

Scale: 1" = 20'



The Design Classifications are as follows:

Design speed	40 mph
Posted speed:	
Through town, school areas	25 mph
Elsewhere	35 mph
Maximum superelevation	6%
Minimum superelevation	2%
Maximum profile grade	1.5%
Minimum profile grade	0.4%
4-11 foot lanes	44 feet
Shoulder width	6 feet*
Concrete gutters	2 feet
Sidewalks	10 feet
	6 feet (for 60' right-of-way)

*Planned for areas with 80' right-of-way

C. Statement of Objectives and Traffic Assignments

The widening project is proposed because this portion of Farrington Highway is becoming severely congested during peak hours due to the increased traffic volume generated by urban growth and recreational use. (See Figure 4, Traffic Summary).

The basis for the project limit is when the project was initiated, (middle 1960's) the information available indicated that the widening between Lualualei Homestead Road and the vicinity of Jade Street would accommodate the residential trips generated in this area. At that time there were few residential destination points beyond Jade Street. Although there may be need to extend the project limits this is not being proposed.

To provide an indication of such growth, the recent Department of Planning and Economic Development's report, "Population and Housing Unit Estimates for Oahu Census Tracts, 1970-1975", Report CTC-36 September 27, 1977, provides the following information relating to housing and population for Census Tracts 97 and 98 in which the project is located.

Housing

<u>Census Tract</u>	<u>April 1, 1970</u>	<u>July 1, 1975</u>	<u>July 1, 1976</u>	<u>Percentage Change 1970-1976</u>
97	1,565	2,499	2,610	66.8
98	1,212	1,563	1,618	33.5

Population

97	6,020	8,524	8,894	47.7
98	4,403	5,542	5,756	30.7

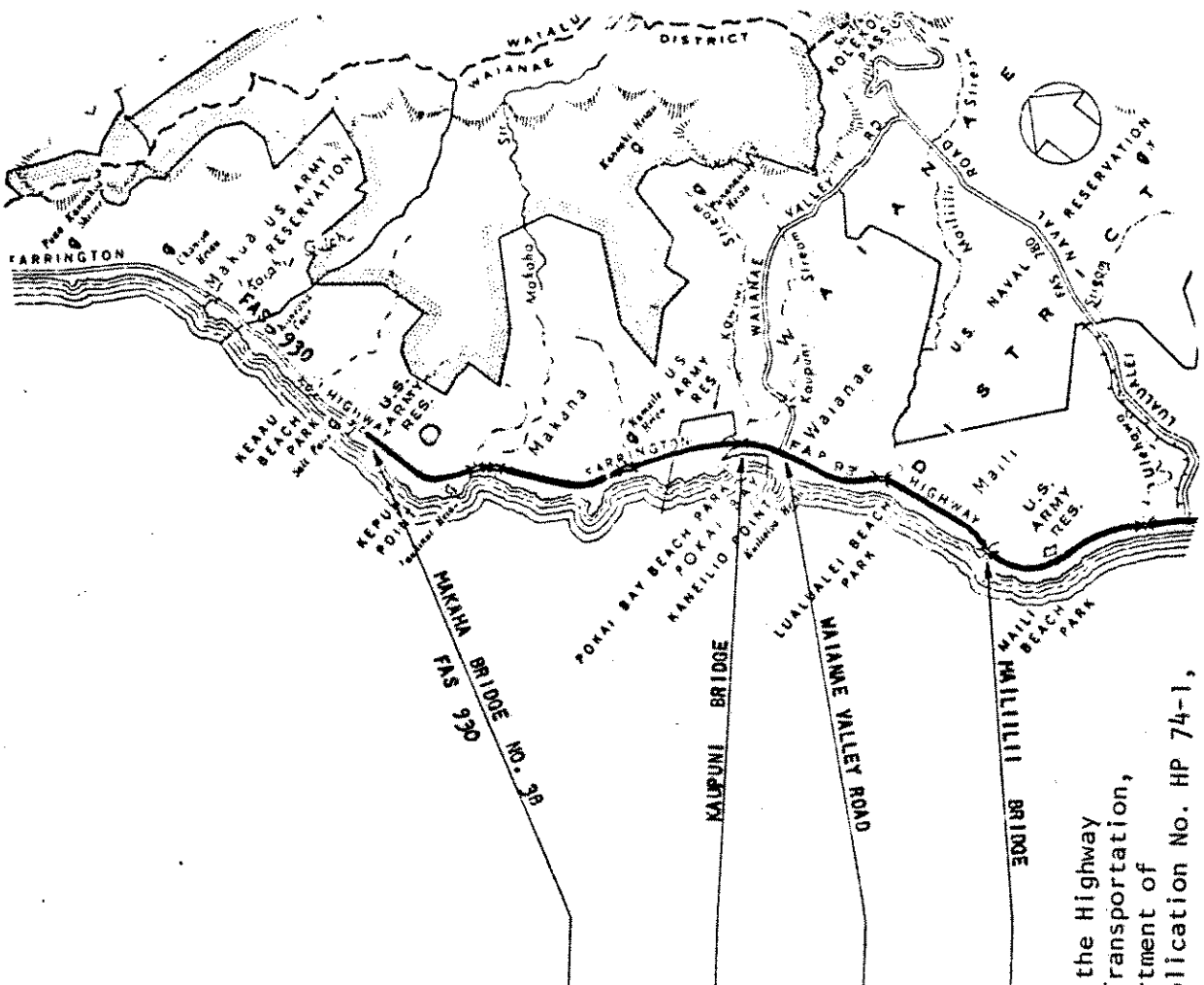


Figure 4
 Traffic Summary
 Island of Oahu
 1973
 Makaha Section

		SECTION LENGTH MILES		
		4.39	0.46	1.12
Average Daily Traffic	1969	4,951	11,131	13,013
	1970	6,026	12,950	13,364
	1971	6,686	15,032	14,679
	1972	7,752	15,793	16,342
	1973	8,326	16,962	17,551
	Vehicle Type (Percent)	Passenger	91.1	91.1
Buses		0.1	0.1	0.7
Panel and Pickup		5.8	5.8	10.3
Other Single Unit Trucks		2.5	2.5	2.9
Truck Combinations		0.5	0.5	0.7
PEAK HOUR A.M. (Percent)		5.5	5.5	6.0
PEAK HOUR P.M. (Percent)	9.7	9.7	8.2	
THOUSAND VEHICLE MILES (Per Day)	36.55	7.80	19.66	

SOURCE: Traffic Summary, Island of Oahu, 1973, prepared by the Highway Planning Branch, Highways Division, Department of Transportation, State of Hawaii, in cooperation with the U.S. Department of Transportation, Federal Highway Administration, Publication No. HP 74-1, February, 1975.

Furthermore, Figure 5, Projects in the Waianae-Makaha Area, shows the major projects recently completed and/or planned for the lands which the highway serves. These major projects are also briefly described below:

1. Hawaii Housing Authority, Waianae Community Development, (Ulu Wehi) residential dwellings located adjacent to Waianae Intermediate School (identified by "A"). This residential subdivision consists of 382 units in a two and three story building.
2. The Waianae Small Boat Harbor is planned to be located within the Waianae Regional Park. It will replace the mooring facilities at Pokai Bay. The ultimate plans for the Waianae Small Boat Harbor call for 300 berths, 7 boat launching lanes and 200-300 car/trailers.

The Waianae Small Boat Harbor and the Waianae Regional Park (discussed below) will create vehicular traffic in form of beachgoers and boaters. The launching ramps will also attract many boating enthusiasts who will transport their boats via trailer to the Harbor. Although this increase will occur (this increase has been accounted for in the traffic projections), it should be noted that a significant proportion of the boaters will travel on the roads during off peak hours, subsequently, they are not expected to create severe or significant problems relating to traffic movement.

3. The Waianae Regional Park (identified by "C" on Figure 5.) Aside from the proposed small boat harbor, the Waianae Regional Park is also planned to be improved as follows:

1st increment: Construction in fiscal year 1977 of a Recreational Center Complex with shower-locker building to serve both gymnasium, boxing room, weight-lifting room, physical fitness room, game room, arts and crafts room, community meeting room with kitchen facilities and restrooms.

2nd increment: Four tennis courts and tennis court lighting (8 courts).

3rd increment: Swimming pool, diving tank, wading pool, filter room and bleachers for approximately 250 spectators.

4th increment: Additional playcourts, ballfields, and open field.

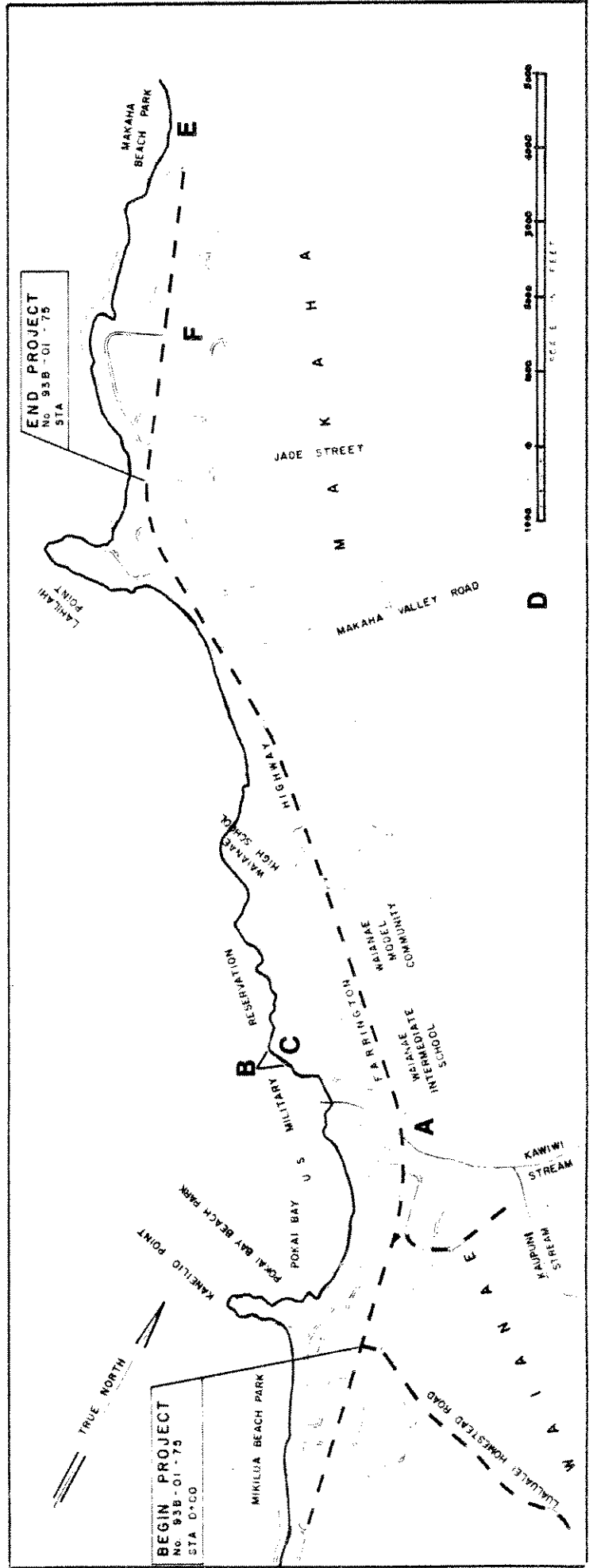
5th increment: Camp sites, trailer parking and picnic sites.

4. Makaha Valley condominiums and hotel (identified as "D" in Figure 5). This area is presently designated Urban by the State. It is anticipated that further condominium and possibly hotel expansions can occur in the near future. Presently, these condominium units are being completed and are now being sold.

Figure 5
Projects in the Waianae-Makaha Area

Legend

- A: Hawaii Housing Authority Waianae Community Development (Ulu Wehi) residential dwellings located adjacent to Waianae Intermediate School.
- B: Waianae Small Boat Harbor
- C: Waianae Regional Park
- D: Makaha Valley condominiums and hotel
- E: Makaha Beach Park
- F: Makaha Meadows Subdivision



5. Makaha Beach Park (identified as "E" in Figure 5). In the past, there have been several proposals to improve and expand the beach park facilities. Congestion of the beach park is especially noticeable during its world-famous surfing championship competition. Improvements being considered include acquiring additional land area, increasing park facilities, and improving the recreational facilities.

6. Makaha Meadows Subdivision (identified as "F" in Figure 5). Although an improved subdivision has been created, the dwelling units have not been constructed. At this time, it is felt that approximately 320 units can be built within the project site. The subdivision is being developed in conjunction with the Hawaii Housing Authority.

In addition to these six major projects which have recently been completed, or under construction, it is noted that other projects in the area include: an elementary school site, drainage improvements, commercial buildings, public and community buildings, sewers and water projects. Cumulatively, these projects are felt to characterize the development of the area.

The growth of average daily trips is shown on Figure 4. In 1969, the average daily traffic (ADT) between Kaupuni Bridge and Waianae Valley Road was 11,131; in 1973, the ADT increased by 52% to 16,932. It is estimated that in 1978, the ADT at Lualualei Homestead Road to Waianae Valley Road will be 20,900 (see Table 1 for traffic projections.)

In addition to the current established need for the proposed project, the Land Transportation Facilities Division (formerly the Highways Division), State Department of Transportation, has projected that in 1998, the ADT for the portion of the roadway from Waianae Valley Road to Lualualei Homestead Road will be 36,800. Table 1 shows the current estimated ADT and the projected ADT.

D. Public Funds and Phasing of the Proposed Project

The project is expected to be completed in two phases. The first phase will be the widening of the highway from Lualualei Homestead Road to Ala Walua Street. The second phase will continue from that point to Jade Street.

The total construction time for the proposed widening will be about two years. The construction schedule has been tentatively set so that the first phase will be initiated in early 1979. The second phase for construction will depend on the availability of funds.

The cost of the total project is estimated to be approximately \$9,000,000. The State will fund the proposed widening project. At this time, no Federal or County funds are expected to be utilized.

The widening of the highway will take place within the present right-of-way (generally 80-feet). A portion of the highway (from the Makaha side of Kaupuni Bridge to approximately Ala Akau Street) consists of a 60 foot right-of-way. Plans call for the acquisition of lands in this 2,500 foot portion so that there will be an 80-foot right-of-way. These additional lands are owned by either the State or Federal government and are vacant; they are a portion of the following Tax Map Keys (TMK): 8-5-28:40, 8-5-28:41, 8-5-28:42, 8-5-02:11, 8-5-02:12, 8-5-02:42, 8-5-02:44, and 8-5-02:48.

Table 1
Traffic Projections

Location	Year	Average Daily Traffic
Makaha Valley Road at Intersection with Farrington Highway *Kam=6.0 Kpm=8.0 **Dam=55/45 Dpm=55/45	1978	5,600
	1980	6,000
	1998	10,000
Farrington Highway, south of intersection with Jade Street Kam=7.0 Kpm=7.5 Dam=55/45 Dpm=55/45	1978	11,200
	1980	12,000
	1998	20,200
Farrington Highway, south of intersection with Makaha Valley Road Kam=7.0 Kpm=7.5 Dam=55/45 Dpm=50/50	1978	16,000
	1980	17,400
	1998	29,200
Farrington Highway, south of intersection with Waianae Valley Road Kam=8.0 Kpm=7.5 Dam=55/45 Dpm=55/45	1978	20,200
	1980	21,800
	1998	36,800

*Kam and Kpm refer to the percent of daily traffic in the peak during am and pm hours, respectively.

**Dam and Dpm refer to the directional proportion of flow during am and pm peak hours, respectively.

Source: State of Hawaii Department of Transportation, Land Transportation Facilities Division, November, 1977, Ref. No. TA77-24.

III. DESCRIPTION OF THE ENVIRONMENTAL SETTING

A. General Site Conditions

Photographs 1 through 5 show the present conditions of the project area.

B. Physical Features

1. Geography

The portion of Farrington Highway proposed to be widened is located within the coastal portion of Waianae Valley and Makaha Valley. This level coastal area was generally established by either coral outcrops (created at a time when the sea level was much higher than present), alluvial deposits formed by silt deposited by the streams, and rock slides occurring during the erosional processes. The coastal area is level due to the grading and clearing for urbanization.

2. Soils

The soils of the project area have been identified and are described in Table 2.

3. Climate

The project area is, climatically, subject to land-and-sea air circulation patterns. The characteristics of land-and-sea air circulations have been described by Blumenstock and Pricel as:

" . . . These circulations have a well-marked diurnal rhythm, in response to the day-to-night reversal in the temperature contrast between land and sea. Between forenoon and early evening, air moves inland on a sea breeze. Sometimes these sea breezes are fairly brisk. During night and until shortly after sunrise the air drifts back from land to sea. The return drift is usually very gentle, so gentle that it can barely be felt."

The area receives a relatively small amount of rainfall,

¹ "Climates of the States: Hawaii," prepared by D. Blumenstock and S. Price. A Natural History of the Hawaiian Islands -- Selected Readings, edited by E. Alison Kay. Honolulu, 1972.

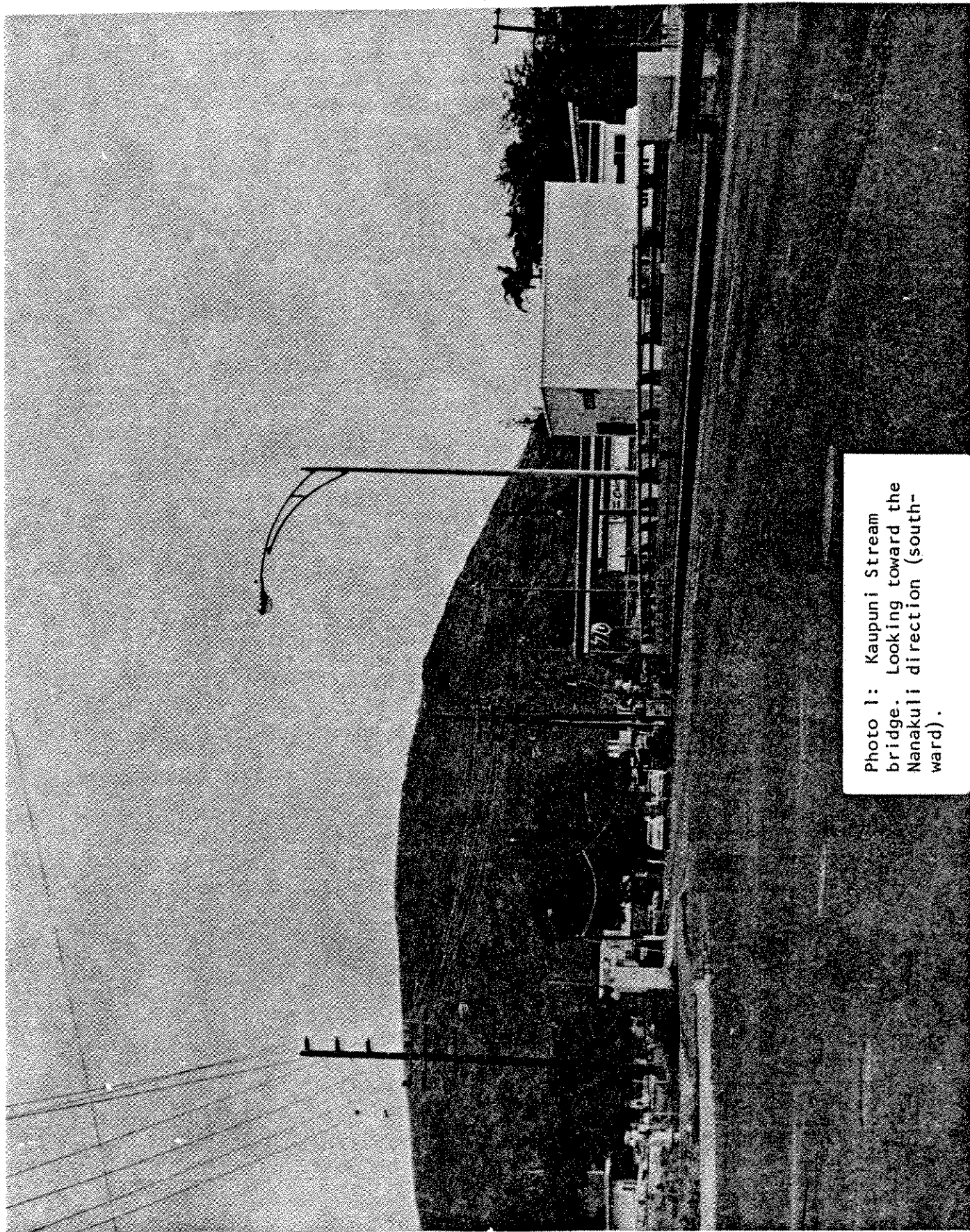


Photo 1: Kaupuni Stream bridge. Looking toward the Nanakuli direction (southward).

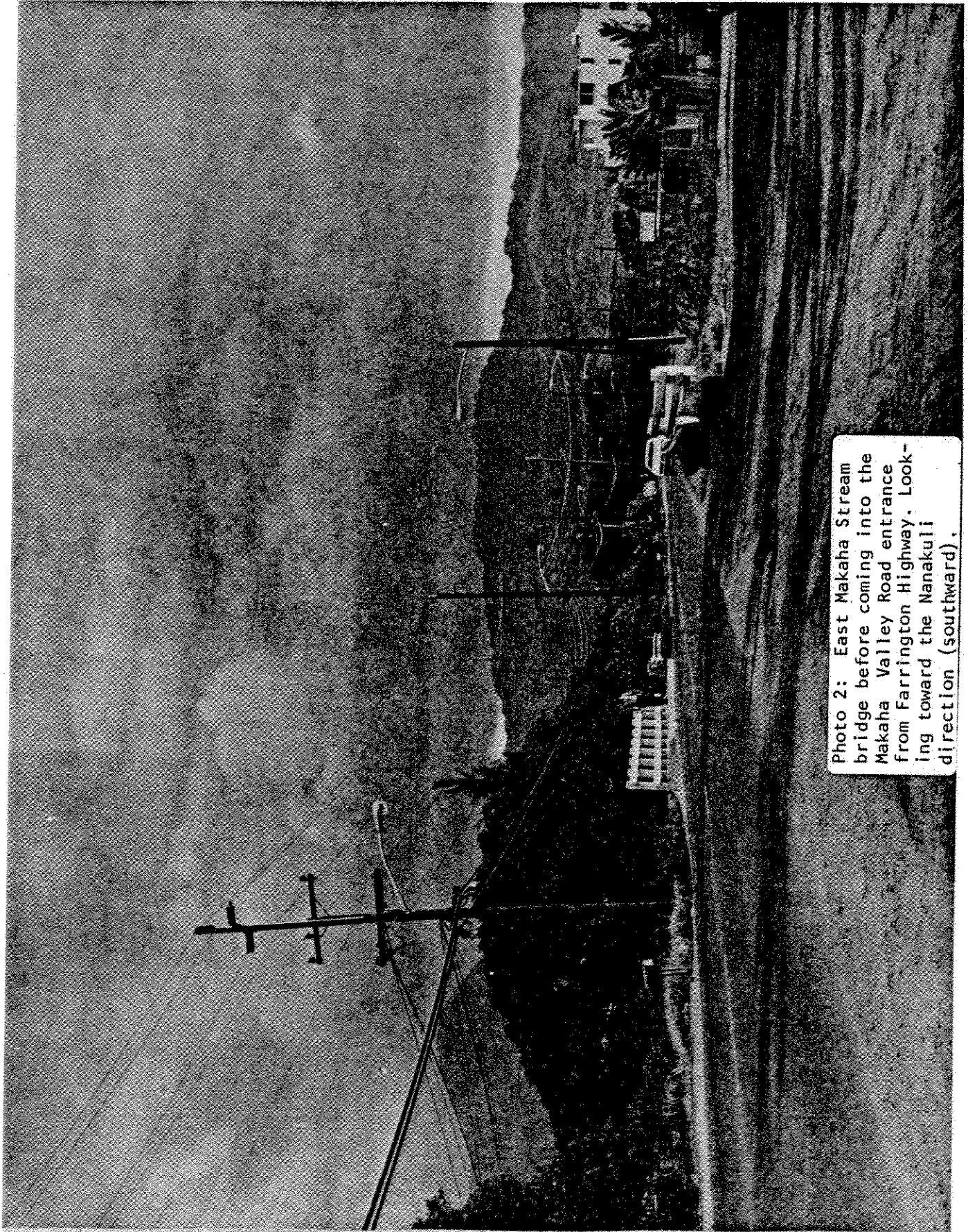


Photo 2: East Makaha Stream bridge before coming into the Makaha Valley Road entrance from Farrington Highway. Looking toward the Nanakuli direction (southward).

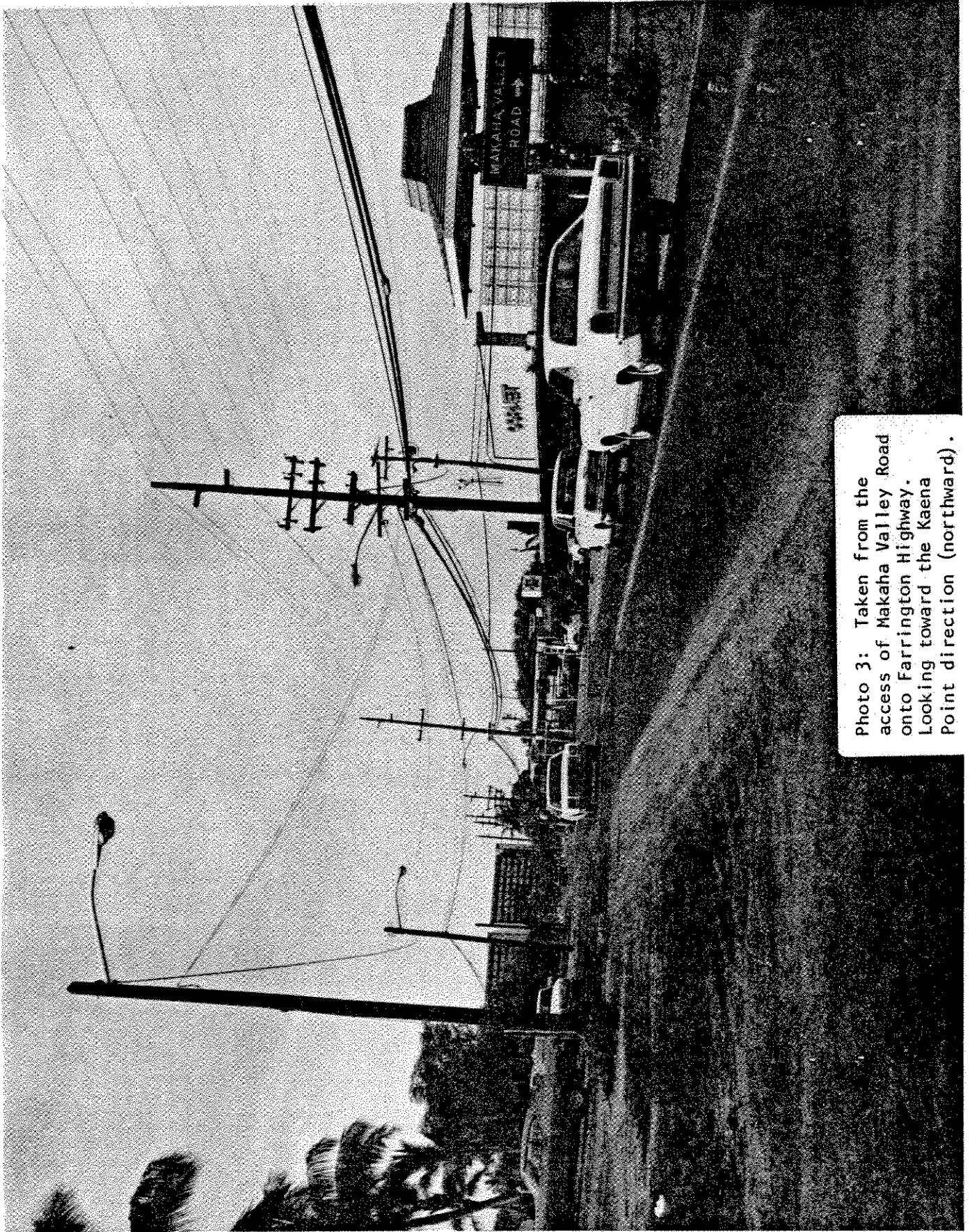


Photo 3: Taken from the access of Makaha Valley Road onto Farrington Highway. Looking toward the Kaena Point direction (northward).

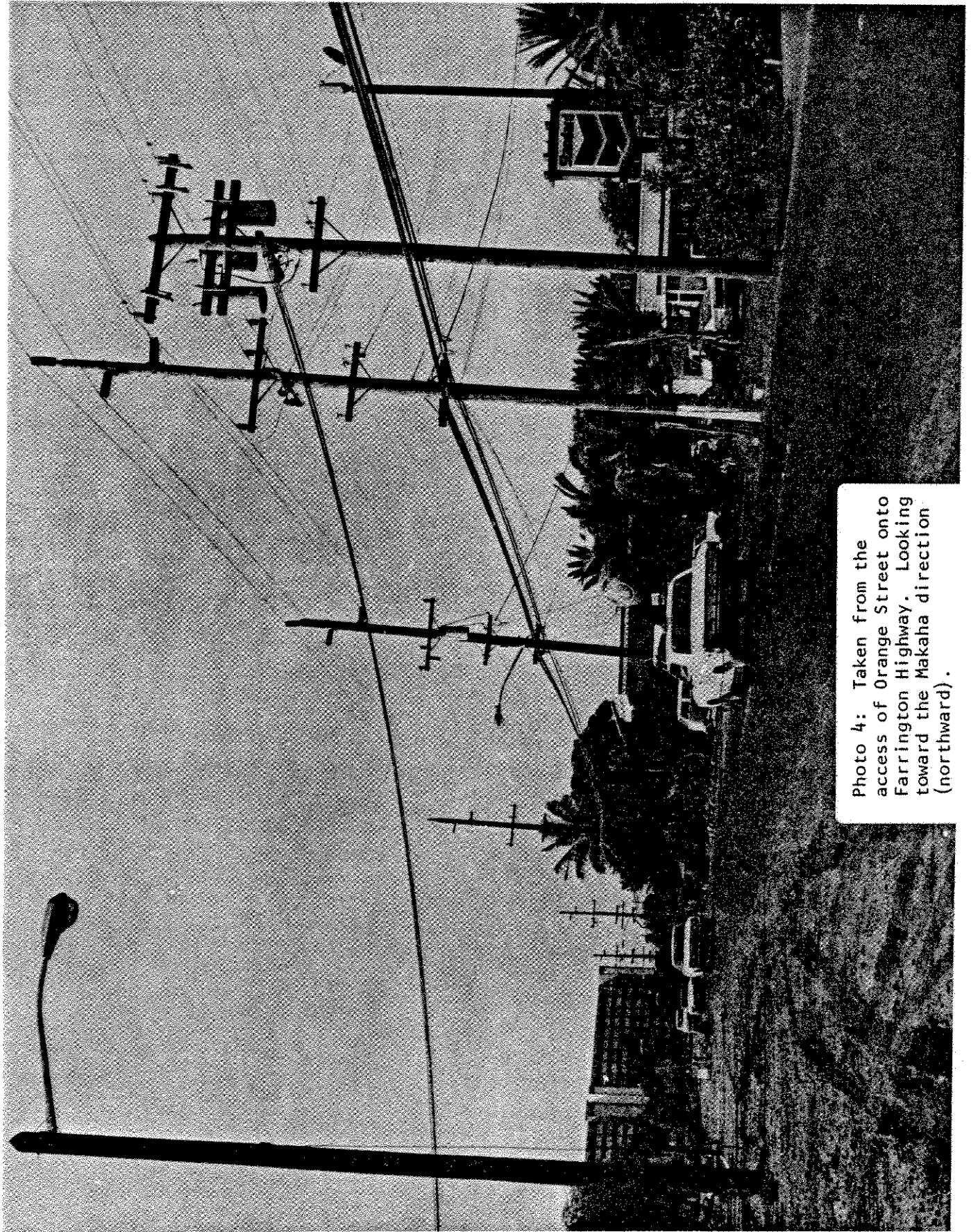


Photo 4: Taken from the access of Orange Street onto Farrington Highway. Looking toward the Makaha direction (northward).

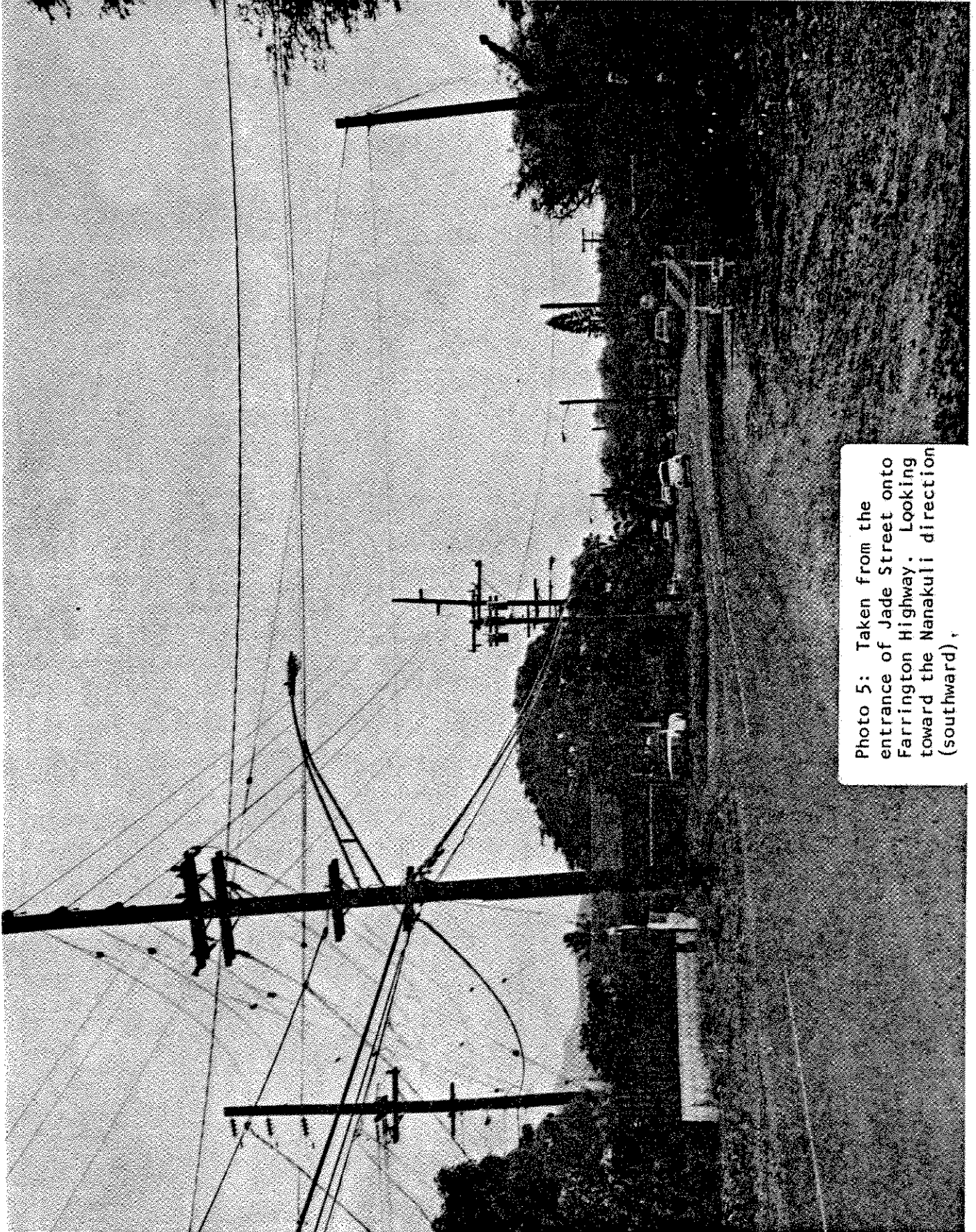


Photo 5: Taken from the entrance of Jade Street onto Farrington Highway. Looking toward the Nanakuli direction (southward).

Table 2

LIST OF SOIL TYPES WITHIN THE PROPOSED
FARRINGTON HIGHWAY WIDENING AREA¹

1. Waialua silty clay, 0 to 3 percent slopes (WkA)
2. Mamala stony silty clay loam, 0 to 12 percent slopes (MnC)
3. Hanalei silty clay, 0 to 2 percent slopes (HnA)
4. Mokuleia clay (Mtb)
5. Coral outcrop (CR)
6. Pulehu clay loam, 0 to 3 percent slopes (PSA)

SOIL ASSOCIATION

Lualualei-Fill land-Ewa association: Deep, nearly level to moderately sloping, well-drained soils that have a fine textured or moderately fine textured subsoil or underlying material, and areas of fill land; on coastal plains.

(For more information on soils and their location within the affected area, see Exhibit V., Information on Soils Type in the Highway Right-of-Way (page E-15).

¹ U. S. Department of Agriculture, Soil Conservation Service in cooperation with the University of Hawaii Agricultural Experiment Station. Issued August, 1972. Soil Survey of (the) Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii.

averaging 20 inches annually.¹ There are distinct dry and wet seasons, May through September, and December to February, respectively. The mean annual temperature is 75.4° F, with the mean maximum temperature of 85.2° F and the mean minimum temperature of 66.8° F.²

4. Flora and Fauna

Flora and fauna in the affected area is sparse because of the previous disturbance (e.g. clearing, grading) to the highway's right-of-way and the present condition of the area (primarily the area of the widening is found in the existing paved and unpaved shoulders). Because of the recent disturbance of the shoulders (due to a utility project), the flora in the affected area consists predominantly of weed-type growths such as pitted beardgrass, sandbur, star grass, Bermuda grass, crabgrass, hakonokono grass, and pakai kuku. Additionally some cultivated plants within the highway's right-of-way will be cleared. These include ornamental plants (hibiscus), lawn grasses, and other cultivated plants adjacent to the store fronts and residences which infringe on the highway's right-of-way. Several trees within the right-of-way are located along Mauna Lahilahi Park; these trees include, coconut trees, a kiawe tree, and hau trees. At this time it is felt that the coconut trees can be relocated to another location rather than being cleared.

Fauna in the affected right-of-way would be limited to such commonly observed animals as the house mouse, rat, and possibly mongooses.

5. Tsunami and Flood Hazard Zones

Because of the highway's proximity to the coast and its low elevation (5 to 15 feet above mean sea level), the 2.4 mile section to be widened lies within the designated 100-year tsunami inundation limits. Historically, tsunami runup elevations ran from 8 to 16 foot above mean sea level. It can be anticipated that should there be a major tsunami or flood event, portions of the highway may be flooded as it is presently.

The portion of Farrington Highway proposed for widening is located in the Special Management Area (SMA) as indicated by Ordinance No. 4529, City and County of Honolulu. It is noted that Farrington Highway (at this location) is being used as the physical boundary for delineating the SMA zone on the ordinance map.

¹ Climatologic Stations in Hawaii, State of Hawaii, Department of Land and Natural Resources, Division of Water and Land Development, Report R-42, January, 1973, page 186.

² Data obtained from the National Weather Services, U. S. Department of Commerce for the Waianae District.

C. Socioeconomic Background

The Waianae Coast area is primarily rural in character and is represented by a series of small coastal "towns". Beginning from the south (Honolulu end) of the coast there is Nanakuli, then Maili, Waianae, and Makaha. In total, there is estimated (in 1975) to be 27,000 people living along this Coast. This represented approximately 4% of the island's population. Trends indicate that the district will continue to witness moderate growth. The Coast is also very well known for its shore resources, as well as boat harbor (Pokai Bay and presently being constructed the Waianae Small Boat Harbor), sandy beaches, and other water oriented sports (e.g. fishing, swimming, surfing). The area is popular and beach park users go to the Waianae Coast from throughout Oahu.

As stated above, in 1975, there were about 27,000 people residing in 7,100 households in the four Census tracts that compose the Waianae District. The highway section to be widened serves as a main arterial between the rest of Oahu and the portions of Waianae along this section as well as beyond Jade Street. Present highway traffic levels at the Jade Street end of the project constitutes about 40 percent of the use levels, thus a considerable amount of traffic feeds into the project bounds from side streets.

The Waianae households located between Honolulu and the Lualualei Homestead Road end of the project would be less affected by the project. Using the area served by the bounds of the project and the area beyond Jade Street, the households most affected by the project (estimated from 1974 aerial photographs) number slightly over 3,000 households, or about 42 percent of the residents of the Waianae District.

This highway segment is also used by residents elsewhere on the island who travel to various locations beyond the Lualualei Homestead Road intersection for recreation, primarily beach use. Such travel is particularly high on weekends and holidays, but no reliable data have been available to estimate such use levels.

In addition to trip generation for employment, shopping, and recreation, use patterns indicate considerable traffic during midday periods that may reflect other less structured vehicular use of a type that cannot be specified from available data.

1. Population Characteristics

The best available data concerning the impacted population includes the Waianae District as a whole, but since the population of the District is fairly homogeneous, such data are reliable indicators of the Characteristics of the residents of the area most impacted by the proposed project.

As shown in Table 3, the Waianae District was estimated to contain over 7,100 households in 1975. Households in Waianae generally contained more people per household that was true of Oahu as a whole. The age distribution figures shown on Table 3 clearly indicate that this larger household size was due to larger numbers of children per household than was the case for Oahu as a whole.

One reasonable means of forecasting population levels for the area is to accept the "II-F" projections for Oahu as prepared by the Department of Planning and Economic Development and further assume that the Waianae District will expand to 4 percent of Oahu's population by the year 2000. (this is the procedure that was followed by the Hawaii Water Resources Regional Study.) As shown in Table 3, this would mean that the 1970 population of 23,507 would increase to 36,696 in the year 2000. The increase in traffic levels would likely be commensurate with this level of population increase. However, this assumes that the road around Kaena Point is not built. In the event that it is decided to build this road, major changes in traffic flows could be assumed. Since the likelihood, the timing, and the nature of such a major project is not known with any useful degree of certainty, it will be assumed that such a development will not take place within the time period of concern in examining the impact of the proposed highway widening project.

Various other population characteristics are also shown in Table 3. People of Hawaiian ethnic background are shown to be a far greater proportion of the Waianae District population than is true for Oahu as a whole. Conversely, those of Japanese and Caucasion (haole) ethnicity are not as large a percentage of the Waianae population. The differences between the populations in terms of marital status, household size, and household structure can generally be attributed to the larger percentage of children in Waianae's population. The median age of Waianae residents is 20.5 years in comparison with 25.9 for all of Oahu.

A comparatively higher proportion (see Table 3) of Waianae residents: (1) are permanent residents; (2) were born in Hawaii; (3) were lifetime residents of Oahu and the State. The birthrate for the Waianae District averaged 25.9 per 1,000 population during the period 1970 through 1974. This was one-third higher than for Oahu as a whole.

2. Educational and Income Characteristics

As would be expected in any semi-rural environment, the education levels of Waianae residents (see Table 4) tend to be somewhat lower than Oahu's overall population. The type of employment offered in the region generally does not require a college degree, and the professional who works in downtown Honolulu typically can afford to live closer to the downtown work site in equally desirable living conditions.

Table 3

Basic Characteristics of Waianae Versus Oahu Residents

Characteristics	Waianae	Oahu
POPULATION		
1970 Census Count		
Number of Persons	23,507	630,528
Number of Households	5,633	174,742
Persons per Household	4.17	3.61
1975 DPED Estimates		
Number of Persons	26,926	704,455
Number of Households	7,106	209,676
Persons per Household	3.79	3.24
OEO 1975 Census Update Survey		
Number of Households (1974)	7,936	204,718
Persons per Household	4.29	3.43
Percent Males	51.4	50.7
Percent Age 0-4	11.8	9.0
Percent Age 5-9	12.6	9.0
Percent Age 10-14	13.6	9.9
Percent Age 15-19	10.7	9.7
Percent Age 20-24	10.2	10.6
Percent Age 25-29	7.6	9.6
Percent Age 30-34	6.6	7.4
Percent Age 35-39	3.5	5.7
Percent Age 40-44	3.9	5.2
Percent Age 45-49	4.3	5.4
Percent Age 50-54	5.0	5.4
Percent Age 55-59	3.6	4.0
Percent Age 60-64	2.7	3.1
Percent Age 65-59	1.9	2.1
Percent Age 70 and over	2.1	3.4
POPULATION PROJECTIONS (HWRRS)		
4 Percent of DPED's "II-F" Series for 2000 A.D.	36,696	917,400
ETHNICITY (percent)		
Part-Hawaiian	43.4	14.4
Hawaiian	4.1	0.9
Filipino	11.8	10.2
Caucasian	11.4	27.9
Japanese	7.5	24.6
Portuguese	4.9	2.6
Samoan	2.1	1.0
Puerto Rican	0.9	0.6
Chinese	0.5	5.6
Korean	0.4	1.5
Black	0.4	1.4
Mixed (Not Part-Hawaiian)	12.1	8.2

Table 3
(continued)

Characteristics	Waianae	Oahu
MARITAL STATUS (Age 14 and Over)		
Percent Now Married	58.4	62.4
Percent Widowed	3.4	3.8
Percent Divorced	3.8	3.0
Percent Separated	2.2	0.7
Percent Never Married	32.2	30.1
HOUSEHOLD SIZE (percent)		
1 - Person	3.0	9.5
2 - Person	19.1	24.5
3 - Person	22.1	20.4
4 - Person	16.4	20.6
5 - Person	12.5	12.7
6 - Person	10.3	6.4
7 - Person	7.7	3.0
8 - Person	4.5	1.6
9 - Person	2.3	0.6
10 or more Persons per Household	2.1	0.8
RELATIONSHIP TO HEAD OF HOUSEHOLD		
Household Head	22.8	28.2
Spouse of Head	17.7	21.6
Child of Head or Spouse	46.5	40.4
Grandchild of Head or Spouse	3.3	1.7
Parent of Head or Spouse	1.3	1.5
Other Relative of Head or Spouse	4.6	2.3
Unrelated Individuals	3.9	3.6
SEX OF HEAD OF HOUSEHOLDS		
Males (percent)	84.3	86.6
Females (percent)	15.7	13.4
DEPENDENTS PER HOUSEHOLD (percent)		
None	14.3	22.0
One	20.6	23.0
Two	20.6	18.9
Three	16.6	17.5
Four	7.2	10.1
Five	10.0	5.1
Six	5.2	2.0
Seven	3.0	1.0
Eight	2.0	0.2
Nine or More	0.5	0.2
RESIDENCY (percent)		
Permanent Resident of Hawaii	95.0	85.2
Born on Oahu	66.0	48.9
Born Elsewhere in Hawaii	9.4	9.7
Born Elsewhere in U.S.	17.7	28.4
Born in Foreign Country	6.8	13.1

Table 3
(continued)

Characteristics	Waianae	Oahu
U.S. Citizen	94.4	92.8
U.S. National	3.1	1.0
Foreign Citizen	2.5	6.1
Lifetime Oahu Resident	61.0	44.7
RESIDENCE ONE YEAR AGO (percent)		
Same House	72.7	75.8
Elsewhere on Oahu	18.2	11.4
Elsewhere in Hawaii	0.8	0.5
RESIDENCE FIVE YEARS AGO		
Same House	40.4	43.1
Elsewhere on Oahu	32.2	21.6
Elsewhere in Hawaii	0.7	1.4
LIVE BIRTHS (per 1000 population)		
1970	28.7	21.5
1971	26.2	20.2
1972	26.8	18.8
1973	24.9	18.2
1974	22.9	18.1
Five-Year Average	25.9	19.4
ILLEGITIMATE BIRTHS (percent)		
1970	18.4	9.2
1971	17.3	8.8
1972	20.3	9.0
1973	19.7	10.0
1974	19.3	10.4
Five-Year Average	19.0	9.5
DEATHS (per 1000 population)		
1970	5.2	4.6
1971	5.2	4.7
1972	6.0	4.7
1973	5.6	4.6
1974	5.2	4.6
Five-Year Average	5.5	4.6
INFANT DEATHS (per 1000 live births)		
1970	26.1	18.5
1971	7.7	15.3
1972	23.7	16.5
1973	7.9	12.4
1974	16.9	15.6
Five-Year Average	16.5	15.7

Table 3
(continued)

Characteristics	Waianae	Oahu
ELECTIVE ABORTIONS (per 1000 live births)		
1971	114.0	283.7
1972	128.9	316.2
1973	135.9	312.4
1974	133.4	270.0

Sources: U.S. Census, 1970; OEO 1975 Census Update Survey;
Hawaii Water Resources Regional Study; Vital
Statistics of Hawaii, 1970-1974.

School enrollment in the Waianae District for 1976 is shown in Table 5. The projected school enrollment for 1982 is slightly less than 6 percent above the 1976 enrollment level.

As shown in Table 6, median household income of Waianae residents was about 89 percent of that of Oahu residents. The incidence of families below the Federal government's officially defined "poverty line" is shown in Table 7. Except for the largest households, the incidence of poverty among Waianae's households far exceeded that among Oahu's residents.

3. Employment Characteristics

The higher incidence of poverty in the Waianae District does not seem to be adequately explained by high unemployment rates nor by considerable part-time employment (see Table 8). A greater source of the poverty problem seems to be derived from the occupational and industrial structure of employment, as well as from the earlier discussed tendency of Waianae households to have larger numbers of children in residence. As shown in Table 8, relatively few Waianae residents work in high paying professional, technical, managerial, clerical, or sales positions. Relatively large numbers work in structural construction, which has experienced considerable problems of sporadic employment. Also, relatively large numbers work in agriculture which has often not been financially rewarding.

4. Housing

Housing costs in 1975 in the Waianae District were considerably less than for Oahu as a whole. The median monthly cost (excluding maintenance and utilities) for owner-occupied housing in Waianae was \$162 per month versus \$256 for Oahu. The median utilities costs for owner-occupied housing in Waianae was \$49 per month in comparison to \$82 for Oahu. The median rental costs were \$186 monthly in Waianae versus \$197 on Oahu. The ranges in costs for both owners and renters are shown in Table 9. About half the homes in both cases are owner-occupied. Of these, about two-thirds held the land in fee simple, as also shown in Table 9.

Although extensive housing data were not gathered specifically for this report, the limited primary data that were gathered indicate that housing costs in Waianae were about 80 percent of those experienced for equivalent quality in neighborhoods such as Makiki and Moiliili.

Housing in Waianae more commonly consists of one-story single-family detached dwellings than is true for Oahu as a whole. Although data have not been available, it appears that many of the condominiums in the area are used for vacation purposes rather than as primary residences.

Table 4
Educational Characteristics of Waianae Versus
Oahu Residents

Characteristics	Waianae	Oahu
EDUCATION, AGE 6 AND OVER (percent)		
None	2.9	2.0
First through Seventh Grades	29.7	20.7
Eighth Grade	7.8	5.2
Ninth through Eleventh	21.2	13.8
Twelfth	24.6	28.2
Some College	7.5	15.0
Bachelor's Degree	1.7	7.8
Some Graduate Work	0.7	1.4
Graduate Degree	0.4	3.2
Business/Trade School	1.5	2.2
EDUCATION, AGE 18 AND OVER (percent)		
None	1.8	1.0
First through Seventh Grades	10.8	6.8
Eighth Grade	7.1	4.1
Ninth through Eleventh	22.1	9.9
Twelfth	37.8	37.2
Some College	11.7	20.1
Bachelor's Degree	2.6	10.4
Some Graduate Work	1.0	1.9
Graduate Degree	0.6	4.3
Business/Trade School	2.3	2.9
At Least Through High School	57.7	77.9
EDUCATION, AGE 25 AND OVER (percent)		
None	2.4	1.3
First through Seventh Grades	13.0	8.4
Eighth Grade	9.6	5.1
Ninth through Eleventh	21.6	9.6
Twelfth	32.4	36.2
Some College	9.8	15.5
Bachelor's Degree	3.5	11.3
Some Graduate Work	1.2	2.2
Graduate Degree	0.8	5.4
Business/Trade School	2.3	3.3
At Least Through High School	50.6	73.7

Source: OEO 1975 Census Update Survey-Oahu

Table 5
 Waianae School Enrollment

School	1976-Actual	1982-Projected
Maili (K-6)	1016	1126
Makaha (K-6)	870	1035
Nanaikapono (K-6)	1216	975
Nanakuli 2nd (K-6)	----	455
Nanakuli Hi-Inter. (7-12)	1341	1177
Waianae (K-6)	1400	1510
Waianae Int. (7-8)	1008	1068
Waianae High (9-12)	1815	1828

Source: Department of Education

Table 6
Income Characteristics of Waianae Versus Oahu Residents

Characteristics	Waianae	Oahu
PERSONAL INCOME, AGE 16 AND OVER (percent)		
No Income	28.6	25.7
Less than \$2,000	11.8	9.3
\$ 2,000-2,999	7.1	5.4
3,000-3,999	3.8	4.7
4,000-4,999	5.4	4.7
5,000-5,999	6.1	5.4
6,000-6,999	6.5	5.3
7,000-7,999	4.7	4.6
8,000-8,999	2.5	4.1
9,000-9,999	3.5	4.0
10,000-11,999	6.0	7.0
12,000-14,999	7.6	7.7
15,000-19,999	4.5	6.1
20,000-24,999	1.0	2.7
25,000 and above	0.8	3.1
Mean	\$5,917	\$7,470
Median	3,645	5,019
Median ("Zero" incomes excluded)	6,223	7,489
HOUSEHOLD INCOME (percent)		
Less than \$2,000	2.7	2.1
\$ 2,000-2,999	4.3	2.7
3,000-3,999	3.6	2.6
4,000-4,999	2.9	2.5
5,000-5,999	5.1	3.5
6,000-6,999	5.5	4.0
7,000-7,999	5.0	3.9
8,000-8,999	4.1	3.6
9,000-9,999	3.0	3.7
10,000-11,999	6.7	7.7
12,000-14,999	14.3	11.5
15,000-19,999	15.8	13.7
20,000-24,999	9.1	10.8
25,000 and above	9.1	16.7
Mean	\$13,664	\$16,273
Median	12,566	14,139

Table 6
(continued)

Characteristics	Waianae	Oahu
FAMILY INCOME (percent)		
Less than \$2,000	2.4	2.1
\$ 2,000-2,999	5.0	2.6
3,000-3,999	4.6	2.4
4,000-4,999	4.8	2.7
5,000-5,999	5.5	3.3
6,000-6,999	6.0	4.5
7,000-7,999	5.3	4.3
8,000-8,999	4.2	4.0
9,000-9,999	3.4	4.1
10,000-11,999	7.4	8.6
12,000-14,999	14.1	13.1
15,000-19,999	17.0	15.7
20,000-24,999	10.1	12.6
25,000 and above	10.2	20.0

Source: OEO 1975 Census Update Survey-Oahu

Table 7
 Percent of Households Below Poverty Level by
 Household Size

Household Size	Percent of Households in Poverty	
	Waianae	Oahu
One	22.2	15.0
Two	21.1	8.8
Three	19.5	8.8
Four	15.1	7.9
Five	11.4	8.5
Six	24.8	12.5
Seven	21.2	14.6
Eight	21.3	21.4
Nine	29.6	22.9
Ten	0.0	16.7
Eleven and above	100.0	34.7
All Households	19.9	10.0

Source: OEO 1975 Census Update Survey-Oahu

Table 8

Employment and Occupational Characteristics of
Waianae Versus Oahu Residents, Percent

Characteristics	Waianae	Oahu
EMPLOYMENT STATUS, AGE 14 AND OVER		
Employed full- or part-time	41.4	49.9
Employed, but laid off, on strike, or on leave	1.5	1.5
Unemployed, looking for work	6.1	4.4
Not in the labor force	36.7	27.6
In the military service	5.6	7.2
Retired	8.5	9.1
HOURS WORKED LAST WEEK, EMPLOYED, AGE 14 AND OVER		
1-14	6.0	5.6
15-34	11.7	12.1
35-39	4.4	5.6
40	56.9	59.3
41 or more	17.7	13.7
WEEKS WORKED LAST YEAR, EMPLOYED, AGE 14 AND OVER		
13 or less	11.3	6.3
14 to 26	7.3	4.7
27 to 39	6.2	5.4
40 to 47	6.5	5.9
48 to 49	10.3	11.2
50 to 52	55.3	64.3
OCCUPATION OF EMPLOYED POPULATION, AGE 16 AND OVER		
Professional, technical, managerial	20.4	30.8
Clerical, sales	13.4	25.8
Service	16.0	15.7
Farming, fishing, forestry	9.7	1.8
Processing	0.7	1.4
Machine trade	7.4	3.6
Bench work	0.3	2.5
Structural work	21.9	10.2
Miscellaneous	9.2	7.1
INDUSTRY OF EMPLOYED POPULATION, AGE 16 AND OVER		
Agriculture	8.8	1.8
Fishing, hunting	0.0	0.1
Mining	0.0	0.0
Construction	16.3	9.5
Manufacturing	3.8	6.9
Transportation, communication, gas	6.6	8.8
Wholesale	0.6	1.5
Retail	14.2	17.8

Table 8
(continued)

Characteristics	Waianae	Oahu
INDUSTRY OF EMPLOYED POPULATION, AGE 16 AND OVER (Cont'd)		
Finance, insurance	1.5	6.7
Service	17.9	20.8
Government	26.4	22.3
Miscellaneous	2.3	2.3
WEEKS UNEMPLOYED FOR UNEMPLOYED, AGE 14 AND OVER		
One day-one week	1.0	0.9
2-3 weeks	1.1	1.9
4-13 weeks	5.6	4.5
14-26 weeks	2.5	3.9
27-52 weeks	8.1	7.9
53-78 weeks	1.7	1.6
79-104 weeks	1.1	1.6
Longer than 2 years	5.5	8.5
Never employed	72.4	67.9
(Median Weeks of Unemployment, excluding those "never employed")	(37)	(41)
UNEMPLOYMENT, AGE 16 AND OVER		
Unemployed and looking for work	11.9	7.5
Employed	88.1	92.5
OCCUPATION OF UNEMPLOYED, AGE 16 AND OVER		
Professional, technical, managerial	14.0	19.2
Clerical, sales	23.3	32.1
Service	19.9	23.4
Farming, fishing, forestry	7.7	2.1
Processing	1.1	2.3
Machine trade	2.3	1.0
Bench work	0.0	2.8
Structural work	18.2	6.1
Miscellaneous	8.1	5.7
INDUSTRY OF UNEMPLOYED, AGE 16 AND OVER		
Agriculture	3.3	2.3
Fishing, hunting	0.0	0.1
Construction	13.8	6.0
Manufacturing	2.5	6.9
Transportation, communication, gas	9.6	4.4
Wholesale	0.0	0.8
Retail	21.9	26.6
Finance, insurance	1.1	5.4
Service	16.7	22.7
Government	26.0	16.7
Miscellaneous	1.4	1.9

Source: OEO 1975 Census Update Survey-Oahu

The figures at the end of Table 9 indicate that a larger proportion of the housing in Waianae was in need of repair (rated "fair") or was in need of major repair (rated "poor") than was the case for all of Oahu's housing. As a further means of comparison, of the 25 "districts" used in the source cited in the table, only Upper Kalihi has a smaller proportion of houses (54.5 percent) in the "good" category. The Aina Haina-Hawaii Kai "district" had 99.2 percent of its housing in the "good" category. The percentage of housing in the "poor" category was exceeded in five other "districts" Upper Kalihi, Waipahu, Wahiawa, North Shore-Waialua, and Waimanalo.

Publicly subsidized housing is being planned in the area by the Hawaii Housing Authority (HHA) and the Department of Hawaiian Home Lands. The HHA is presently constructing the 320-unit Makaha Meadows project just past the Jade Street end of the proposed highway-widening project. Also, the Department of Hawaiian Home Lands anticipates that as many as 500 single family units may be constructed near Waianae Valley Road. Other possible housing projects exist as previously cited, but their timing is still highly uncertain. Even if these two projects are the only ones constructed in the next 10 years, their impact on traffic will be significant, for they would increase by about one-fourth the present level of households using the highway segment being considered as a means of traveling toward Honolulu.

5. Miscellaneous Social Data

Crime statistics are generally unreliable, but data compiled by the Honolulu Police Department suggest that crimes reported in the Waianae region are about half as frequent per resident as is true for Oahu as a whole. Welfare reciprocity data is often also unreliable,¹ but as shown in Table 10, the incidence of recipients in the impacted area of various types of welfare assistance tends to be substantially above that of the island as a whole. This appears to be the case for the two Census Tracts in which the proposed project is located.

6. Public Transportation

City bus service along the proposed project is quite extensive. Service is scheduled 20 hours per day during the week, running half an hour apart during most of the time, but every fifteen minutes during the busiest periods and an hour apart during the late evening hours. Weekend and holiday schedules are considerable less frequent due to lower passenger demands.

¹ Based on the experience of the socioeconomic consultants.

Table 9
Housing Characteristics of Waianae District Compared
with Oahu, Percent

Characteristics	Waianae	Oahu
OCCUPANCY TYPE		
Owned or being purchased	49.0	44.3
Condominium owned or being purchased	0.3	3.5
Rented for cash rent	48.3	50.0
Occupied without payment of rent	2.4	1.7
MORTGAGE AND TAX EXPENSE, OWNER-OCCUPIED		
Mortgage paid	5.8	1.6
Under \$100 per month	26.3	15.1
\$100-199 per month	23.7	17.3
\$200-299 per month	19.4	17.3
\$300-399 per month	8.7	16.9
\$400-499 per month	7.8	9.9
\$500 or more per month	1.4	6.6
No data	6.9	11.3
MONTHLY RENTAL EXPENSE		
Less than \$100	17.5	11.8
\$100-149	16.8	11.8
\$150-199	22.0	25.8
\$200-249	18.3	16.1
\$250-299	16.0	13.5
\$300-349	7.2	8.7
\$350 or more	2.2	7.1
No data	0.0	4.2
LAND TENURE, OWNER-OCCUPIED		
Leasehold	28.8	31.6
Fee simple	70.6	66.7
No data	0.6	1.7
NUMBER OF ROOMS PER UNIT		
One	1.4	3.5
Two	3.6	5.7
Three	5.6	9.2
Four	19.6	20.5
Five	41.5	27.3
Six	16.3	18.0
Seven	7.1	8.8
Eight	3.2	4.1
Nine or more	1.6	2.9
TYPE OF STRUCTURE		
Singe-Family Detached	63.9	57.7
Duplex	0.2	6.1
Townhouse	0.0	3.4
Apartment or Condominium	35.9	32.8

Table 9
(continued)

Characteristics	Waianae	Oahu
UNITS BY NUMBER OF STORIES IN STRUCTURE		
One	87.9	57.6
Two to three	8.3	30.0
Four or more	3.8	12.4
UNITS PER NUMBER OF UNITS IN STRUCTURE		
One	85.1	57.1
Two	8.1	5.9
Three to ten	2.9	17.9
Eleven or more	3.9	19.1
CONDITION OF UNIT		
Good	64.2	85.6
Fair	29.9	11.5
Poor	5.9	1.9

Source: OEO 1975 Census Update Survey-Oahu

7. Public Recreation Patterns

According to the Statewide Comprehensive Outdoor Recreation Plan (SCORP), the predominant outdoor recreation in the Waianae District is picnicking and swimming/sunbathing. Almost all of the outdoor recreation activities pursued by Waianae District residents take place within the district. Over half of the "activity occasions" within the District are undertaken by non-residents of the District. About 85 percent of the "activity occasions" in the Waianae District take place along the shoreline or offshore areas. Eighty-one percent (81%) of the picnicking and swimming/sunbathing activities are pursued by individuals who reside outside the Waianae District. The major recreational supply deficiencies noted in this region were beach camp sites and boat launching ramps.

Existing recreation sites within the District are shown on Figure 6. The Waianae Regional Park presently has 8 tennis courts, a softball field, and comfort station. A gymnasium, a swimming pool, volleyball and basketball courts, and picnic facilities are either being added or are planned for in the near future. Use of these facilities will be primarily by residents of the area.

D. Historical and Archaeological Sites

The widening will take place within primarily disturbed paved and unpaved shoulders, and vacant lands. No historical or archaeological sites are known to exist within or adjacent to this project area.

During the EIS Review Period, Jane Silverman, the State Historic Preservation Officer stated (letter, May 30, 1978 to the Office of Environmental Quality Control): "The proposed undertaking will have no effect upon any known historic or archaeological site on or likely to be eligible for inclusion on the Hawaii Register and/or National Register of Historic Places. This office has no reservations for the project to proceed." The last paragraph of her letter also states: "In the event that any unanticipated sites or remains are encountered, please inform the applicant to contact this office immediately."

Table 10
Welfare Recipients as Percentages of Oahu's
Welfare Assistance

Type of Assistance Expenditure	Census Tract 97	Census Tract 98	Waianae District
(Percent of Total Oahu Population)	(1.20)	(0.76)	(3.87)
General Assistance	3.54	3.85	13.29
AFDC, ABD ¹ / ₁	3.49	2.74	12.10
Aid to Unemployed Parent	5.30	4.53	18.23
Medical Assistance	1.74	1.14	9.00
Food Stamps Only	3.94	0.71	6.82
Foster Care	2.88	-1.53	20.71

¹/ Includes aid to families with dependent children (AFDC), and aid to the aged, blind, and disabled (ABD).

Source: Calculated from Oahu Welfare Summary, Department of Social Services and Housing, July, 1977.

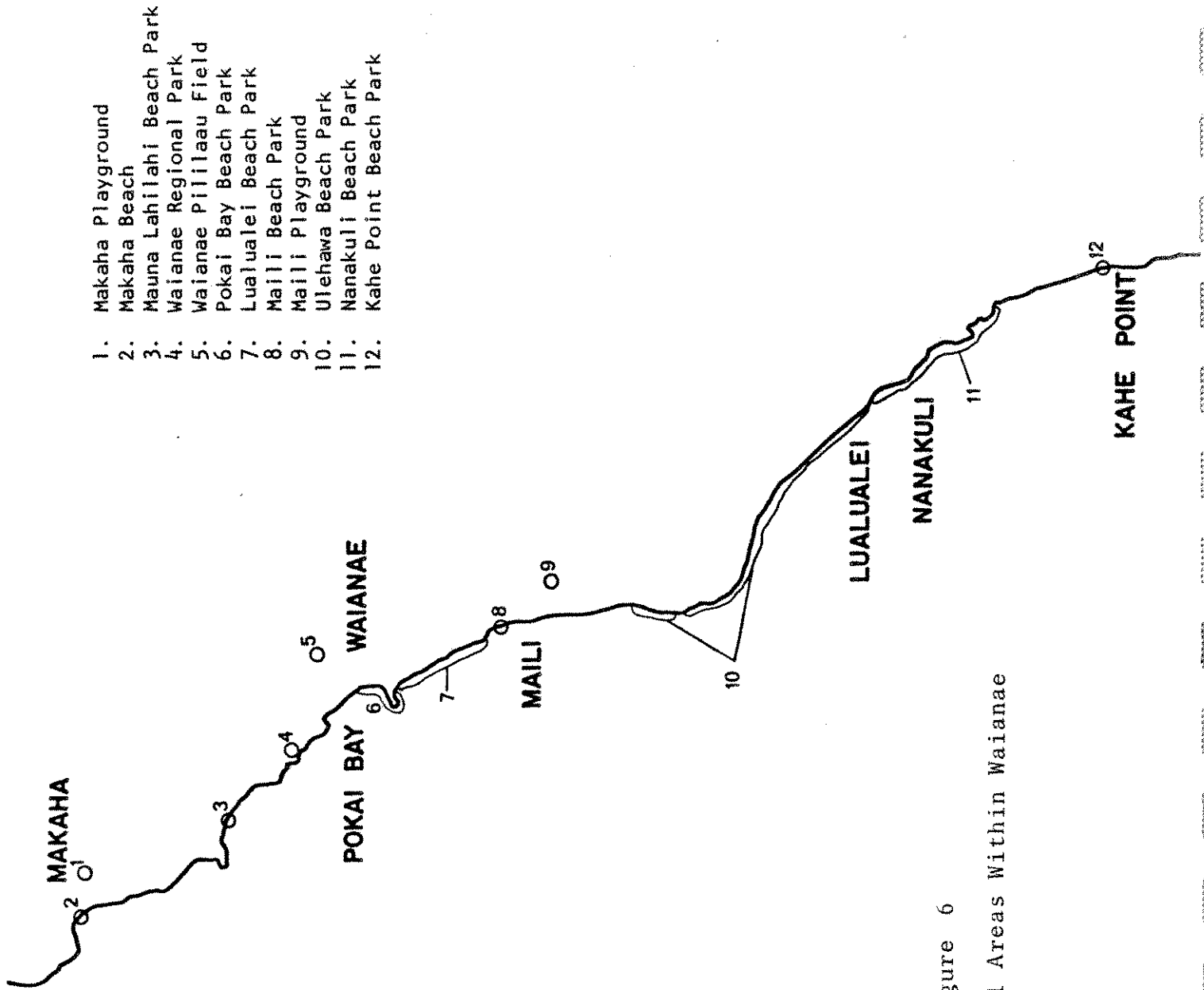


Figure 6
Public Recreational Areas Within Waianae

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

A. General Plan, City and County of Honolulu, January 18, 1977

A review of the General Plan's "Objectives and Policies" identifies two major objectives for the Waianae area.¹ The first is that the Waianae Coast will have a population of 39,000 or 3.8 percent of Oahu's total population by the year 2000. Secondly, the Waianae Coast is designated a rural area in which growth is least desirable. (The General Plan designates 13 areas, the higher the number the lower the area's priority for urbanization; i.e. the Honolulu area is designated 1, the Waianae Coast is designated 13.)

In 1975, the population of the Waianae Coast was estimated to be 27,496; this means that a population growth of about 11,500 would be desirable by the year 2000. This would assume an average net population increase of 525 persons per year. However, based on correspondence from the State's Hawaii Housing Authority (dated August 4, 1977, see Exhibit III) and the State's Department of Hawaiian Home Lands (dated August 3, 1977, see Exhibit IV), these agencies in the near future (+5 years) plan to construct 1,202 and 500 dwelling units in the area affected by this project, respectively. Assuming a household size of 3.6 persons² and the occupancy of the 1,702 dwelling units, the population would increase by 6,145 persons in the next 5 years alone. Therefore, unless population increase is severely curtailed after 1983, it appears that the General Plan's population goal for Waianae is low.

The widening project is not expected to act as a primary catalyst to population growth or urbanization. It is felt that the urban designations and residential zoning are the primary catalyst to growth. Next to this, are the economic considerations (e.g. land values, construction costs, housing costs) and the limitation of governmental services and facilities (e.g. water, sewer lines). In many cases the availability of (or improvement to) infrastructures enhances any decision for higher zoning. Unfortunately, although the highway is being widened to improve the existing traffic flow, it will also be a positive factor if lands are being considered for

¹ Because of its generalized nature, the General Plan does not cover specific courses of action within the Waianae District.

² This is below the 1975 Waianae household size of 3.79 persons/household.

higher zoning.

Because the improvement is not considered to be the primary catalyst to population growth or urbanization, it is unwarranted to include an evaluation of the urbanization of Waianae in this Revised EIS.¹

It should be further noted that the widening project would also benefit the users of recreational areas (primarily the Waianae beaches) along the coast. This includes the Waianae Small Boat Harbor, Pokai Bay, Makaha Beach, and the proposed Makua-Kaena State Park. Because users of these recreational areas are largely from parts of Oahu other than Waianae, the widening project will beneficially affect these recreational users. (It should be pointed out, however, that the widening will end at Jade Street, approximately 1.5 miles before Makaha Beach. Subsequently, one can expect that traffic congestion will continue to occur when surfing championships are held at Makaha Beach.) The development of recreational areas along the Waianae coast is desirable from both the City and County's and State's recreational plans.² Therefore, the widening to serve these areas is felt to benefit these recreation plans.

The proposed project is consistent with the present Detailed Land Use Map (DLUM) for the area. In 1976, an amendment to the General Plan (Ordinance 4658 and 4659) deleted the mauka realignment for Farrington Highway as it was originally planned. For additional discussion on this mauka realignment see page 77, VII., A.

B. Shoreline Management Area (SMA) Ordinance 4529

As previously indicated, portions of the project are within the Shoreline Management Area. It is felt that the project will be consistent with the shoreline management policies (identified in Ordinance 4529); it will enhance the opportunity to the public to utilize the recreational resources developed and being planned for the adjacent area.

Issuance of the Shoreline Management Area Permit is granted by the City Council.

C. Bikeplan Hawaii, A State of Hawaii Master Plan

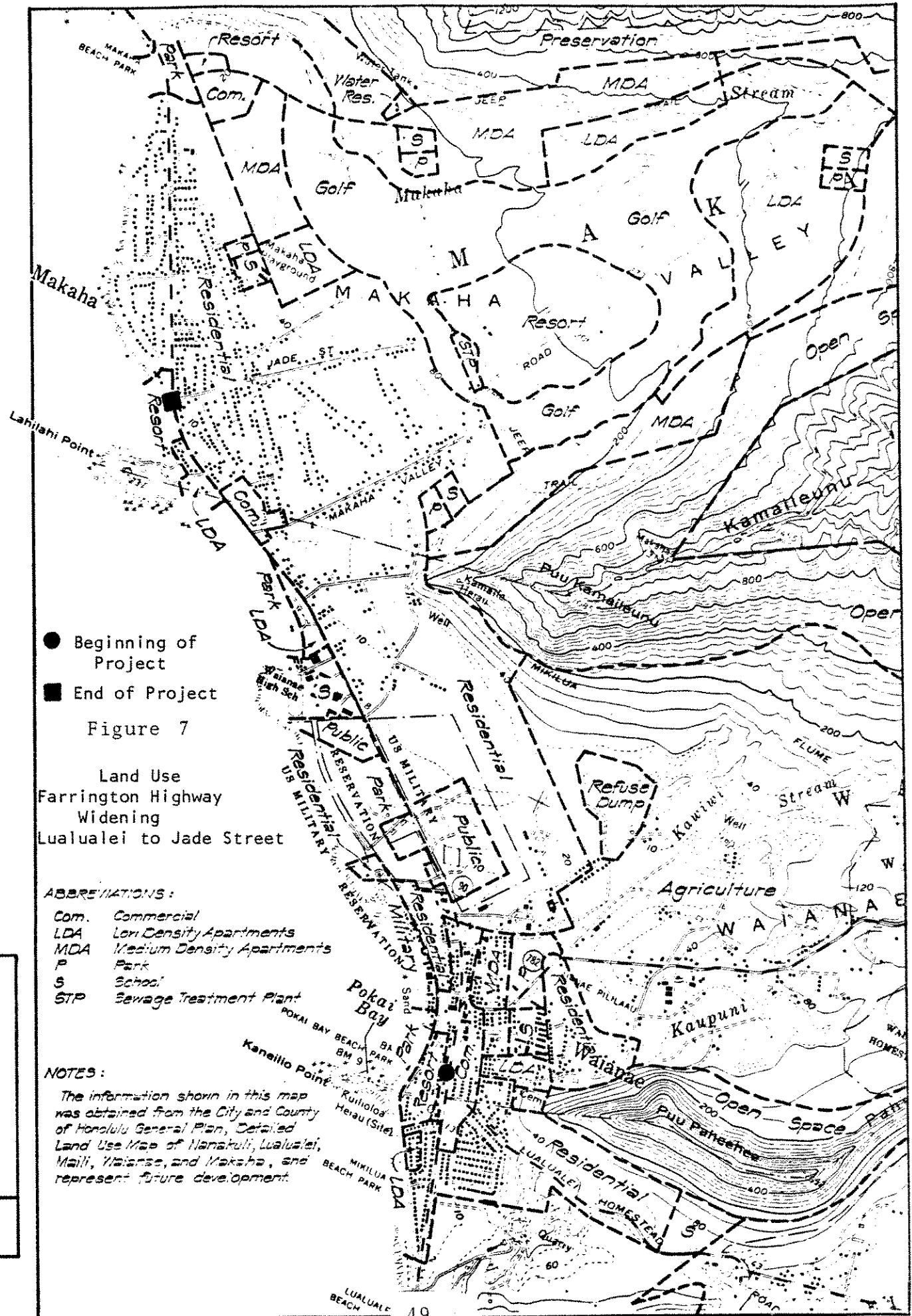
The project includes a bike route which conforms to the Bikeplan.

1 In terms of the additional studies, monies and time which would be required.

2 Based on future City and County development plans for beaches in the subject area, and the State Comprehensive Outdoor Recreational Plan (SCORP).

D. Land Use Designations and Zoning

The project is consistent with the present land use of the area (roadway). Additionally, Figure 7 identifies the surrounding zoning of the area served by this project. As shown on Figure 7 the area is zoned primarily for residential use, the remaining uses are generally urban, this includes those areas identified for public uses.



- Beginning of Project
- End of Project

Figure 7

Land Use
 Farrington Highway
 Widening
 Lualualei to Jade Street

ABBREVIATIONS:

- Com. Commercial
- LDA Low Density Apartments
- MDA Medium Density Apartments
- P Park
- S School
- STP Sewage Treatment Plant

NOTES:

The information shown in this map was obtained from the City and County of Honolulu General Plan, Detailed Land Use Map of Manakuli, Lualualei, Mailli, Waiānae, and Makaha, and represent future development.



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

Three technical reports were prepared for this Environmental Impact Statement, these reports include:

1. Air Quality Assessment for Farrington Highway Widening prepared by Barry D. Root, Air Pollution Consultant, December, 1977.
2. Noise Study for the Proposed Farrington Highway Widening prepared by Dr. Iwao Miyake, Acoustical Consultant, December 24, 1977.
3. Socioeconomic Study - "Socioeconomic Background" prepared by Robert N. Anderson, Ph.D., October 15, 1977, and "Cost-Benefit Analysis", Robert N. Anderson, Ph.D., January 4, 1978.

These studies will be available at the Land Transportation Facilities Division, Department of Transportation, and the Office of Environmental Quality Control. Anyone wishing to review these studies should contact these agencies. Where appropriate, portions of these studies have been included in this Section without the use of quotations.

A. Physical Impact

No significant or adverse impacts are foreseen in the areas of flora and fauna, historical sites, geology, and microclimate.

This determination is based on the following: (1) the widening will take place within lands which have been previously disturbed and/or vacant; (2) the subject area (within the right-of-way) does not have any unique or rare physical, biological or cultural features; and (3) the geology and microclimate are not expected to alter due to the relatively small scale of this project.

Additionally, improved access to public facilities such as schools, the civic center, and recreational areas, would result. Utilities will be relocated as necessary; no adverse impact is foreseen because of this relocation.

B. Air Quality Impact

1. Existing Ambient Air Quality

The nearest permanent State of Hawaii Department of Health ambient air quality monitoring station is located at Barbers Point, about 12 miles southeast of the project site.

The Barbers Point monitoring station is located near Campbell Industrial Park, Oahu's major industrial area; air pollutant measurements there are higher than those that are likely to prevail in the project area. On the other hand, the readings at Barbers Point are not likely to include the effect of emissions from the large oil-fired steam electric plant at Kahe Point. Under certain wind conditions, these emissions could affect the Waianae project area. In any case, the measurements at Barbers Point constitute the nearest long-term record of ambient air pollution and are thus summarized in Table 11 as an indication of existing air quality along the Waianae coast. Unfortunately, carbon monoxide and hydrocarbons are not measured at the Barbers Point station. Furthermore, particulate sampling at this site was discontinued in December, 1975. Sampling for nitrogen oxides ended at all Oahu stations in April, 1976. For that reason, the 1975 data are summarized in Table 11.

Between November 1, 1976 and April 20, 1977, a short-term carbon monoxide monitoring project was conducted for the State Department of Health by a private consulting firm. One hour CO measurements were carried out at several sites on Oahu. The site nearest to Waianae was Aiea Elementary School, about 20 air miles from the project site. Of the 41 days of sampling conducted at this site, the average of maximum peak one-hour CO readings was only 2.8 mg/m³, a value far less than the State of Hawaii one-hour limit of 10 mg/m³. The State one-hour limit was never exceeded at this sampling site during times when measurements were being recorded. The highest recorded hourly CO value at Aiea Elementary School was 7.9 mg/m³ between 0700 and 0800 on November 29, 1976.

2. Impact of the Proposed Widening on Ambient Air Quality

a. Short-term Particulate Emissions

During the construction phase of the project, the pollutant of primary concern will be suspended particulate matter. Emission rates for particulates will vary depending on the amount of cutting, filling, and grading required. Since all the work will take place within the immediate or adjacent area there should be no need to carry out the amount of earth moving usually associated with construction of new roadways. Particulate emissions should consequently be somewhat lower than the levels that normally occur in road construction areas.

Specific mitigation measures that are normally employed by the contractor to minimize the amount of particulates generated by road construction include watering down the dust in work areas, using dust palliatives, restricting the daily area of operation, paving construction lanes, and if necessary, curtailing activities

Table 11

Existing Ambient Air Quality Levels At Barbers Point
(Summary - 1975)

<u>Pollutant</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Annual Average</u>
Particulate Matter	13	137	52
Sulfur Dioxide	<5	11	<5
Nitrogen Dioxide	<20	25	11

NOTE: All values are in $\mu\text{g}/\text{m}^3$; minimum and maximum figures are for 24-hour time periods.

SOURCE: State of Hawaii, Department of Health.

during dry, high wind conditions.

The Waianae area has a rather dry climate and constant vigilance will be required to keep daily particulate emissions as low as possible. The construction phase of the project should last for only a short time at any given location along the route. Ambient air levels of particulate generated by the project should not cause suspended particulate concentrations in excess of the allowable State of Hawaii 24-hour standard for particulates unless the mitigation measures described above are consistently ignored.

b. Long-term Vehicular Sources of Air Pollutants

The primary air pollutants emitted by motor vehicles are carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NO₂). Of these the hydrocarbons and nitrogen oxides react under the influence of sunlight in the atmosphere to produce photochemical oxidants, or smog. The rate at which these atmospheric reactions occur depends on many factors and it is not now possible to predict expected down-wind concentrations of photochemical oxidants using simple models of atmospheric pollutant dispersion. Carbon monoxide, on the other hand, is relatively stable and several methods of assessing down-wind concentrations of CO using mathematical models have been developed. Carbon monoxide is also the most abundant of the pollutants generated by motor vehicles and a thorough analysis of CO impact provides a very good indicator of the environmental acceptability of any proposed highway project.

Following the mandate of the National Environmental Policy Act of 1969, pursuant policies were issued by the U.S. Environmental Protection Agency (EPA). The EPA, in their Guidelines for Review of Environmental Impact Statements, Volume I: Highway Projects recommended that mathematical analysis of highway air pollution impact include investigation at two levels: (1) an area-wide (mesoscale analysis) and (2) a highway corridor (microscale analysis).

(1) Mesoscale Emissions Analysis

Predicted traffic loadings for the project area are given in Table 1, page 17. Segment loadings for 1988 were determined by linear interpolation between the 1978 and 1998 values. The highway distance from Jade Street to Makaha Valley Road is approximately 0.5 mile; from Makaha Valley Road to Waianae Valley Road is about 1.8 miles; and from Waianae Valley Road to Lualualei Homestead Road is about 0.1 mile.

Predicted vehicle miles traveled and mesoscale

emissions for the project are shown in Table 12. Air pollutant emission factors are from EPA, Compilation of Air Pollutant Emission Factors, Appendix D, Table D.7-1, December, 1975. Emission values listed in the EPA table have thus been interpreted in the light of expected delays in implementing these standards. Since the same number of vehicles are expected to travel over the project route on a daily basis whether it is widened or not, the only difference in mesoscale emissions between the alternatives of widening or not widening the roadway will be based on differences in speed. If the roadway is not widened then, during peak traffic hours, there might be stop and go traffic conditions at major intersections along the route. This would mean that some vehicles would spend a longer period of time in the project area during peak hours that emissions for those conditions might be slightly higher than would occur if the roadway is widened. This difference would be too slight to be described in a mesoscale analysis, however, and for practical purposes, mesoscale emissions for the project area can be considered to be nearly the same whether the roadway is widened or not.

From Table 12, it can be seen that emissions for all the major automobile-generated pollutants except NO_2 are expected to decrease continually throughout the 20-year period considered. This is because maximum new automobile emission controls are not expected to be achieved until the mid-1980's and all the automobiles with higher emission levels are not expected to be out of the vehicle fleet until 1998 or later.

To assess the potential impact of these emissions, the following highly unlikely, worst case situation, and all day temperature inversion at an average height of only 10 meters above the ground; a daily average windspeed giving a 0.5 m/sec flow in the crosswind direction. Based on these assumptions, the 211 kg of NO_2 predicted for the project route in 1988 will produce ambient concentrations of only $127 \mu\text{g}/\text{m}^3$ for a 24-hour worst case average. This further assumes no atmospheric reactions with other pollutants that would tend to decrease this concentration. By 1998, the expected daily NO_2 emissions of 151 kg would produce 24-hour worst case averages of only $90 \mu\text{g}/\text{m}^3$. This value is far below the State of Hawaii 24-hour standard of $150 \mu\text{g}/\text{m}^3$.

Table 12
 MESOSCALE EMISSIONS ANALYSIS
 FOR THE FARRINGTON HIGHWAY WIDENING PROJECT AREA

Year	Vehicle Miles Traveled (VMT)	CO		HC		NO ₂	
		Emission Factor (g/VMT)	Total Emissions (kg)	Emission Factor (g/VMT)	Total Emissions (kg)	Emission Factor (g/VMT)	Total Emissions (kg)
1978	41,470	61.1	2,534	8.8	365	4.8	199
1988	58,505	31.0	1,814	5.4	316	3.6	211
1998	75,540	11.3	854	1.9	144	2.0	151

(2) Microscale Carbon Monoxide Analysis

The microscale carbon monoxide analysis is based on a technique described in EPA's Guidelines for Air Quality Maintenance Planning and Analysis, Volume 9: Evaluating Indirect Sources. There are several assumptions inherent in the procedure:

1. Motor vehicle emission rates are based on a 1975 vehicle mix containing 88% automobiles, with 20% of all vehicles operating under "cold start" conditions at low altitude with outside air temperature between 68° F and 86° F. These values are similar to the situation at Waianae except that the vehicle mix contains about 96% automobiles and daytime temperatures sometimes exceed 86° F. The over abundance of automobiles in the vehicle mix would tend to produce slightly higher emissions than assumed by the method, but the warmer outside air temperatures should mean that few vehicles operate in the pollution-producing "cold start" mode for very long.
2. A worst-case wind direction and speed (1m/sec) with atmospheric stability Category D are assumed for diffusion calculations. These are the least favorable meteorological conditions from an air pollution standpoint that are likely to occur in the daytime in an urbanized area. The Waianae area is more suburban in nature and it is possible that more stable atmospheric conditions could occur there. Recent traffic counts show, however, that peak hour traffic occurs near the middle of the day rather than in early morning when more stable conditions would likely occur. For that reason, the assumption of stability, Category D seems appropriate for the diffusion calculations performed here.
3. Computed CO concentrations are determined using a set of graphs, the interpretation and interpolation of which limits precision of results for any given receptor site to about $\pm 0.5 \text{ mg/m}^3$.

For all calculations, an existing background CO concentration of zero was assumed since Farrington Highway is the major roadway in the area and motor vehicles constitute the primary source of CO in the project area.

Two primary sites coinciding with the most recent traffic counts for the project were selected as receptor sites for the microscale peak hour carbon monoxide analysis. Site 1 is located on the northeast corner of Farrington Highway and Waianae

Valley Road (see Figure 8). This site was selected for analysis because it presently has the only traffic signal and thus would be expected to have the highest CO concentrations in the project area. The green to cycle ratio for this signal is about 0.8 in the Farrington Highway direction. Current and forecast peak hour traffic loadings for this intersection are shown in Table 1. The current loadings for Waianae Valley Road were based on a daytime traffic count for the site taken on Wednesday, September 14, 1977. This date is about one full week after the start of classes at public schools within or near the project site and the count is thus considered to be representative of traffic at this location throughout the 1977-78 school year. The peak hour traffic occurs around midday. Meteorological conditions for the dispersion of air pollutants are usually most favorable at that time of day.

Results of the CO analysis with just two lanes of the proposed four lane widening of Farrington Highway are shown in Table 13. Downstream from the traffic light vehicle speeds were assumed to be 25 mph consistent with posted speed limits for the area.

To estimate 8-hour average concentrations, the EPA Guidelines suggest that multiplying the one-hour estimate by a "meteorological persistence factor" of 0.6 is a viable approach. The 8-hour CO estimates based on this assumption are shown in Table 14. (The mean traffic volume for an eight-hour period was not provided as input for this study. With just peak hour and average daily volume estimates available it seemed most prudent and conservative to base the 8-hour analysis on the peak hour traffic volumes.)

Site 2 is located immediately adjacent to the roadway opposite from the Waianae Model Community Center (see Figure 8). The capacity of Farrington Highway at this point was assumed to be 1,400 vehicles per hour at level of Service E. Results of the microscale CO analysis at this site are also shown in Tables 13 and 14.

One hour Federal carbon monoxide standards are expected to be met at all receptor sites within the project area whether the widening of Farrington Highway is undertaken or not. The eight hour Federal CO standard is likely to be exceeded under worst case peak hour conditions at the traffic light on Waianae Valley Road through 1988 with or without the widening project, but by the early 1990's this situation would be alleviated more quickly by widening the highway.

Under worst case conditions at receptor Site 1 (near the intersection of Waianae Valley Road), the State of Hawaii one-hour carbon monoxide standard is

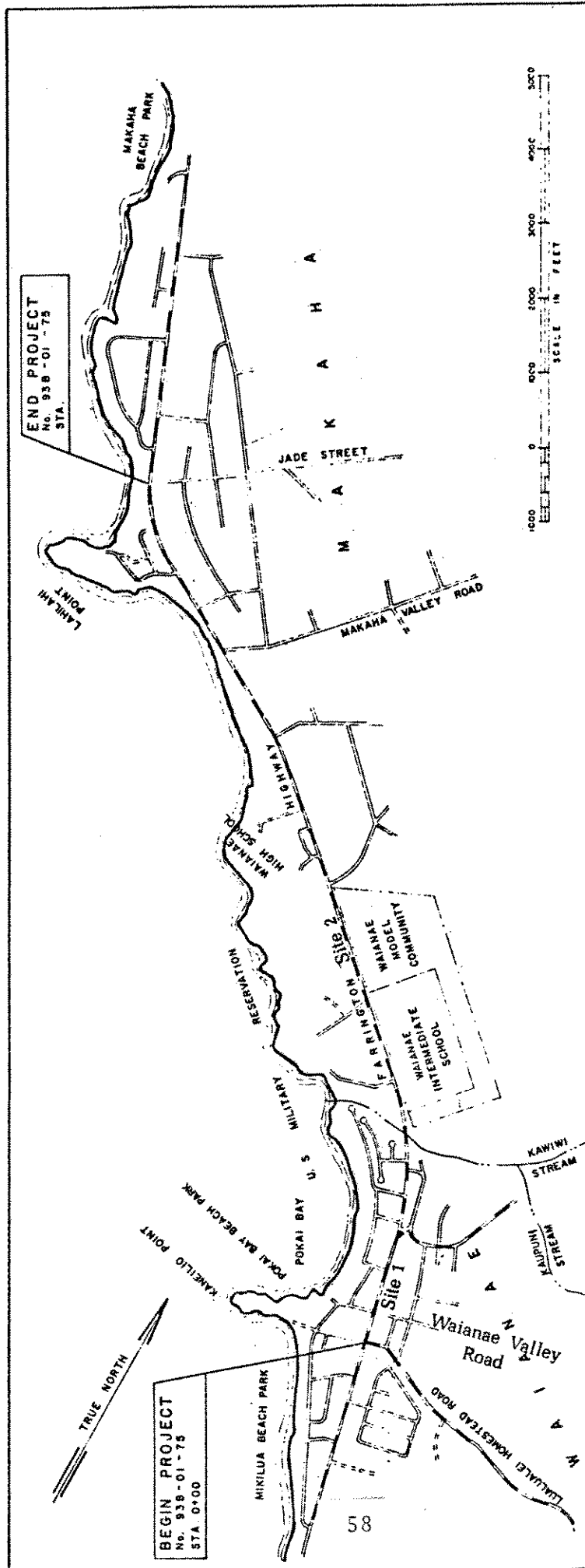


Figure 8

Vicinity Map and Receptor Sites
 Farrington Highway Widening
 Lualualei Homestead Road to Jade Street

Table 13

PEAK HOUR CARBON MONOXIDE CONCENTRATIONS (mg/m³)

UNDER WORST CASE CONDITIONS AT SELECTED RECEPTOR SITES^a

Receptor Site	Farrington Highway Configuration	Year		State of Hawaii Standard	Federal Standard
		1978	1988		
1	Two Lane	32.0	22.1	10	40
	Four Lane	29.8	21.3	10	40
2	Two Lane	9.9	8.7	10	40
	Four Lane	8.5	6.3	10	40

^aSee Figure 8 for location of receptor sites.

Table 14

EXPECTED WORST CASE EIGHT HOUR CARBON MONOXIDE
CONCENTRATIONS (mg/m³) AT SELECTED RECEPTOR SITES^a

Receptor Site	Farrington Highway Configuration	Year		State of Hawaii Standard	Federal Standard
		1978	1998		
1	Two Lane	19.2	13.3	5	10
	Four Lane	17.9	12.8	5	10
2	Two Lane	5.9	5.2	5	10
	Four Lane	5.1	3.8	5	10

^aSee Figure 8 for location of receptor sites.

likely to be exceeded through 1998 if Farrington Highway is not widened, but widening the highway could enable the achievement of this standard by the mid-1990's. At points other than at this intersection, however, widening Farrington Highway should result in achievement of both one and eight hour State of Hawaii CO standards by the early 1980's. These conclusions are all based on the assumption that the U.S. Congress will not legislate even greater delays in achievement of strict automobile emission controls than those considered in this study.

C. Water Quality Impact

The 2.4 mile section to be widened crosses two streams. The first, on the Waianae end of the project (see Figure 2) is Kaupuni Stream (the present bridge crossing the stream is called Kaupuni Channel Bridge). This "stream" should be more appropriately identified as a concrete lined drainage channel. This trapezoidal channel is approximately 80 feet wide at the base; plans call for the bridge to be widened. Kaupuni Stream drains an area of 3.58 miles; an annual maximum gage height of 6.59 feet and discharge of 1,730 cubic feet per second (1976).¹ The second stream is located just before the intersection of Farrington Highway and Makaha Valley Road. This stream is identified as the East Makaha Stream and is approximately 7 feet wide with no improvements. East Makaha Stream is dry except during periods of storm runoff and is not navigable.

The proposed action will replace the existing East Makaha Stream Bridge. Kaupuni Bridge will be widened, providing the same navigational clearance, with no effect on the few non-motorized rafts using the Channel.

Water quality will be affected on both a short-term and long-term basis. For the short-term period, construction, at some point, will occur on the bridges; increased amounts of fugitive dust and construction material may accidentally enter these streams. A berm (in the stream) may be used by the contractor to keep the work area dry.

On a long-term basis, the widening of the roadway will add additional hard surfaces, increasing surface water runoff and various foreign matter (e.g. rubber from tires, grease, oil) will be discharge into the drainage system. This impact was not quantified because it was felt that the additional amounts of pollutants from the roadway will be minimal, and that the roadway widening

¹ U.S. Department of the Interior, U.S. Geological Survey Water-Data Report HI-76-1, Water Resource Data for Hawaii and other Pacific Areas, Water Year, 1976, 1977.

impact cannot be measured as an isolated effect due to the implementation of several planned and scheduled residential and recreational improvements in the adjacent area which will be implemented at about the same time (e.g. Waianae Small Boat Harbor, subdivisions).

The proposed widening will not alter the existing drainage conditions. The existing drainage problems will not be mitigated by this proposed widening.

Both the U.S. Coast Guard and the Department of the Army have indicated (see Exhibits I and II) that no permits under their purview will be required for the bridges' reconstruction.

D. Noise Impact

1. Noise Criterion

The U.S. Department of Transportation recommends $L_{10} = 70$ dBA for land use category B which includes, among others, residences, schools, and churches. The U.S. Department of Housing and Urban Development (HUD), on the other hand, classifies an area where the noise level exceeds 65 dBA for more than 8 hours per 24 hour period as "discretionary - normally unacceptable". In addition to the above, the State of Hawaii's Department of Health's noise control regulation, "Community Noise Control for Oahu," Public Health Regulations, Chapter 44B regulates noise during construction. It also sets 50 dBA as the maximum allowable traffic noise inside a school classroom, hospital, or convalescent home.

2. Existing Noise

Noise level measurements were taken at seven selected locations between Lualualei Homestead Road and Jade Street (see Figure 9a and 9b). These noise measurements are felt to represent the average and peak hour usage of the highway. A continuous 24 hour recording of the noise at Waianae Neighborhood Community Center and Waianae High School were taken. Noise measurements at other locations were taken at 30 minute intervals from 8 a.m. and 4 p.m. on two consecutive weekdays, with hand-held sound meters. The meter was read every 10 seconds until a 90 to 95 percent confidence level was obtained.

The noise levels at L_{10} for each of the selected locations from a distance of 100 feet from the nearest curb are provided in Table 15. Based on the sum of these readings, the present noise level in this area during normal daytime traffic falls in the 60 to 65 dBA range. During peak traffic hours, the noise levels range between 66 to 71 dBA at certain locations.

3. Future Noise Levels

Future noise levels were calculated on the basis of the Department of Transportation's traffic projections (see Table

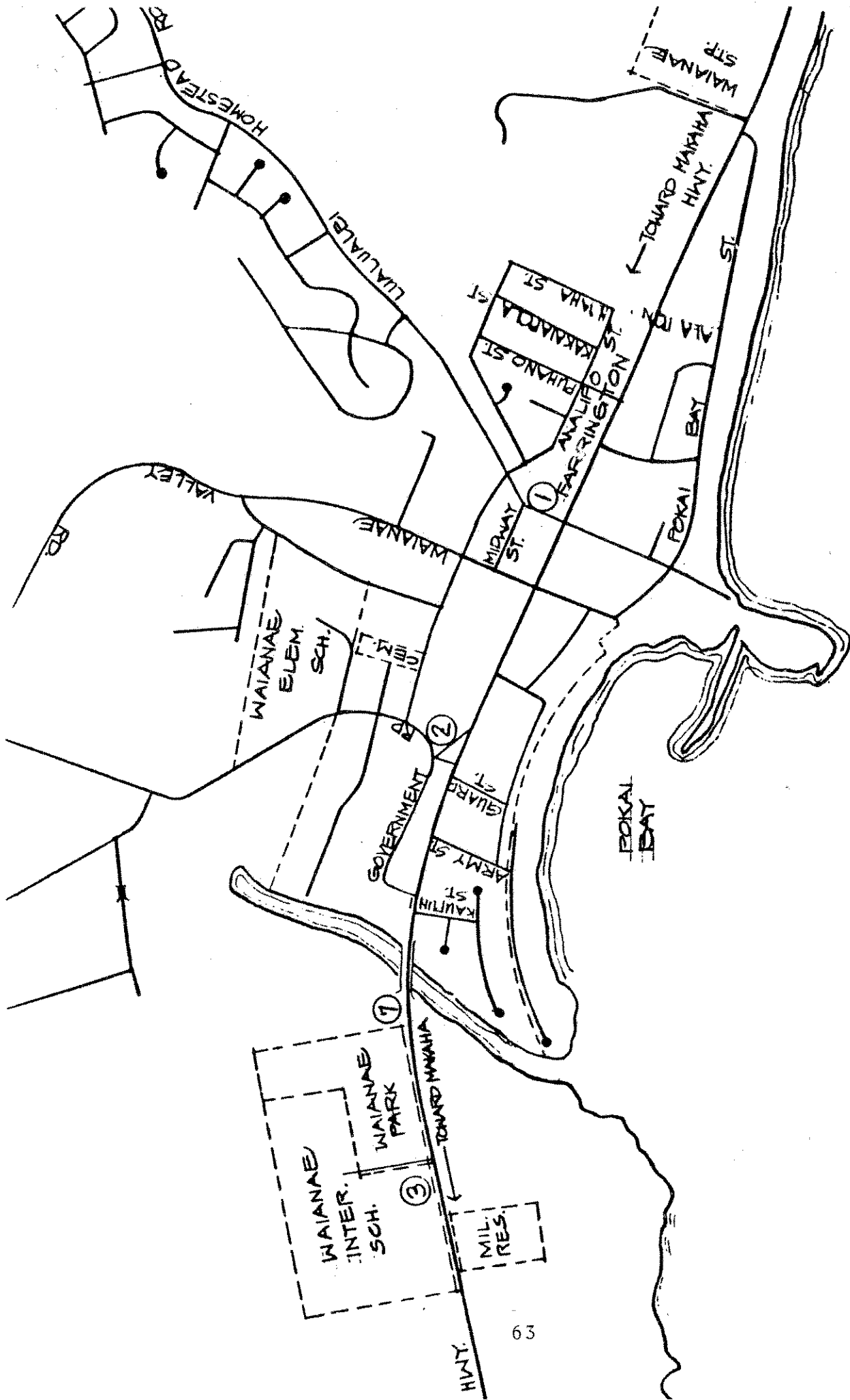


Figure 9a
 Location of Noise Receptor Sites

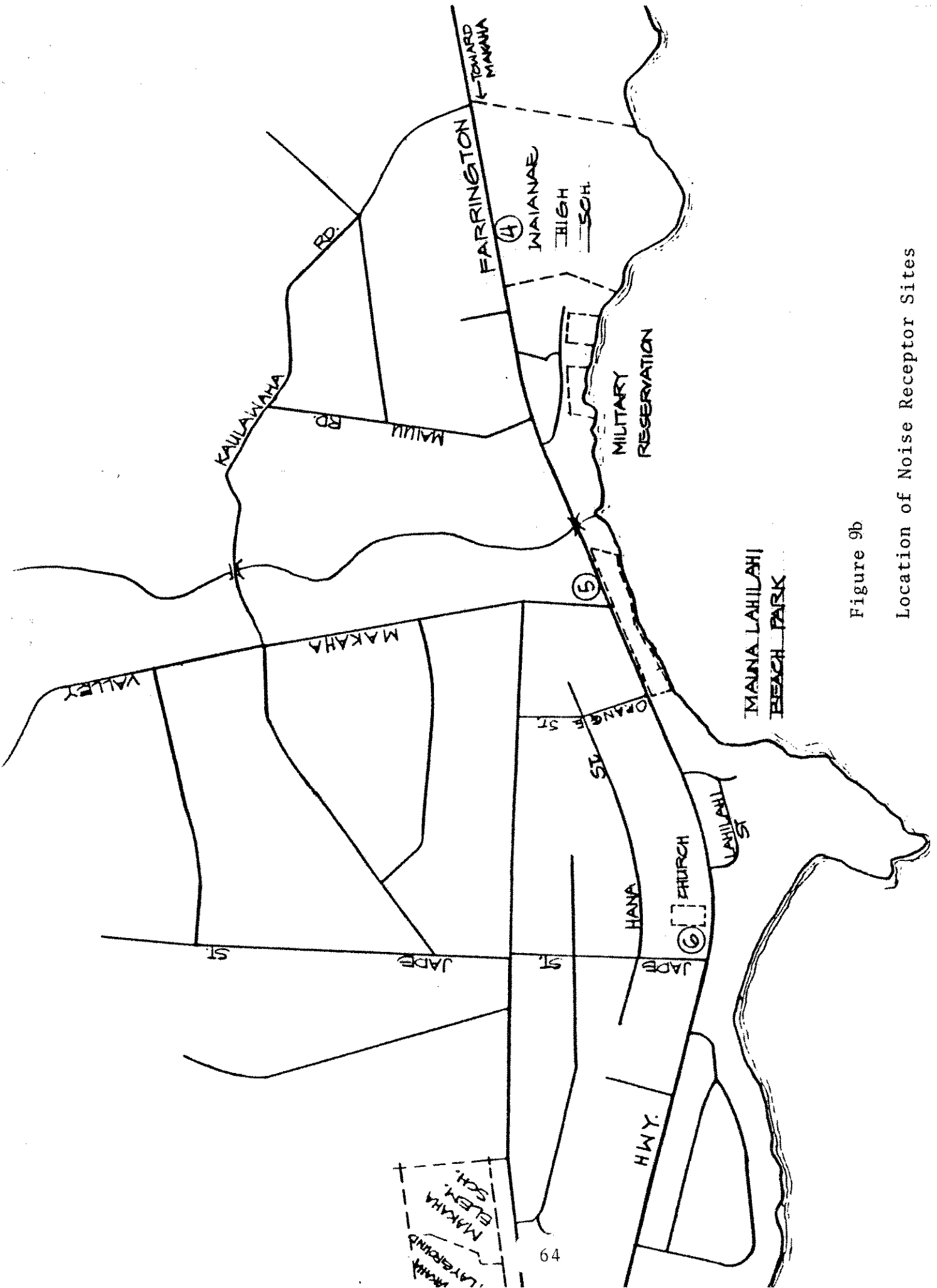


Figure 9b

Location of Noise Receptor Sites

Table 15

FARRINGTON HIGHWAY NOISE LEVEL

100 FEET FROM NEAREST CURB, NOISE LEVEL IN dBA (L₁₀)Station 1: Lualualei Homestead Road

Time	7/19/77	7/20/77
0700-0800	61.9	65
0800-0900	65	63.4
0900-1000	65	65
1000-1100	64.8	65.3
1100-1200	64.3	---
1200-1300	66	65
1300-1400	65	---
1400-1500	63	---
Average	64.4	64.7

Station 2: Old Government Road

Time	7/19/77	7/20/77
0740-0840	68.8	67
0840-0940	64.8	67.8
0940-1040	67.5	75.5
1040-1140	67.2	67.4
1140-1240	69	67
1240-1340	69.7	67.9
1340-1440	71.7	---
1440-1540	69	---
Average	68.5	68.8

Station 3: Waianae Intermediate School

Time	7/19/77
0700-0800	63.2
0800-0900	65
0900-1000	69
1000-1100	65.4
1100-1200	65
1200-1300	64.9
1300-1400	65.5
1400-1500	67.5
1500-1600	65.6
Average	65.7

Station 4: Waianae High School

Time	7/19/77
0730-0830	63.4
0830-0930	65.5
0930-1030	67
1030-1130	64.3
1130-1230	67
1230-1330	64.9
1330-1430	65.2
1430-1530	67
Average	65.5

Table 15
(continued)

Station 5: Makaha Valley Road

Time	7/19/77	7/20/77
1200-1300	66.9	
1300-1400	67.2	
1400-1500	66	
Average	66.7	
0700-0800		67
0800-0900		70
0900-1000		67
1000-1100		67.9
1100-1200		---
1200-1300		67.5
1300-1400		67
Average		67.7

Station 6: Jade Street

Time	7/19/77	7/20/77
0700-0800	61.5	---
0800-0900	59.8	61.4
0900-1000	59.7	63
1000-1100	59.6	63
1100-1200	---	---
1200-1300	---	63
1300-1400	---	61
1400-1500	---	60.9
Average	60.5	62.5

Station 7: Waianae Neighborhood Community Center

Time	7/23/77 to 7/24/77	Time	7/23 to 7/24/77
0700-0800	63.5	2000-2100	59
0800-0900	63.5	2100-2200	59.5
0900-1000	64.5	2200-2300	65.5
1000-1100	66	2300-2400	65
1100-1200	69	2400-0100	65.7
1200-1300	68.5	0100-0200	63.5
1300-1400	64	0200-0300	61.5
1400-1500	62.5	0300-0400	55
1500-1600	62.5	0400-0500	56
1600-1700	62.5	0500-0600	59
1700-1800	62.5	0600-0700	66
1800-1900	61	0700-0800	67.5
1900-2000	60.5		

1). The noise consultant provided a summary of 1998 estimated noise levels (L₁₀) in Table 16.

Table 16 gives the daytime and nighttime 1998 outdoor noise levels calculated for various distances and vehicular speeds. The results show that the predicted 1998 traffic noise level will be acceptable to people with homes 50 feet or more from the center line of the nearest lane of the highway. At 50 feet, the daytime indoor noise level will be close to 55 dBA. The nighttime indoor noise level will be approximately 45 dBA. Actually, by 1998, the noise level will be lower by at least 6 dBA because existing noisy vehicles will be replaced by quieter ones.¹

If the widening of the highway between Lualualei Homestead Road and Makaha Valley Road will move the center line of the outer lane of the highway to 25 feet from any residence, the noise level at the residence will increase immediately by 5 to 6 dBA above the existing normally acceptable level. After the initial increase, the noise level is expected to remain nearly the same till about 1990 when it is expected to start decreasing to an acceptable level by 1998.

The widening of the highway between Makaha Valley Road and Jade Street will not increase the noise level noticeably for residents of this area.

4. Potential Noise Problem Areas

Farrington Highway passes in front of two schools and three churches. The State Department of Health's regulation requires the noise level inside these institutions be 50 dBA or lower.

a. Schools

Waianae Intermediate School is located approximately 500 feet from the highway. Widening of the highway will not create a noise problem at the school. No corrective measure is necessary.

Waianae High School portable classrooms P-8 and P-9 are located 83 feet from the existing curbing of the highway. Widening of the highway will aggravate the already noisy condition in these classrooms. The existing noise levels in these classrooms were measured. Truck

¹ Recent survey of automobile and truck industries shows that most manufacturers will be able to reduce the noise levels of automobiles by 6 dBA and of trucks by 10 dBA by 1978. This alone will reduce the traffic noise level by 6 to 9 dBA by 1990 when most of the existing noisy vehicles would be replaced.

Table 16
 1998 AVERAGE NOISE LEVEL (ESTIMATED) FARRINGTON
 HIGHWAY*

<u>Location</u>	<u>Daytime</u> <u>7 AM - 10 PM</u>			<u>Nighttime</u> <u>10 PM - 7 AM</u>		
	<u>25'</u>	<u>50'</u>	<u>100'</u>	<u>25'</u>	<u>50'</u>	<u>100'</u>
	Lualualei Homestead Rd. to Government Road	76.5	73.1	69.3	70.5	67.1
Government Road to Makaha Valley Road	76.8	73.4	69.6	66.3	62.9	59.1
Makaha Valley Road to Jade Street	74.9	71.5	67.7	65.4	62	58.2

* Based on L₁₀, and a speed of 35 MPH

noise inside the classrooms range between 60 and 70 dBA. Automobile noise varied between 55 and 66 dBA. The average noise level inside the classrooms measured 59 dBA. Ten percent of the time, the noise level exceeded 66 dBA. Obviously the existing noise level is already 9 dBA above the Department of Health's standard. In spite of this, the regulation requires the reduction of the noise level inside these classrooms to 50 dBA or less.

The cost of abating the noise will be included in the cost of the road widening project. The highway section affecting Waianae High School will not be widened in the initial phase.

Construction noise and interruption of traffic access to and from Waianae Intermediate and High Schools appear to be unavoidable. Construction noise must comply with Chapter 44B, Public Health Regulations.

b. Churches

Noise readings inside the churches were not taken because access to the churches was not available at the time of measurement, therefore, these noise levels were estimated. Waianae Baptist Church is located approximately 100 feet mauka of the highway. The existing noise levels inside the church is 52 dBA, slightly above the Department of Health's requirement. Future noise levels are not expected to rise above this level. Corrective measures may not be necessary because a 2 dBA reduction would not be noticeable.

Waianae United Methodist Church is located approximately 150 feet makai of the highway. No corrective measure is anticipated here because the traffic noise inside the church is not expected to rise above 50 dBA.

The third church is located approximately 60 feet mauka of the highway near Jade Street. The existing noise level inside the church is 45 dBA. The widening of the highway is not expected to raise the noise level inside the church above the 50 dBA level until 1998. If the expected decrease in vehicular noise by 1990 is accounted, the noise level inside the church will not rise above 50 dBA. Corrective measures may not be necessary.

c. Residences

Most of the residences along the highway are located more than 50 feet from the highway. The widening of the highway will increase the noise level but not enough to raise the noise substantially above the normally acceptable level.

There is a possibility that few residences may require noise reduction treatment. The need depends on whether or not the center line of the widened highway is moved closer to residences which are less than 50 feet from the curbing of the existing highway. No corrective measure is necessary if the center line of the improved highway is not shifted toward residences which are 50 feet or less from existing curbing.

5. Corrective Measures

Corrective measures may take one of two forms, attenuating the noise level of the source or sound proofing the receiver building. Residences and classrooms may be sound proofed by closing the window or jalousie opening and installing window air conditioners. Noise entering residences and classrooms may be attenuated by installing acoustic louvers or acoustic filters. Acoustic louvers may be used where the reduction necessary is less than 10 dBA. For larger noise reduction, acoustic filters are necessary.

E. Impact on the Existing View Planes and Aesthetics

The determination of whether an area has scenic value or is aesthetically pleasing is subjective. Presently, the 2.4 mile section does have a view of the mauka side of the highway beyond the homes and uses adjacent to the highway. The view consists of the Waianae Mountain Range and the various ridges and valleys in this area. The makai side of the highway, on the other hand, affords views of the various houses, institutions and vegetation cover; a view of the shoreline area is only periodically available.

The widening will provide the same view of the surrounding area and is not expected to alter the present view planes.

F. Socioeconomic Impact

1. Assessment of Economic Justifiability

The estimated benefits and costs of this proposed project are summarized in Table 17. The project appears economically justifiable, since the present value of benefits exceeds the present value of costs. (This assumes that the assumptions used in making these estimates, as detailed in the Socioeconomic Report, are accurate.) Since benefits are approximately equal to costs, changes in these assumptions obviously might affect the conclusion that the project is economically justified.

The small changes in travel time will unquestionably induce some further travel into the area abutting the proposed project. However, with the present state of art, given the small percentage of changes in travel time, the extent of this effect cannot be estimated usefully. Not only can the amounts not be estimated accurately, but an unpredictable portion will consist of traffic to the area by people living elsewhere; a portion will consist of travel by residents new to the area; and some will be increased travel by present residents. These impacts may be undesirable to some, but it must be remembered that highway improvements

Table 17
 Present Value of Benefits and Costs,
 Farrington Highway Widening

Item	Benefits or Costs*
Construction and Maintenance Costs	- \$5,039,000
Travel Time Savings	+ 4,343,000
Savings in Operating Costs	+ 2,243,000
Accident Costs	- 1,248,000
Air Pollution Costs	Negligible
Noise Costs	Unable to quantify

*Benefits are shown with a positive and costs with a negative sign. It should also be noted that the benefits and costs were derived from mathematical calculations with discount formulas and present day costs. They are not direct calculations of figures presented in the text. For example, the \$5,039,000 costs for Construction and Maintenance is based on taking the \$8,000,000+ construction cost of the project and discounting its salvage value at the end of a 20-year period, and adding the net costs for maintenance of the widened portion of the highway.

are designed to enhance accessibility for people to recreational attractions, commercial outlets, job locations, and desirable housing. In other words, as some people experience these benefits, their doing so may affect the lifestyles and recreational patterns of others in a manner the latter consider undesirable. One's viewpoint thus determines whether the changes are desirable, and thus are considered as either costs or benefits.

It is also worthy of note that State and County land use controls place greater constraints on land uses and are more significant than the enhanced accessibility created by the proposed project. In this respect, the community has at least some voice in determining the future course of land changes in the impacted areas.

In contrast to a new roadway or other such major transportation disturbance in the area, the simple widening of an existing thoroughfare does not create changes of a sufficient magnitude to usefully estimate the impact of traffic changes on property values and businesses in the area, particularly since no displacement of businesses, homes or public facilities is to occur. About all that can be indicated with useful accuracy is the general socioeconomic nature of the impacted region, which is provided in Section III.

One further economic impact can be estimated with useful accuracy, e.g. the impact on jobs and income of the construction phase of the project. By using the state's interindustry model, and based on a total project cost estimate of \$7.2 million for earthwork, grading, et cetera and \$1.3 million for utilities relocation, approximately 180 man-years of work would be created in Hawaii's construction industry. If we allow for the full multiplier effects of this construction activity, approximately 190 additional man-years of employment would occur within the state, for a total impact of about 370 man-years of employment. Income in the form of wages, profits, dividends, et cetera, thus occurring within the construction industry would be approximately \$4.3 million, with a further repercussive effect in the state's economy of \$2.7 million in income.

2. Relevant Public Opinion

No systematic attempt has yet been made to sample the opinions of residents of the impacted area concerning their preferences for the highway widening project. Furthermore, public hearings are not often reliable means of reflecting such a cross-section of opinions. Unstructured discussions with a number of people in leadership positions within the Waianae District (by the socioeconomic consultants) frequently reflected their concern that the widening might lead to increased traffic accidents due to increased motorist speed. They also frequently expressed support for more traffic

lights at key intersections and pedestrian crossings (which is included in the proposed project).

Many of these individuals also indicated concern that the project might also induce further residential development and beach use by "outsiders." Such effects were considered to be disruptive of the community's social fabric. This attitude seems to be in direct contrast with the results of a March, 1977 survey by the City's Department of General Planning. This survey of residents of the area seemed to show majority support for a number of public and commercial developments along the Waianae Coast. Perhaps the most revealing statistic was that 75 percent of the Waianae respondents being in favor of extending Farrington Highway around Kaena Point. (The reliability of this mail survey is also questionable. For example, 82 percent of the Waianae respondents were homeowners, whereas only half of the households in the District are owner-occupied. Nevertheless, it is probably the best available reading of relevant opinions of the residents of the region.)

Ultimately, the only completely valid way to determine public opinion concerning the highway widening project would be to conduct an educational program concerning the negative and beneficial impacts of the project followed by a reliable sample of relevant public reactions to the proposal. Even then there would be a very debatable question of whose opinions are relevant, i.e., residents of all parts of Oahu have legitimate concerns in addition to the concerns held by residents of the area geographically impacted.

G. Impact on Land Use

In terms of land use patterns, the most direct impact of the project would be on the land parcels immediately abutting the project. The present uses of these parcels are shown in Table 18. Since no taking will be involved, it can only be assumed that the land values would not be negatively impacted. It is not possible to usefully estimate the beneficial economic impacts of the project on these abutting parcels. (Land values, in the Waianae District, as valued for tax purposes generally run about \$6.00 per square foot for commercial and multi-family use, about \$3.00 for single-family residential use, and about \$.50 per square foot for agricultural lands.)

H. Impact on Costs of Traffic Accidents

The socioeconomic consultants included, in their cost-benefit model, accident costs. A review of literature indicated that accident rates and thus, costs, are generally greater for a four-lane undivided highway than a two-lane undivided highway. This difference is likely due to the differences in the traffic speeds

Table 18
Use and Assessed Value of Land Parcels Abutting
Proposed Project

General Land Use Classification	No. of Parcels	* Total Acreage	Assessed Value/sq.ft.
Single Family Dwelling	55	23.86	\$ 3.28
Duplex Residential	8	6.94	2.24
Duplex Residential (Public Housing)	29	2.20	2.90
Condominium	2	7.80	10.99*
Townhouse	3	.12	4.29
Hawaiian Telephone Use	1	.24	5.78
Super Market	4	.71	6.61
General Merchandise	1	2.14	6.02
Apparel and Accessories	2	.47	6.62
Gasoline Service Station	6	2.44	5.23
Motor Vehicle Sales and Service	1	.23	6.62
Hardware Stores	1	.23	6.62
Eating and Drinking Places	8	3.64	6.20
Drug Stores	1	.64	6.48
Miscellaneous Retail	3	1.00	6.34
Personal Apparel Sales and Service	2	.40	6.44
Financial, Insurance and Real Estate	6	1.42	6.54
Legal, Engineering and Accounting	1	.17	6.62
Governmental Administrative	2	4.42	1.68
Public Safety	1	.57	6.60
Automotive Repair	2	.82	6.47
Miscellaneous Business Services	1	.23	6.62
Educational Institutions	12	59.48	1.20
Cultural Centers	1	1.08	1.65
Religious Institutions	2	1.60	2.26
Educational/Religious Institutions	2	15.53	.91
Outdoor Public Recreation	2	58.25	3.08
Indoor Public Recreation	1	-----**	-----*
Private Vacant Land	23	12.30	3.38
State-owned Vacant Land	4	17.07	2.48
"Planting" Strip	6	1.88	-----*
Undevelopable Open Space	2	-----**	-----*
Roadways	4	-----**	-----*

* One or more parcels not valued for tax assessment purposes.
** Not calculated.

experienced. The consultants tried various econometric techniques to estimate forecasted accident rates, but they judged the results to be unsatisfactory. Consequently, a simple "averaging" approach on other portions of Farrington Highway was used to estimate future accident results.

After evaluating various accidents and their costs, it was estimated that the average cost per accident is \$4,861.50. Using this cost estimate along with the 1975 and 1976 accident rates on existing two- and four-lane sections of FAP 93 (Farrington Highway), the expected number of accidents for the existing highway and the proposed widening were calculated. Differences in the future time stream of accident costs between the two options (retaining the existing highway versus the widening of the highway) when discounted at 10 percent gave the "present value" of the increase attributable to the proposed project equal to \$1,248,000.

I. Impact on On-Street Parking

During the review period for the Draft EIS, several reviewers expressed concern about the proposed project's impact on the existing on-street parking. Presently on-street parking is permitted along the Waianae town section of the highway. The proposed project would have eliminated this parking (used basically by customers of various stores alongside the highway). Upon reviewing this impact it was decided that curbside parking in the Waianae commercial area will be permitted from 8:30am to 3:30pm (on a trial basis). Also, in regards to parking it is noted that the staff of the Department has met with the Waianae Businessmen's Association regarding the improvement which will be made to the highway. At that meeting there was no opposition to the project. The ingress and egress to these businesses will not be significantly modified.

Parking within the highway's right-of-way is also occurring along Mauna Lahilahi Park. Parking for park users is presently taking place along the Park (both straight and parallel parking, approximately fifteen to twenty cars can park in the right-of-way). The proposed project will eliminate this parking. The elimination of on-street parking is unavoidable and no monetary loss has been assigned to this impact. The Department of Parks and Recreation, City and County of Honolulu, will be responsible to provide parking for users of Mauna Lahilahi Park.

VI. ANY PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Construction will cause a number of adverse environmental impacts. These impacts include: noise generated by construction equipment and building activity; fugitive dust from grading activities; potential erosion during the grading activities; traffic congestion when temporary detours are necessary and because of the movement of light and heavy construction equipment vehicles; and visual disruption caused by the ongoing construction activity. However, these construction impacts will be local and temporary.

As indicated in Section V, the long-term, adverse environmental impacts include:

1. Under worst case conditions near the intersection of Farrington Highway and Waianae Valley Road, the State of Hawaii one hour carbon monoxide standard is not being presently met. However, this would be the case even if the highway widening is not implemented.
2. At Waianae High School, two portable classrooms are located 83 feet from the existing curbing of the highway. Widening of the highway will aggravate the already noisy condition in these classrooms. Although the recommended noise standard (L₁₀ - 50 dBA) is already being exceeded, corrective measures must be taken to reduce the noise in these classrooms. The noise consultant recommends that the classrooms be sound proofed by either: (1) closing the window or jalousie opening and installing window air conditioners; (2) installing acoustic louvers or acoustic filters.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

VII. ALTERNATIVES TO THE PROPOSED ACTION

A. Realigning the Existing Highway - Mauka

The mauka realignment of Farrington Highway was, in 1968-69, the original recommended proposal by the State Department of Transportation. However, after several public meetings, the proposal was eliminated because of strong public opposition.

This proposed realignment alternative, mauka of the existing Farrington Highway was shown at one time on the City and County Detailed Land Use Map for Makaha, adopted on August 24, 1967 by the City Council (see Figure 10). The bypass realignment begins in the vicinity of Pokai Bay running mauka behind Waianae Town; it runs parallel to the coastline about a quarter mile inland, all the way to Makaha and tying into the existing route in the vicinity of Makaha Beach Park.

Figure 10, shows the location of the mauka realignment alternative.

As stated above, there was strong public opposition to this project, as such, the proposal was withdrawn. The State Department of Transportation requested that the Detailed Land Use Map (DLUM) be amended to exclude the mauka realignment of Farrington Highway to Kili Drive (beyond Jade Street). This amendment was adopted in 1976 and is identified as Ordinance 4659.

B. Realigning and Widening the Existing Highway

The second alternative considered and presented at a 1974 public hearing consists of realigning a portion of Farrington Highway from Kaulawaha Road to Jade Street. The realigned roadway would consist of two-lanes and be located mauka of the existing road. Farrington Highway from Kaulawaha Road to Lualualei Homestead Road would be widened to four-lanes (see Figure 10).

Opposition to this alternative was also voiced in the 1974 public hearing. Furthermore, should this alternative now be re-considered, the following adverse impacts would be probable.

1. Increase accessibility and significantly enhance urbanization in the area served.
2. Increase vehicular air and noise pollution in adjacent areas along the bypass portions of the new roadway.
3. Affect the existing aesthetics and possibly the view planes.
4. Increase the project cost by several times as well as dislocate a number of homes and businesses.

5. Result in the construction of new bridges.

C. No Action

The no action alternative versus the proposed widening was evaluated extensively in the socioeconomic cost-benefit study. Table 17 on page 71 summarizes the differences between both alternatives. Additionally, a no action alternative would have resulted in these adverse impacts:

1. A gradual increase of traffic congestion so that by 1998, traffic congestion during peak hours would be severe.
2. Greater vehicular air emissions (due to the traffic congestions).
3. Possible constraints on the usage of recreational areas served by this project.

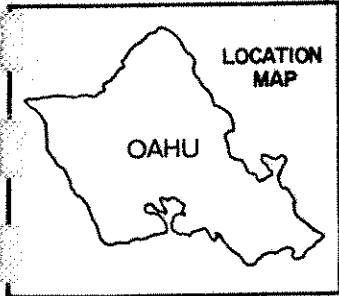
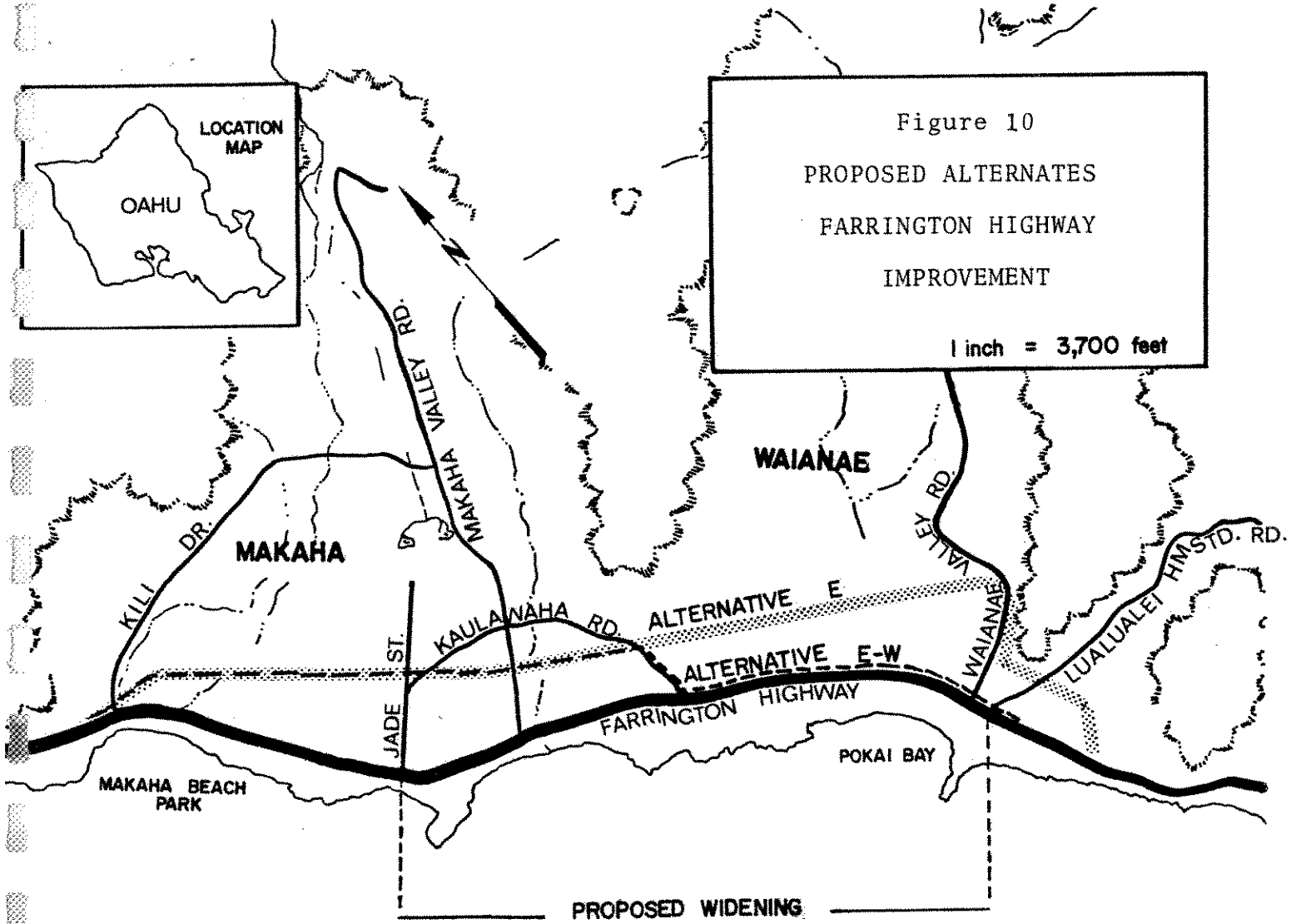


Figure 10
PROPOSED ALTERNATES
FARRINGTON HIGHWAY
IMPROVEMENT
1 inch = 3,700 feet



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

The proposed widening is expected to enhance the long-term productivity of this segment of Farrington Highway. As previously stated, the project will accommodate a greater number of vehicles which will be created by the population growth of the area and development of recreational sites. Without the proposed action, the highway will become severely congested during weekday peak hours and weekend recreational oriented traffic peaks. Over a 20-year period, the productivity of the highway in terms of carrying capacity and time-savings is expected to be beneficial from both an economic and social standpoint.

The lands in question (present and future right-of-way) are owned by the State or Federal government. Therefore, the property is not expected to affect land value or revenue. The present usage of the project area will continue as a public roadway.



IX. MITIGATION MEASURES PROPOSED TO MINIMIZE ADVERSE IMPACTS

Mitigation measures relating to specific environmental aspects were discussed in Section V., The Probable Impact of the Proposed Action on the Environment. Therefore, in this section discussion is limited to the overall, general mitigation measures which will be employed during the construction phase of the project.

Air pollution resulting from highway construction activity is always a possibility. Specific measures to control dust during construction include non-burning techniques for the disposal of grubbed debris; frequent waterings; use of dust palliatives; restricting the area of operation; paving of construction lanes and curtailing of activities during dry and/or strong wind conditions.

The noise created by site clearing and construction will be minimized in the form of limiting heavy construction work during daylight hours. In this way, the construction schedule will coincide with the part of the day in which most of the residents are at work.

Erosion and siltation during construction will be kept to a minimum.

Procedural and standard measure contained in the State's "Standard Specifications for Road and Bridge Construction" will insure the minimization of erosion.

During the EIS consultation period, the Department of Transportation Services, City and County of Honolulu (letter dated May 5, 1977, see page 108) noted that the following provisions should also be included in this section:

- "1. The contractor shall provide, install, and maintain all necessary signs and other protective facilities, which shall conform to the 'Rules and Regulations Governing the Use of Traffic Control Devices at Work Site on or Adjacent to Public Streets and Highways', adopted by the Highway Safety Coordinator.
2. Part VI 'Traffic Control for Highway Contractors and Maintenance Operators' of the Federal Highway Administration's 'Manual on Uniform Traffic Control Devices for Streets and Highways'."

These provisions will be included in the contractor's contract terms. Further, the relocation of utilities, improvement of drainage facilities, realignment of driveways (public and private), replacement of signs, and the replacement of chain-link fences, walkways, et cetera will be coordinated with the various public agencies, private utilities, and private individuals involved.

Construction activities must also comply with the provisions of the various Public Health Regulations, including Chapter 44B, Community Noise Control for Oahu.

In addition to these mitigation measures (and those indicated or recommended in Section V), other control measures, unique to the project, can be included as part of the contract's special provisions. These control measures will be determined upon finalizing the plans for the roadway widening.

X. ANY IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

It is anticipated that the proposed action will commit the necessary construction materials, land, and human resources. For the most part, these resources are easily available, but once utilized, irretrievable.

Construction materials in form of asphaltic concrete, rock, sand, concrete, wood, steel, et cetera, will be used in widening the roadway. These materials are readily available and will not constitute a significant depletion of a valuable resource. Once utilized, these materials will not likely be reused or recycled.

The additional lands to be acquired for the right-of-way will also be committed to a roadway use. These lands are already in public use (the lands in question are owned either by the State or Federal government) and are vacant. However, once the lands are acquired for the highway's right-of-way, the land will be committed to roadway use.

Human resources in form of labor (e.g. planning, designing, engineering, construction labor, and maintenance) will also be expended. This resource is felt to be available and beneficial for the community. It will provide employment for the construction industry during the construction phases, as well as provide employment for maintenance personnel working for the State.

There are no known physical or cultural resources which will be adversely affected or committed within or adjacent to the project bounds.



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

At this time, there are no known governmental policies or plans which would affect the proposed action. There are, however, several governmental projects in the Waianae area which would be served by the project. These projects have been identified and described elsewhere in the text, and it should suffice to note that these projects include development of public housing and Hawaiian Homes housing, assistance in developing low and/or moderate income housing, expansion of regional and state beach parks, improvement of new beach parks, improvement of utilities, and extension of sewage lines. It is felt that the widening of Farrington Highway will benefit these projects by: (1) providing for improved accessibility and time-savings to and from the area to be served; (2) lessening traffic congestion during weekday and weekend traffic peaks; (3) accommodating the future projected growth (both population and increased recreational usage) for this segment of the Waianae Coast; and (4) by doing all of the above, the widening will also enhance the usage of the sand beaches and recreational areas along the Waianae Coast.

It is felt that the proposed four-lane widening is consistent with the State land use designation (Urban) and the City and County of Honolulu's zoning of the area served by the proposed project.



XII. ORGANIZATIONS AND PERSONS CONSULTED

The EIS Preparation Notice for the proposed Farrington Highway Widening was reported in the EQC Bulletin on April 8, 1977 (Volume III, No. 7). Deadline for requests to be consulting parties was May 9, 1977. During this period, only one party, the Waianae Coast Business Association, made a request to become a consulting party.

A total of thirty-one (31) agencies were consulted in the preparation of the Environmental Impact Statement. These agencies (identified below) received a copy of the EIS Preparation Notice and were requested to review and provide comments on the Preparation Notice. A total of 21 agencies responded; agencies providing a response are asterisked and the date of their response is shown in parenthesis.

Federal Agencies

- * Department of the Air Force, Headquarters 15th Air Wing (May 10, 1977)
- * Department of Transportation, U.S. Coast Guard (Commandant) (May 6, 1977)
- * U.S. Department of Agriculture, Soil Conservation Services (April 26, 1977)
- * Department of the Army, U.S. Army Support Command Hawaii (April 22, 1977)
- * Department of the Army, Pacific Ocean Division, Corps of Engineers (May 5, 1977)

State Agencies

- * Department of Planning and Economic Development (April 29, 1977)
- * Department of Accounting and General Services (April 20, 1977)
- * Department of Defense (April 12, 1977)
- University of Hawaii, Environmental Center
- University of Hawaii, Water Resources Research Center
- * Department of Health (May 3, 1977)
- * Department of Education (April 18, 1977)
- Department of Land and Natural Resources
- * Department of Agriculture (May 12, 1977)
- * Department of Hawaiian Home Lands (April 13, 1977)
- * Department of Social Services and Housing (April 25, 1977)
- * Land Use Commission (June 1, 1977)
- Office of Environmental Quality Control

County Agencies

- *Department of General Planning (May 2, 1977)
- Fire Department

- * Police Department (April 19, 1977)
- * Board of Water Supply (May 2, 1977)
- * Department of Parks and Recreation (April 26, 1977)
- * Department of Housing and Community Development (April 13, 1977)
- * Department of Transportation Services (May 5, 1977)
- * Department of Public Works (April 15, 1977)

Other Organizations

Hawaiian Electric Company
 Waianae Commission Neighborhood Board
 Neighborhood Commission Board
 Waianae Coast Business Association**
 Park Engineering, Inc.***

Section XIII includes the reproduction of the letters received and responses provided to those agencies providing comments.

** Mr. Anson O. Rego submitted a request (dated April 13, 1977) to be a consulted party in the preparation of the EIS. No comments were received after the transmittal of the EIS Preparation Notice. Later, Mr. Rego corresponded to the Department of Transportation requesting that the Waianae Business Coast Association be involved prior to the plans being finalized. Subsequently, discussions with the Association prior to the finalization of plans will occur.

*** Park Engineering, Inc. requested a copy of the EIS Preparation Notice, no response was received thereafter.

XIII. REPRODUCTION OF COMMENTS AND RESPONSES
MADE DURING THE CONSULTATION PROCESS

Section XII, identified those agencies contacted during the EIS consultation process. Pages 89 through 113, are copies of the letters received during the consultation period. Where the letter contained comments and/or suggestions, a response was provided by the Department of Transportation. This response is found following the agency's letter. In the cases where a "no comment" letter was received, no response was provided by the Department of Transportation.

The agencies providing letters are identified below in the order they appear; those agencies with "no comments" are indicated by an asterisk.

	Page No.
* 1. Department of Defense, State of Hawaii (April 12, 1977)	89
* 2. Department of Housing and Community Development, City and County of Honolulu (April 13, 1977)	89
* 3. Park Engineering, Inc. (April 13, 1977)	90
* 4. Waianae Coast Business Association (Anson O. Rego) (April 13, 1977)	90
* 5. Department of Hawaiian Home Lands, State of Hawaii (April 13, 1977)	91
6. Department of Public Works, City and County of Honolulu (April 15, 1977)	92
7. Department of Education, State of Hawaii (April 19, 1977)	93
8. Police Department, City and County of Honolulu (April 19, 1977)	95
9. Department of Accounting and General Services, State of Hawaii (April 20, 1977)	96
*10. Department of the Army, Headquarters United States Support Command, Hawaii (April 22, 1977)	98
*11. Department of Social Services and Housing, State of Hawaii (April 25, 1977)	99
*12. U.S. Department of Agriculture, Soil Conservation Service (April 26, 1977)	99
*13. Department of Parks and Recreation, City and County of Honolulu (April 26, 1977)	100
14. Department of Planning and Economic Development, State of Hawaii (April 29, 1977)	100
15. Board of Water Supply, City and County of Honolulu (May 2, 1977)	102
16. Department of General Planning, City and County of Honolulu (May 2, 1977)	104
17. Department of Health, State of Hawaii (May 3, 1977)	106
18. Department of the Army, Pacific Ocean Division, Corps of Engineers (May 5, 1977)	107

	Page No.
19. Department of Transportation Services, City and County of Honolulu (May 5, 1977)	108
20. U.S. Department of Transportation, U.S. Coast Guard (May 6, 1977)	110
*21. Department of the Air Force, Headquarters 15th Air Base Wing (May 10, 1977)	111
22. Department of Agriculture, State of Hawaii (May 12, 1977)	112
*23. Land Use Commission, State of Hawaii (June 1, 1977)	113

GEORGE R. ARIYOSHI
GOVERNOR



REC-1
APR 15 8
DEPT. OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
FORT RUCKER, HONOLULU, HAWAII 96816

VALENTINE A. SIEFERMANN
ADJUTANT GENERAL
ADJUTANT GENERAL

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
CITY AND COUNTY OF HONOLULU
DIRECTOR'S OFFICE
SOUTH KING STREET
HONOLULU, HAWAII 96813
PHONE 527-4111



APR 15 12 59 PM '77
DEPT. OF TRANSPORTATION

FRANK P. PAH
DIRECTOR
RICHARD R. SHARPLESS
MANAGING DIRECTOR

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DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

WILLIAM BLACKFIELD
DIRECTOR
TYRONE T. KUSAO
DEPUTY DIRECTOR

HIENG

12 APR 1977

April 13, 1977

Mr. Herbert Tao
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Tao:

Farrington Highway Widening, Lualualei
Homestead Road to Vicinity of Jade Street

Thank you for sending us a copy of the "Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street" Environmental Impact Statement. We have received the publication and have no comments to offer.

Yours truly,

Fredrick W. Klugh
for
WAYNE R. TOMOVASU
Captain, CE, HARRNG
Contr & Engr Officer

Enclosure

Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Subject: Request for Comments on EIS
Preparation Notice, Farrington
Highway Widening, Lualualei
Homestead Road to Vicinity
of Jade Street
Project No. 93B-01-75

Reference is made to your letter LT-DS 2.36662 dated April 5, 1977 regarding the subject road widening.

We have no comment at this time.

Sincerely,

Tyrone T. Kusao
TYRONE T. KUSAO
Acting Director

APR 15 1977
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APR 15 1977

9616

Suite 2005, Pacific Trade Center 190 S. King Street, Honolulu, Hawaii 96813 ☐ Telephone (808) 531-1676

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APR 14 12 35 PM '77
LEO A. COHEN
HIGHWAY DIVISION
DEPT. OF TRANSPORTATION

Anson O. Rego

LAW OFFICES OF

85-833 FARRINGTON HIGHWAY · WAIANAE, HAWAII 96792 · 696-7061
94-239 WAIPAHU DEPOT ROAD · WAIPAHU, HAWAII 96797 · 67-0339
1630 PACIFIC TRADE CENTER · HONOLULU, HAWAII 96813 · 696-7061

April 13, 1977

April 13, 1977

State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Attention: Mr. Herbert Tao

Gentlemen:

Subject: Farrington Highway Widening
Luualalei Homestead Road
to Vicinity of Jade Street
Maiana District, Oahu

Please send one (1) copy of the EIS Preparation Notice
for the subject project to:

Park Engineering, Inc.
190 South King Street, Suite 2005
Honolulu, Hawaii 96813

Attention: Mr. Glenn Hirano

Sincerely yours,

PARK ENGINEERING, INC.

Glenn Hirano

Glenn Hirano
Assistant Project Engineer

GH:sa

Mr. E. Alvey Wright
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Re: Project No. 93B-01-75
Farrington Highway Widening

Dear Mr. Wright:

Will you please include the newly formed Waianae Coast Business Association, 85-833 Farrington Highway, Waianae 96792 as one of the organizations to be consulted in the preparation of the E. I. S. of the Farrington Highway widening.

Thank you very much.

Very truly yours,

Anson O. Rego

ANSON O. REGO

AOR:db

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APR 20 10 10 AM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

ENGINEERS, SURVEYORS, PLANNERS, LANDSCAPE ARCHITECTS

Park Engineering, Inc.

PROJECT OFFICES
WAIALEA OFFICE
P. O. BOX 125
WAIALEA, HAWAII 96743
HEALEDIA OFFICE
P. O. BOX 633
HEALEDIA, HAWAII 96749

PROJECT OFFICES
MAUI OFFICE
P. O. BOX 22
MAUI, HAWAII 96752
MOLOKAI OFFICE
P. O. BOX 108
MOLOKAI, HAWAII 96749

DIRECTOR'S OFFICE
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DEPT. OF TRANSPORTATION
HAWAIIAN HOME LANDS



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DEPT. OF TRANSPORTATION
HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96806

LT-DS
2.38810

July 22, 1977

April 13, 1977

Waianae Coast Business Association
85-833 Farrington Highway
Waianae, Hawaii 96792

Attention Mr. Anson O. Rego

Gentlemen:

Subject: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to
Vicinity of Jade Street, Project No. 93B-01-75

Thank you for your letter of April 13, 1977. Please note
that we have sent your association a copy of the EIS
Preparation Notice. We are in the process of preparing the
EIS, which should be completed late this year. If you have
any comments to provide, please do not hesitate to contact us.

Very truly yours,
R. Alvey Wright
R. E. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated 4/13/77)

Mr. E. Alvey Wright, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

SUBJECT: Request for Comments on EIS Preparation
Notice, Farrington Highway Widening,
Lualualei Homestead Road to Vicinity
of Jade Street, Project No. 93B-01-75

The proposed project does not directly affect lands owned
by this Department. The Department, however, does support
the purpose of the project--accommodating increased traffic
volume.

Should there be any questions, please contact Mr. William
Blaisdell, telephone 548-2684.

Owau no me ka ha'aha'a,
(I am, humbly yours)

Billie Beamer
(MRS.) BILLIE BEAMER, CHAIRMAN

WBB:lf

DEPARTMENT OF PUBLIC WORKS
CITY AND COUNTY OF HONOLULU
 650 SOUTH KING STREET
 HONOLULU, HAWAII 96813

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 DEPT. OF TRANSPORTATION
 HONOLULU, HAWAII



APR 19 12 50 PM '77
 WALLACE MIYAHIRA
 DIRECTOR AND CHIEF ENGINEER
 ENV 77-184

FRANK P. PARI
 MAYOR

Mr. E. Alvey Wright, Director
 Department of Transportation
 State of Hawaii
 869 Punchbowl Street
 Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: EIS Preparation Notice for the
 Farrington Highway Widening,
 Lualualei Homestead Road to the
 Vicinity of Jade Street
 Project No. 93B-01-75

With reference to your letter LT-DS 2.36662, we have reviewed the subject matter and have the following comments.

1. A sewer improvement district project (Makaha Sewers, Section 1) will be initiated shortly along Farrington Highway between Jade Street and Kaulawaha Road to serve properties on the mauka side of the highway. Please coordinate your work with our Sewers Division.
2. As drainage will be involved in your project, this phase should be coordinated with the Drainage Section of the Division of Engineering.

Very truly yours,

 WALLACE MIYAHIRA
 Director and Chief Engineer

cc: Div. of Engineering
 Div. of Sewers

April 26, 1977
 LT-DS
 2.36613

Mr. Wallace Miyahira
 Director and Chief Engineer
 Department of Public Works
 City and County of Honolulu
 650 South King Street
 Honolulu, Hawaii 96813

Dear Mr. Miyahira:

Subject: EIS Preparation Notice, Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street, Project No. 93B-01-75

Thank you for your letter of April 15, 1977 regarding the above indicated EIS Preparation Notice. We have reviewed these comments and provide the following dispositions:

1. We will coordinate the highway-widening project with the sewer-improvement district project. We anticipate, however, that your project will be completed prior to construction of the widening project and will verify this with Sewers Division staff.
2. The drainage plans will be coordinated with the approval by the Drainage Section of the Division of Engineering.

Your comments as well as our response will be incorporated into the EIS, which is anticipated to be completed in the latter part of this year.

Very truly yours,

 E. ALVEY WRIGHT
 Director

cc: Environmental Communications, Inc.
 (w/copy of letter dated April 15, 1977)

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OFFICE OF THE SUPERINTENDENT
(81)1397.6

APR 13 1976

C. F. B.
CHARLES G. CLARK
SUPERINTENDENT

DIRECTOR'S OFFICE

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OFFICE OF THE SUPERINTENDENT
DEPT. OF TRANSPORTATION
STATE OF HAWAII

APR 22 1 11 PM '77

DEPT. OF TRANSPORTATION
STATE OF HAWAII

HONOLULU, HAWAII 96822

April 18, 1977

OFFICE OF THE SUPERINTENDENT

Honorable E. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Admiral Wright:

Subject: Waianae Intermediate School
Waianae Library
Farrington Highway Widening Project

This is in response to your letter No. IETV-BL 3.42224 dated February 2, 1976 to the Department of Education. Attached herewith is a copy of the February 19, 1976 Memorandum from the DOE commenting on the subject project.

We have reviewed the proposed widening project and have the following comments to offer:

Waianae Intermediate

The existing fire hydrant, water meter, valves and chain-link fence shown on the attached plan should be relocated as required.

Waianae Library

1. The existing lawn sprinkler heads within the proposed roadway right-of-way as shown on the attached plan should be cut and plugged.
2. The existing water meter, valves, telephone booth, sign post, and coconut trees should be relocated as required.
3. The existing lawn sprinkler heads within the proposed slope easement should be raised as required and the vacuum breakers should be adjusted accordingly.

MEMO TO: Honorable E. Alvey Wright, Director
Department of Transportation

FROM: Charles G. Clark, Superintendent
Department of Education

SUBJECT: Highway Widening Fronting Waianae Intermediate School
and Waianae Library - LP-DS - 2, 36662

We have reviewed the Environmental Impact Statement (EIS) Preparation Notice forwarded with your letter of April 5, 1977.

We have no objection to the proposed widening of Farrington Highway, provided the project complies with the Department of Accounting and General Services' recommendations of April 13, 1976 (copy attached).

Attachment

Honorable E. Alvey Wright
Page 2

(P)1397.6

4. The existing library walkway access off of Farrington Highway should be modified as required to maintain a ramp grade of less than 8.33%.

Thank you for the opportunity of reviewing the proposed project. If there are any questions, please call us.

Very truly yours,

HIDEO HIRAKAWA
State Comptroller

H:nlw
Attachment

cc: Mr. C. Clark ✓
Mr. L. Viduya

#6437 (DIR)

LT-ls
2-5822/

July 22, 1977

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

Dear Mr. Clark:

Subject: Environmental Impact Statement
Preparation Notice, Farrington Highway
widening, Lunalilo Homestead Roll to
Vicinity of Judd Street
Project No. 938-01-75

Thank you for your letter of April 18, 1977, regarding the above indicated Environmental Impact Statement (EIS) Preparation Notice. We would like to respond to the comments made by the Department of Accounting and General Services that were attached to your letter. Dispositions to each of the items brought up are provided below:

1. ENGINEERING

Engineering plans for the proposed project will include relocation of the existing fire hydrant, water meter, valves, and chain link fence for that portion of the roadway which will affect Waiwae Intermediate School.

2. HAZARDOUS LIBRARY

- a. Plans call for the existing lawn sprinkler heads to be cut and plugged within the proposed roadway right-of-way.

6490

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
DIRECTOR'S OFFICE

RECEIVED
APR 29 9 27 AM '77



FRANK F. PARI
MAIWA
RICHARD H. BRADPETER
SINIGANG SINIGANG

APR 25 6 06 AM '77
OFFICE
TRAINING DIVISION

FRANCIS KEALA
CHIEF
BUSINESS CLERK
DEPUTY CHIEF

OUR REFERENCE TT-JK
YOUR REFERENCE LT-DS
2.36662

April 19, 1977

Mr. E. Alvey Wright, Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: Request for Comments on EIS Preparation Notice,
Farrington Highway Widening, Eualualei Homestead
Road to Vicinity of Jade Street,
Project No. 93B-01-75

We have reviewed the proposed widening of Farrington Highway,
from Eualualei Homestead Road to the vicinity of Jade Street.
The street widening will definitely assist in the movement of
vehicular traffic, and the problems of speeding and merging
into a two-lane roadway beyond Jade Street in the Kaena
direction may be anticipated.

Although there will be an increase in traffic and other calls
for service, we do not anticipate any immediate need for
additional police officers for the near future.

Very truly,
Francis Keala
FRANCIS KEALA
Chief of Police

Mr. Charles G. Clark
July 22, 1977
Page 2

LT-DS 2.36627

- b. The existing water meter, valves, telephone booth, sign post, and coconut trees will be appropriately relocated.
- c. The existing lawn sprinkler heads within the proposed slope easement will be raised as required under vacuum breakers adjusted accordingly.
- d. The existing library walkway off of Farrington Highway will be modified to maintain a ramp grade of less than 8.33%.

Again, thank you for your comments.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

HT:ja

cc: LT-JL
Environmental Communications, Inc. w/cy of ltr dtd 4/18/77
and 4/13/76
Paul T. Taniguchi, Ltd. w/cy of ltr dtd 4/18/77 & 4/13/76
D/CS, State Comptroller

6424

RECEIVED

APR 25 1 23 PM 1977
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
DIVISION OF PUBLIC WORKS
P. O. BOX 111, HONOLULU, HAWAII 96810

LETTER NO. (P)1412.7

GEORGE R. ARYOSHI
GOVERNOR

13-00
2.3661

April 22, 1977

Chief Francis Keala
Police Department
City & County of Honolulu
1425 South Beretania Street
Honolulu, Hawaii 96814

Dear Chief Keala:

Subject: EIS Preparation Notice, Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street, Project No. 538-01-75

Thank you for your comments of April 19, 1977 regarding the above indicated EIS Preparation Notice. Your comments will be incorporated into the EIS which is anticipated to be completed at the end of this year. We note that in addition to the technical studies, which are being prepared, we are also preparing as part of the socioeconomic impact study the potential impact this project will have on water. The results of this study will be incorporated into the EIS.

Again, our appreciation for your comments.

Very truly yours,

[Signature]
E. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated April 19, 1977)

RECEIVED
APR 22 1 11 PM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION
HONOLULU, HAWAII

Honorable E. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Admiral Wright:

Subject: EIS Preparation Notice, Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street

This is in response to your letter No. LT-DS 2.36662 dated April 5, 1977.

From the standpoint of adverse environmental impact, we have no comments to offer as we feel the benefits gained from the project will outweigh any expected minor adverse environmental impact.

However, we do have some comments on the potential effect of the project on the operational aspects of the State facilities serviced by our department. These facilities are as follows:

Facility	TMK
Waianae Library	8-5-2:42
Waianae Civic Center	8-5-28:41
Waianae Intermediate School	8-5-28:42
Waianae High School	8-5-02:18; 8-5-15:1

Our comments are as follows:

1. There should be special speed limits imposed during school hours for the portions of the highway fronting the schools.

Honorable E. Alvey Wright
Page 2

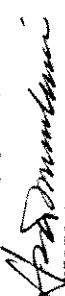
Ltr. No. (P)1412.7

2. Air quality and noise study in the vicinity of the schools should be conducted.
3. The design of the highway should not in anyway pose drainage problems in any of the DAGS-serviced facilities.
4. The design of the highway should not in anyway pose a danger to the vehicles ingressing or egressing from the DAGS-serviced facilities.
5. The design must provide for an entrance to the proposed Waianae Civic Center.

We also would like to refer to our letters No. (P)1397.6 dated April 13, 1976 and No. (P)1659.6 dated June 16, 1976 in which other comments were made.

Because our comments are general in nature without the benefit of any preliminary plans, we would appreciate it if we can obtain a copy of such plans for our review.

Very truly yours,


HIDEO MURAKAMI
State Comptroller

#6424 (DIR)

LT-03
2:38828

July 24, 1977

Mr. Hideo Murakami
Comptroller
State of Hawaii
Department of Accounting
and General Services
P. O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Subject: Environmental Impact Statement
Preparation Notice, Karrington Highway
Widening, Luahala Homestead Road to
Vicinity of Jeda Street
Project No. 93B-01-75

Thank you for your comments of April 20, 1977 on the above mentioned project. We have responded to each of your comments on an itemized basis below.

1. Special speed-limit signs (relating to school hours) will be posted.
2. The air quality and noise studies presently being prepared include receptor sites along the roadway and in the vicinity of the schools (the portion fronting the roadway). The results of both studies will be provided in the Environmental Impact Statement; additionally, copies of both studies will be provided to your Department for your review.
3. Because this section of Karrington Highway traverses through a flood-prone area without adequate drainage to the ocean, the proposed roadway drainage will reduce but not eliminate areas currently impacted by floodwaters.



DEPARTMENT OF THE ARMY
 HEADQUARTERS, 3151 KALANANAKU AVENUE, HONOLULU, HAWAII
 AFV-RE-EE RECEIVED

APR 27 1977
 DEPT. OF TRANSPORTATION
 HIGHWAYS DIVISION

AFV-RE-EE

DIRECTOR'S OFFICE
 APR 25 8 28 AM '77
 DEPT. OF TRANSPORTATION

State of Hawaii
 Department of Transportation
 869 Punchbowl Street
 Honolulu, Hawaii 96813

LT-DS 2.38028

Mr. Hideo Ihirakami
 July 22, 1977
 Page 2

4. The widening will accommodate additional vehicles, allowing for a better movement of traffic and decreasing travel time. The highway design should also provide adequate safety precautions relating to vehicular ingress and egress from public facilities.
5. The highway plans will provide for an entrance to the proposed Waianae Civic Center, and the location will be coordinated with your office.

We hope that we have adequately responded to your comments. If we can provide further information, please contact Herbert Teo (548-6932) of our Technical Design Services Office, Land Transportation Facilities Division.

Very truly yours,

R. E. Alvey
 R. E. ALVEY
 Director

cc: LT-DS
 Paul T. Taniguchi, Ltd. w/cy of ltr dtd 4/20/77
 Environmental Communications, Inc. w/cy of ltr dtd 4/20/77

HT:jm

∞ ∞

Sincerely yours,

Carl P. Rodolph
 CARL P. RODOLPH
 Colonel, CE
 Director of Facilities Engineering



6471



ANDREW I. CHANG
DIRECTOR OF SOCIAL SERVICES AND HOUSING

STATE OF HAWAII
DEPARTMENT OF SOCIAL SERVICES AND HOUSING
P. O. Box 339
Honolulu, Hawaii 96809

April 25, 1977

RECEIVED
APR 27 1 28 PM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

MEMORANDUM:

TO: Office of Environmental Quality Control
550 Halekawailla St., Room 301
Honolulu, Hawaii 96813

FROM: Andrew I. T. Chang, Director
Department of Social Services and Housing

SUBJECT: Farrington Highway Widening, Luualalei Homestead Road to
Vicinity of Jade Street, Project No. 93B-01-75

We have reviewed the subject EIS Preparation Notice for the widening of Farrington Highway.

The Hawaii Housing Authority presently has projected plans for approximately 1,100 dwelling units to be constructed in the Waianae Coast area during the next three/five years. Approximately 320 units of the total will be situated in Makaha off Water Street.

The subject widening project which will result in increased accessibility will accommodate and enhance our projected housing plans in the Waianae area and any future plans for further urbanization.

Andrew I. Chang
DIRECTOR

Attachment
cc: DOT, Land Transportation Facilities Division
Governor, State of Hawaii
HHA, Attn: Mr. Kurland/Dr. Wong

DIRECTOR'S OFFICE
APR 28 1 37 PM '77
DEPT. OF
TRANSPORTATION

April 26, 1977

Mr. E. Alvey Wright
Director, Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: Farrington Highway Widening, Luualalei Homestead Road
to Vicinity of Jade Street, Project No. 93B-01-75

We have reviewed the above-mentioned EIS preparation notice and have no comments to offer.

Thank you for the opportunity to review this preparation notice.

Sincerely,

Jack P. Kanalz
Jack P. Kanalz
State Conservationist

APR 29 4 20 PM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

RECEIVED
APR 29 9 28 AM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION



6481

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU OFFICE

650 SOUTH KING STREET
HONOLULU, HAWAII 96813



MAY 2 8 09 AM '77
DEPT. OF TRANSPORTATION

FRANK P. PARI
MAYOR

April 26, 1977

Mr. E. Alvey Wright, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

SUBJECT: EIS PREPARATION NOTICE
FARRINGTON HIGHWAY WIDENING

We have reviewed the subject project and find your proposal to be acceptable.

Sincerely,

Young Suk Ho
YOUNG SUK HO, Director

RECEIVED
MAY 4 2 10 PM '77
DEPT. OF TRANSPORTATION
HIGHWAYS DIVISION

7292

GEORGE R. ARYKOSH
Governor
HONOLULU, HAWAII
FRANK SRINIVASAK
Mayor

RECEIVED
DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT
MAY 2 3 17 PM '77



2000 KALANANĪHŪKI AVENUE, SUITE 200
HONOLULU, HAWAII 96815
DEPT. OF TRANSPORTATION
April 29, 1977

Ref. No. 3455

The Honorable E. Alvey Wright
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Wright:

Subject: Environmental Impact Statement Preparation Notice,
Farrington Highway Widening, Luualalei Homestead Road
to Jade Street, Project No. 933-01-75

We have reviewed the subject EIS Preparation Notice and wish to offer the following comments:

- 1) Section IV, "General Description of the Action's Technical, Economic, Social and Environmental Characteristics," should contain additional information regarding the physical characteristics of Farrington Highway as a major vehicular arterial from/to the urban boundaries of Honolulu. Data such as vehicular capacity, AIF estimates, pavement width, and time/distance travel estimates would enable reviewers to gain a better understanding of how the subject widening project might impact existing conditions.
- 2) In developing Section V-B, "Social and Land Use Considerations," we suggest that you explore information supplied in the following two publications:
 - a) 1975 Census Update, Oahu - Office of Economic Opportunity (CEO)
 - b) Employment By Place of Work, 1974 - Department of Planning and Economic Development/Department of Health, State of Hawaii
- 3) An analytical investigation of potential land use impacts resulting from the widening project should include a review of the Oahu General Plan and County of Honolulu Interim Zoning Control Ordinance. Maps detailing existing land use and

The Honorable E. Alvey Wright
Page 2
April 29, 1977

zoning of Makaha Valley, for example, indicate that a substantial amount of acreage is presently zoned for residential, apartment or hotel use. Each of this land is currently undeveloped. The subject EIS should identify whether the widening project will significantly induce development of urban vacant or underdeveloped lands in the Waianae area detailing environmental and socio-economic considerations.

- 4) Specific information should be supplied in the subject EIS regarding the bikeway component of the highway widening construction project. Bikeplan Hawaii, prepared by the Department of Transportation, has identified Waianae as an area where bikeway facilities should be constructed. In accordance with Bikeplan Hawaii recommendations, bicycle AUM counts (weekday/weekend) should be taken prior to construction of any bikeway facility in order to assess cost/benefit ratios and to serve as base in monitoring bicycle use after the bikeway is constructed. Consultation with the Hawaii Bicycling League during the bikeway location and design stage may also be desirable.

We have no further comments to offer at this time but appreciate this opportunity to review the EIS Preparation Notice.

Sincerely,


HIDEO KONO

cc: Office of Environmental Quality Control

LX-OS
2.38824

July 22, 1977

Mr. Hideo Kono, Director
Department of Planning and
Economic Development
250 South King Street
Honolulu, Hawaii 96813

Dear Mr. Kono:

Subject: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to Vicinity
of Jade Street, Project No. 93B-01-75

Thank you for your comments of April 29, 1977 regarding the above indicated EIS Preparation Notice. We have addressed your responses on an itemized basis below:

1. In the EIS we will attempt to discuss the project's technical, economic, social and environmental characteristics with such detailed data as vehicular capacity, present estimated ADT, pavement width, rights-of-way, and time/distance travel estimates.

2. Both the 1975 Census Update, Oahu, and the Employment by Place of Work, 1974, will be reviewed and appropriately utilized in describing present socioeconomic conditions and socioeconomic impact.

3. Presently the socioeconomic study will entail the possible impact, direct and indirect, on land use. Understandably, this socioeconomic aspect (secondary urban impact) is difficult to evaluate. One of the principle reasons for this difficulty in evaluation is that the Waianae Coast is undergoing many types of changes. This includes the projected residential unit growth of 1,000 in the next five years, the construction of the Waianae Small Boat Harbor, the impact of growth of Campbell Industrial Park and the adjacent Iwa district, as well as the development of the Makaha Beach Area. With several large developments of this nature taking place concurrently, it is difficult to segregate their individual impact on land use and therefore

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

FRANK F. FASI, Mayor
YOSHIE H. FUJINAKA, Chairman
STANLEY S. KAPAHASHI, Vice Chairman
REBECCO S. KAWAHARA
EDWARD F. C. LAU
E. ALVEY WRIGHT
Fred Dailey

EDWARD Y. HIRATA
Manager and Chief Engineer

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MAY 9 4 01 PM '77
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LAND TRANSPORTATION AND TRANSPORTATION
FACILITIES DIVISION
MAY 2, 1977

LF-US 2,38824

DR. DADELO ROMO
Page 2
July 22, 1977

on population growth. We feel that the socioeconomic study now underway will be one of the first of this nature prepared in the State. For this reason, we hope that upon its completion, we can provide your Department a study in its entirety so that the methodology presented can be reviewed and evaluated by your Department's planners. At this time we anticipate completion of the socioeconomic study in November.

4. In the area of bikeways, we will consult with the existing Bikeway Plans to determine where coordination can be incorporated and included within the scope and funding of this project.

We hope that we have provided adequate responses to your comments, and if we can be of further assistance, please contact Herbert Law (548-8932) of our Technical Design Services Office, Land Transportation Facilities Division.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated April 29, 1977)

Admiral E. Alvey Wright
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Admiral Wright:

Subject: Request for Comments on EIS Preparation Notice, Farrington Highway Widening, Iualualei Homestead Road to Vicinity of Jade Street, Project No. 93B-01-75

This confirms that our proposed 20-inch main along Farrington Highway from Iualualei Homestead Road to Kaulawaha Road will be constructed in conjunction with your project. We will pay for the costs incurred by our new main installation. A copy of the negative declaration previously transmitting this information to you is enclosed.

In order to protect our existing water systems in the project area, we request that the highway widening construction plans be coordinated with us.

Please call Mr. Lawrence Whang at 548-5221 if further information is needed.

Very truly yours,

Edward Y. Hirata
Edward Y. Hirata
Manager and Chief Engineer

Enc.

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3. Project should, at the least, extend beyond the developed area of Makaha. The major constraint seems to be funding. Project Characteristics. The title of Section IV, General Description of the Action's Technical, Economic, Social and Environmental Characteristics, leads a reader to expectations not realized from a reading of the section.

The EIS merely indicates that widening from a two-lane to a four-lane undivided highway is proposed within a proposed 80-foot right-of-way (expanded from 60 feet), with signalized intersections. ADT's for 1969, 1975 and 1998 are provided.

The EIS should indicate existing and projected peak-hour traffic volumes; typical pavement widths; highway capacity; what intersections will be signalized; pedestrian crossings; speed limits; slow zones; whether parking will be permitted; how access to abutting properties will be handled; where left turn lanes, if any, will be provided to major land uses; and exit lanes for dispersion of traffic onto slower speed streets. Appropriate maps and diagrams should be provided in the EIS.

The EIS should also include estimated costs, estimated start of construction and estimated time of construction or completion date.

4. Population, Housing and Land Use. The EIS should provide information on population and housing in the district as well as the project area or vicinity, i.e., Waianae Valley and Makaha Valley. What kind of growth has occurred? How much? Where? What is the projected growth and where is this growth expected? These should be related to the ADT's and peak hour volumes; i.e., the EIS should show existing as well as projected land use and indicate what land use pattern was the basis for the projected ADT's for 1998.

Population counts are available from the censuses and the Department of Planning and Economic Development estimates. Housing counts are also available from the censuses. Housing authorizations and land use data are available from the Data Systems Branch of the Department of General Planning. Population projections for the Waianae District are available in the revised General Plan. The 1975 OEO Census update provides updated socio-economic data. 1970 and 1975 comparisons can be made.

5. Geology and Soils. The section on Geology has little relevance to the discussion. It should be revised to relate to the nature of urban development in Waianae, to the development of Farrington Highway along the coast, and to later discussion of alternate highway proposals.

The EIS should include a general discussion of soils in the highway right-of-way. The presence, if any, of clayey soils with high shrink-swell potential should be indicated.

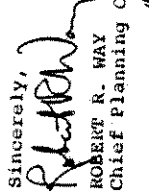
6. Drainage. Major streams or drainage channels should be identified and mapped, particularly if they require bridges or culverts. The EIS should indicate the ultimate fate of drainage from the highway and the impact at those locations to which drainage waters ultimately will flow.

The EIS should indicate what portions of the project are in designated tsunami or flood prone areas.

7. Network. The EIS should show that the proposed project is an element of an overall transportation network for the comprehensively planned development of the area.

In this regard, the EIS should indicate, on appropriate maps, what network configurations have been officially adopted by City Council beginning with the General Plan of 1964, and following up with discussions of various amendments up to the present time, and indicating what currently is the officially adopted transportation network for this area. The EIS should indicate projected ADT's and peak hour traffic volumes for the major elements of the network.

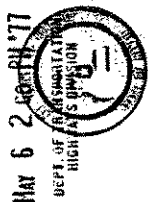
Sincerely,


ROBERT R. WAY
Chief Planning Officer

RRW:fmt

7299

DEPARTMENT OF GENERAL PLANNING
CITY AND COUNTY OF HONOLULU
655 KEELE STREET
HONOLULU, HAWAII 96813



FRANK P. HARRIS
DIRECTOR

MAY 4 1 12 PM '77
ROBERT R. WATSON
CHIEF PLANNING OFFICE
TRANSPORTATION
DGP4/77-868 (CT)

LT-DS
2-38805

July 22, 1977

Mr. Edward V. Hirata
Manager and Chief Engineer
Board of Water Supply
City & County of Honolulu
630 North Kalia Street
Honolulu, Hawaii 96843

Dear Mr. Hirata:

Subject: EIS Preparation Notice, Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street, Project No. 93B-01-75

Thank you for your letter of May 2, 1977 regarding the above indicated EIS Preparation Notice. We will continue to coordinate with your staff the proposed installation of a 20" water main along Farrington Highway from Lualualei Homestead Road to Kaulawaha Road. It is our understanding that the installation of this water main will be in conjunction with this project and that your department shall provide funds for the cost incurred by this new installation.

Again, thank you for your comments.

Very truly yours,
Frank P. Harris
FRANK P. HARRIS
DIRECTOR

cc: Environmental Communications, Inc.
(w/copy of letter dated May 2, 1977)

RECEIVED
MAY 9 9 26 AM '77
DESIGN BRANCH
HIGHWAYS DIVISION
DEPT. OF TRANSPORTATION

May 2, 1977

Mr. E. Alvey Wright, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

Farrington Highway Widening--Lualualei Homestead Road to Vicinity of Jade Street, Project No. 93B-01-75
Request for Comments on EIS Preparation Notice,
April 5, 1977
DOT Ref. LT-DS 2.38662

We offer the following comments and suggestions:

1. Maps. If maps are included in the EIS, they should relate to the text. Figure 1 of the EIS Preparation Notice is inappropriate. It is an old map and does not show what the text indicates--". . . the major highway system on the island of Oahu." It would be better if you used the typical road maps available at the major service stations at an approximate scale of 1" = 4 miles, or a portion of a Rand-McNally map at an approximate scale of 1" = 3 miles. Also, if more than one map is used, the maps should face the same way to the reader. When figures 2 and 3 are placed side-by-side, one of the maps reads upside down because the labels are printed inconsistently.
2. Project Limits. The basis for the project limits should be explained. Farrington Highway is a four-lane facility up to Lualualei Homestead Road. The project starts here and ends at Jade Street, about halfway through Makaha.

The EIS should indicate why it ends here rather than a few blocks further north or at or beyond Makaha Beach Park. The

Mr. Robert R. Way
Page 2
July 27, 1977

LT-DS 2.38904

LT-DS
2.38904

July 27, 1977

Mr. Robert R. Way
Chief Planning Officer
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Way:

Subject: Farrington Highway Widening, Laualalei
Homestead Road to Vicinity of Jade Street,
Project No. 93B-01-75, EIS Preparation
Notice

Thank you for your letter of May 2, 1977 regarding the above indicated EIS Preparation Notice. We have reviewed your comments and suggestions and would like to provide the following dispositions:

1. Maps. One of the maps which will be included in the EIS is a 1976 map which shows the major highway system for the project area. We feel that this would be a more updated map; the most recent USGS map for this area will also be provided in the EIS. The USGS map will have a scale of 1" = 4,000'.

In regard to your comment on the consistency of the maps in terms of direction, we will attempt to secure maps which consistently read with the north arrow facing up.

2. Project Limits. The basis for the project limit is because of the average daily traffic demands. Our information indicates that the widening between Laualalei Homestead Road and the vicinity of Jade Street will accommodate the residential trips generated in this area. Beyond Jade Street there appear to be few residential destination points. We do recognize, however, that there are recreational destination points beyond the project limits which are congested several times during the year.

3. Project Characteristics. We have reviewed specific items which you identify as part of the action's general description. We note that wherever possible, we will attempt to include these concerns in the EIS.
4. Population, Housing and Land Use. Presently the socioeconomic study for the affected area is being conducted. One of the objectives of this socioeconomic study is to determine population, housing and land-use trends. We will provide this information in the EIS.
5. Literature research will be conducted to determine the available population and housing data for the Waianae district. Amongst the references to be used will be the 1975 OEO Census update.
6. Geology and Soils. The section on geography was included as a general discussion of the site's geographic characteristic. For this reason, there was no attempt made to go into detail on soils and geological features. In the EIS, a section on geology and soils will be provided. Additionally, urban development in Waianae will be treated as a separate item and will likely be discussed under the section Urban Characteristics of the Project Area.
7. Drainage. As you have suggested, we will identify the major streams and drainage channels which are affected.

The EIS will contain a project entitled Natural Hazards which reviews the project area in terms of whether it lies within designated tsunami or flood-prone areas.

7. Network. As we understand this comment, this aspect refers to the long-range plans for the development of a transportation system in the Waianae area. In this regard we will endeavor to identify the relationship of this proposed project with the long-range comprehensive plan for the area.

6541

RECEIVED
 MAY 13 1 19 PM '77
 DEPT. OF TRANSPORTATION
 HONOLULU, HAWAII

UNIVERSITY OF HAWAII
 DEPARTMENT OF HEALTH
 HONOLULU, HAWAII

GEORGE R. ARRYOSH
 GOVERNOR OF HAWAII

GEORGE A. I. YUEN
 DIRECTOR OF HEALTH
 AUDREY W. MAUI, M.D., MPH
 Deputy Director of Health
 HELEN N. THOMPSON, M.A.
 Deputy Director of Health
 JAMES S. KUMAGAI, PH.D., P.E.
 Deputy Director of Health

May 3, 1977

Mr. Robert R. Way
 Page 3
 July 27, 1977

LT-DS 2.38904

We hope that we have provided sufficient responses to your comments and find that your concerns and suggestions will provide useful guidelines in our preparation of the EIS.

Very truly yours,

E. Alvey Wright
 E. ALVEY WRIGHT
 Director

Mr. E. Alvey Wright
 Director
 Department of Transportation
 869 Punchbowl St.
 Honolulu, Hawaii 96813

Dear Mr. Wright:

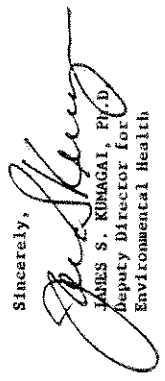
cc: LT-DS
 Environmental Communications, Inc.
 (w/copy of ltr dtd May 2, 1977)

Subject: Request for Comments on Proposed Environmental Impact Statement (EIS) for Farrington Highway Widening, Luahalei Homestead Road to Vicinity of Jade Street, Project No. 93B-01-75

Thank you for allowing us to review and comment on the subject proposed EIS. The following are comments from our staff:

1. The construction activities must comply with Public Health Regulations, Chapter 44B, Community Noise Control for Oahu.
 - a. An application for community noise permit must be filed and approved by the Department of Health.
 - b. Construction activities must comply with the provisions of the conditional use permit as stated in Public Health Regulations, Chapter 44B and the conditions of the permit.
2. The highway must meet the design conditions as stated in Section 4.2-B Highway Noise, of Public Health Regulations, Chapter 44B.

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,

 JAMES S. KUMAGAI, Ph.D.
 Deputy Director for
 Environmental Health



DEPARTMENT OF THE ARMY
PACIFIC OCEAN DIVISION, CORPS OF ENGINEERS
RECEIVED
470 SUTTER ST. S.F. 94108
SAN FRANCISCO 94108

MAY 9 4 02 PM '77

DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

PODED-PV

LT-BS
2.36662

MAY 22, 1977

Mr. James W. Somers
Chief, Director for
Environmental Health
Department of Health
1505 Ala Moana Blvd.
Honolulu, Hawaii 96813

Dear Mr. Somers:

Subject: EIS Preparation Notice, Farrington
Highway Widening, Ina'ala'alei Homestead
Road to Vicinity of Jada Street,
Project No. 93B-01-75

Thank you for your comments of May 3, 1977 relating
to the above indicated EIS preparation notice. We have
reviewed these comments and feel that the proposed project
will comply with Chapter 46-B, Public Health Regulations on
Community Noise Control for noise, items 1.a., 1.b., and 2.
of your comments will be complied with and the necessity
to obtain a community noise permit will be recognized in
the appropriate section of the EIS.

In addition, we note that Dr. Iwao Miyake is presently
conducting a noise study to determine the impact of noise
on the surrounding area. Upon completion of the noise study,
we will provide your department with a copy for your review
and comments.

Very truly yours,

Mr. Alvey Wright
MR. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated May 3, 1977)

RECEIVED
MAY 10 10 27 AM '77
DISTRICT BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

Mr. E. Alvey Wright, Director
Department of Transportation
State of Hawaii
889 Punchbowl St.
Honolulu, HI 96813

Dear Sir:

We have reviewed the Environmental Impact Statement Preparation Notice
for the Farrington Highway Widening as requested in your letter
LT-BS 2.36662 of 5 April 1977.

We suggest that the impact on water quality during construction of
the replacement bridges at Kaupuni Bridge and East Makaha Stream
Bridge be discussed. If the construction involves placement of fill
material in the stream, a Department of the Army permit may be re-
quired.

Thank you for the opportunity to review this document.

Sincerely yours,

Kisuk Cheng
KISUK CHENG
Chief, Engineering Division



DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

HONOLULU MUNICIPAL BUILDING
1350 SOUTH KING STREET
RECEIVED HONOLULU, HAWAII 96813



FRANK P. FARI
MAYOR

KAZU HAYASHIDA
DIRECTOR

TE4/77-1032

RECEIVED
MAY 10 9 14 AM '77
FIELD BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

May 5, 1977

Mr. E. Alvey Wright, Director
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Wright:

Subject: Request for Comments on EIS Preparation Notice,
Farrington Highway Widening, Luaiualei Homestead
Road to Vicinity of Jade Street,
Project No. 93B-01-75

We recommend that Section VIII, page 7, "Proposed Mitigation Measures" include the following provisions:

1. The contractor shall provide, install, and maintain all necessary signs and other protective facilities, which shall conform to the "Rules and Regulations Governing the Use of Traffic Control Devices at Work Site on or Adjacent to Public Streets and Highways" adopted by the Highway Safety Coordinator.
2. Part VI "Traffic Control for Highway Contractors and Maintenance Operators" of the Federal Highway Administration's "Manual on Uniform Traffic Control Devices for Streets and Highways".

Very truly yours,

Kazu Hayashida
KAZU HAYASHIDA
DIRECTOR

333 VIK

LT-DS
2-36822

July 22, 1977

Mr. Misk Cheung, Chief
Engineering Division
Department of the Army
Pacific Ocean Division
Corps of Engineers
Building 230, Fort Shafter
APO San Francisco 96558

Dear Mr. Cheung:

Subject: Environmental Impact Statement
Preparation Notice, Farrington Highway
Widening, Luaiualei Homestead Road to
Vicinity of Jade Street
Project No. 93B-01-75

We have received and reviewed your comments of May 5, 1977, regarding the above indicated Environmental Impact Statement (EIS) Preparation Notice. At this time, we anticipate providing water quality data for Kaupuni Stream and East Makaha Stream. However, this information will be limited to that which is available through various water quality data publications. It is felt that the construction of replacement bridges will not significantly affect the water quality in the streams; however, this potential will be evaluated.

We anticipate that there will be placement of fill material in the stream, and thus, a Department of Army permit will be applied for.

We appreciate your comments and hope that we have adequately responded to them.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

MT:jm

cc: LT-DS
Environmental Communications, Inc. w/cy of ltr dtd 5/5/77

Mr. Kazu Hayashida
July 22, 1977
Page 2

46531 (DIR)

LT-Ds 2.36821

LT-DS
2.36821

July 22, 1977

"Part VI 'Traffic Control for Highway Contractors and Maintenance Operators' of the Federal Highway Administration's Manual on Uniform Traffic Control Devices for Streets and Highways."

Again, thank you for your comments.

Mr. Kazu Hayashida, Director
Department of Transportation
Services
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

bear Mr. Hayashida:

Subject: Environmental Impact Statement
Preparation Notice; Farrington Highway
Widening, Luialualei Homestead Road to
Vicinity of Jade Street
Project No. 938-01-75

Very truly yours,

R. Higashimura
W. E. ALVEY WRIGHT
Director

HT:jm

cc: LT-Ds
Environmental Communications, Inc. w/cy of ltr dtd 5/5/77
Paul T. Taniguchi, Ltd. w/cy of ltr dtd 5/5/77

Thank you for your comments of May 5, 1977 regarding the above indicated Environmental Impact Statement (EIS) Preparation Notice. As you have recommended, we will include in the "Proposed Mitigation Measures" section of the EIS the following provisions:

1. The contractor shall provide, install, and maintain all necessary signs and other protective facilities, which shall conform to the Rules and Regulations Governing the Use of Traffic Control Devices at Work Site On or Adjacent to Public Streets and Highways adopted by the Highway Safety Coordinator.
2. That the following regulations and standards will be compiled with:

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

Address reply to:
COMMANDER (inop)
Fourteenth Coast Guard District
677 Ala Moana
Honolulu, Hawaii 96813

#6540 (DIR)
LI-DS
2.30807

16475
6 MAY 1977

MAY 17 10 19 AM '77
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
DESIGN BRANCH

Admiral E. Alvey Wright
Director, Dept. of Transportation
State of Hawaii
869 Punchbowl Street
HONOLULU, HI 96813

RECEIVED
MAY 13 1 51 PM '77
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

July 22, 1977

Captain J. V. Caffrey
United States Coast Guard
Chief of Staff
Fourteenth Coast Guard District
677 Ala Moana
Honolulu, Hawaii 96813

Dear Captain Caffrey:

Subject: Environmental Impact Statement
Preparation Notice, Farrington
Highway Widening, Luahala
Homestead Road to Vicinity of
Jade Street, Project No. 93B-01-75

We have received and reviewed your comments of May 6, 1977, on the above indicated Environmental Impact Statement (EIS) Preparation Notice. Please be assured that the indicated need for a Coast Guard Bridge Permit application will be pursued. We will also address the horizontal and vertical navigational clearances of both the existing and proposed bridge structures (Kaupuni Stream and East Makaha Stream) in the EIS. It should be noted that the proposed plans for the replacement bridges indicate that there would be no impact on the existing navigational use of these watercourses. At present, navigational uses are primarily limited to small, non-motorized rafts used by children living in this area.


Thank you for your comments and a copy of the booklet, "Permits for the Construction of Bridges Across Navigable

Staff review of the "Environmental Impact Statement Preparation Notice for the Farrington Highway Widening, Luahala Homestead Road to Vicinity of Jade Street" has been completed and comments are hereby submitted as requested in your letter of 5 April 1977.

The Coast Guard's interest in the project is relative to the reconstruction/widening of the Kaupuni Stream and East Makaha Stream bridges as these streams are considered navigable. Because the project is considered a major action requiring the preparation of an Environmental Impact Statement, the EIS is part of the Coast Guard's Bridge Permit application. Thus it should address the horizontal and vertical navigational clearances of both the existing and proposed bridge structures. Clearances should be expressed relative to mean low water and mean high water data. The effects of the proposed work on the present and future navigational use of these watercourses should also be stated.

Please find the enclosed instruction booklet for the preparation of permit applications. If there are any further questions on this matter, please contact LTJG CHERYL GABREL in our Aids to Navigation Branch at 546-7130.

Thank you for the opportunity to review and comment on this EIS Preparation Notice. A copy of the DEIS is requested when it becomes available.

Sincerely,

Captain, U. S. Coast Guard
Chief of Staff

Encl: (1) Booklet-"Permits for the Construction of Bridges Across Navigable Waters of the United States"

Copy to: (less enclosure)
DEQC Hawaii
CEQ Washington DC
Commandant(G-WEP-7)

Captain J. V. Coffrey
July 22, 1977
Page 2

LT-DS 2.38807

Wetere of the United States". Upon completion of the EIS,
a copy will be sent to your office for your further review
and comments.

Very truly yours,

R. McQuinn
for E. ALVEY WRIGHT
Director

WJ:ja

cc: LT-DS
Environmental Communications, Inc. w/cy of ltr dtd 5/6/77

6559



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 16th AIR WING BIRMINGHAM OFFICE
APO SAN FRANCISCO 96347

ATTN: DEEE (Mr. Nakashima, 4492158) JUN 16 1 45 PM '77
RECEIVED
MAY 17 8 56 AM '77

SUBJECT: EIS Preparation Notice
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION DIVISION
FACILITY TRANSPORTATION

to: State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

1. This headquarters has no comment to render relative to the EIS Preparation Notice for Project No. 93B-01-75, Farrington Highway Widening, Luatulei Homestead Road to vicinity of Jade Street, on the Island of Oahu.
2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your development projects throughout the state and the opportunity to review the subject EIS Preparation Notice.

P. D. KOSA
L. J. Dir of Civil Engineering

RECEIVED
MAY 17 8 56 AM '77
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



GEORGE R. ARYORSKI
GOVERNOR



RECEIVED
MAY 16 10 20 AM '77
DEPT. OF TRANSPORTATION
FACILITIES DIVISION
1428 SO. KING STREET
HONOLULU, HAWAII 96814

7173

JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE
YUKIO KITAGAWA
DEPUTY TO THE CHAIRMAN

BOARD MEMBERS
HIKUMI HIGUCHI
MEMBER - AT LARGE
ERNEST MORGADO
MEMBER - AT LARGE
KALFRED K. YEE
MEMBER - AT LARGE
SHIZUO KADOTA
HAWAII MEMBER
STEPHEN G. AU
HAWAII MEMBER
FREDUM OGASAWARA
MAHI MEMBER

May 12, 1977

MEMORANDUM

To: Mr. E. Alvey Wright, Director
Department of Transportation

Subject: EIS Preparation Notice, Farrington Highway Widening,
Luahalei Homestead Road to Vicinity of Jade Street.
Project No. 938-01-75
Ref: LT-DS 2.36662

The Department of Agriculture has reviewed the subject EIS Preparation Notice. We strongly support the socio-economic impact study being proposed to identify the secondary or indirect impacts of the project on the community. Our agency's most immediate concerns would be related to the impact of the project upon agriculture and water supply.

Enclosed for your use is a copy of "Analysis of Changes in Agricultural Activities, A Case Study of Waianae Region," which was prepared as part of the State of Hawaii analytical training program.

If we may be of any further assistance to your consultants, please let us know. Thank you for the opportunity to comment.

John Farias, Jr.

JOHN FARIAS, JR.
Chairman, Board of Agriculture

Enclosure

July 22, 1977

LW-DS
2.38825

MR. JOHN FARIAS, JR.
Chairman
Board of Agriculture
1428 South King Street
Honolulu, Hawaii 96814

DEAR MR. FARIAS:

Subject: EIS Preparation Notice, Farrington Highway Widening, Luahalei Homestead Road to Vicinity of Jade Street, Project no. 938-01-75

We have received your comments of May 12, 1977 on the above indicated EIS Preparation Notice. Presently we are preparing a socioeconomic impact study which will identify the potential impact of the widening project on agriculture. We will utilize the information in the publication "Analysis of Changes in Agricultural Activities, A Case Study of Waianae Region". We would also like to point out that one of the retained socioeconomic consultants participated in this case study and thus would be very familiar with agricultural problems in the Waianae region.

Thank you for your comments, and please be assured that we will provide information on agricultural impact of the proposed project.

Very truly yours,

E. Alvey Wright
E. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated May 12, 1977)

DEPARTMENT OF PLANNING
AND ECONOMIC DEVELOPMENT

DIRECTOR'S OFFICE

LAND USE COMMISSION

June 3 11 03 AM '77

Suite 1705, Pacific Trade Center, 190 S. King Street, Honolulu, Hawaii 96813

Governor
EDDIE FENCEN
Chairman
STANLEY SAKAHASHI
Vice Chairman

RECEIVED
JUN 6 1 29 PM '77

DEPT. OF
TRANSPORTATION
June 1, 1977

COMMISSION MEMBERS:

James Carras
Charles Duke
Collette Macbado
Shinsai Miyasato
Missou Oua
Carol Whitesell
Edward Yonai

GORDAN FURUTANI
Executive Officer

The Honorable E. Alvey Wright, Director
Department of Transportation
State of Hawaii
869 Funchbowl Street
Honolulu, Hawaii 96813

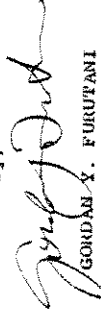
Dear Mr. Wright:

Subject: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to
Vicinity of Jade Street,
Project No. 93B-01-75

Thank you for your letter of April 5, requesting our
comments regarding the subject EIS Preparation Notice.

We have no comments to offer at this time, however, we
appreciate the opportunity to review the document.

Sincerely,



GORDAN X. FURUTANI
Executive Officer

GXF:yk

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JUN 6 4 08 PM '77
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



XV. LIST OF NECESSARY APPROVALS

The following approvals/permits will be required prior to implementing the proposed widening:

1. Shoreline Management Area Application. Submitted to the Department of Land Utilization, City and County of Honolulu, this application is necessary under Ordinance 4529, relating to the protection and enhancement of shoreline areas around Oahu. The City Council provides approval of the application.
2. Grading Permit. Issued by the Department of Public Works, City and County of Honolulu.
3. Building Permit. Issued by the Building Department, City and County of Honolulu.
4. An application for a community noise permit must be filed and approved by the State Department of Health.

As indicated in Exhibits I and II, no permits for this project will be required by the Coast Guard and the U.S. Army Corps of Engineers.

XVI. REPRODUCTION OF THE LETTERS RECEIVED DURING THE
DRAFT ENVIRONMENTAL IMPACT STATEMENT REVIEW
PERIOD AND THE RESPONSES PROVIDED

The review period for the Draft Environmental Impact Statement was set by the Environmental Quality Commission. This review period was from May 22, 1978 through June 22, 1978. During this period, a total of twenty six (26) agencies provided written responses. Of this total, thirteen (13) provided responses indicating that they had no comments to offer at this time on the Draft EIS.

In this section, copies of each of the letters received and, where appropriate, the letter of disposition from the State Department of Transportation follows. The agencies providing letters with "no comments" are indicated by an asterisk (*).

- *1. Department of Public Works, City & County of Honolulu (May 24, 1978)
- *2. State Department of Planning and Economic Development
(May 25, 1978)
- *3. Department of Housing and Community Development, City & County
of Honolulu (May 26, 1978)
4. State Department of Agriculture (May 30, 1978)
5. Division of State Parks, State Department of Land and Natural
Resources (May 30, 1978)
- *6. Office of the Adjutant General, State Department of Defense
(May 30, 1978)
- *7. State Department of Health (May 31, 1978)
- *8. Fish and Wildlife Service, U.S. Department of the Interior
(June 1, 1978)
- *9. Directorate of Health Services, U.S. Department of the Interior
(June 2, 1978)
10. Department of Parks and Recreation, City & County of Honolulu
(June 2, 1978)
- *11. Soil Conservation Service, U.S. Department of Agriculture
(June 2, 1978)
12. Building Department, City & County of Honolulu (June 5, 1978)
- *13. Headquarters 15th Air Base Wing (PACAF), U.S. Department of
the Air Force (June 6, 1978)

- *14. Fourteenth Naval District Headquarters, U.S. Department of the Navy (June 6, 1978)
15. State Department of Land and Natural Resources (June 7, 1978)
- *16. State Department of Accounting and General Services (June 8, 1978)
- *17. State Department of Social Services and Housing (June 9, 1978)
18. Department of Land Utilization, City & County of Honolulu (June 9, 1978)
- *19. Board of Water Supply, City & County of Honolulu (June 13, 1978)
20. Department of General Planning, City & County of Honolulu (June 14, 1978)
21. Corps of Engineers, U.S. Department of the Army (June 14, 1978)
22. State Department of Education (June 22, 1978)
23. Department of Transportation Services, City & County of Honolulu (June 22, 1978)
24. American Lung Association of Hawaii (June 22, 1978)
25. Environmental Center, University of Hawaii at Manoa (June 22, 1978)
26. State Office of Environmental Quality Control (June 27, 1978)

Copies of these responses (reduced) appear in the same order they are listed in, on the following pages.

1853

DEPT. OF TRANSPORTATION
STATEWIDE TRANSPORTATION PLANNING OFFICE
FRANK SRIYANEK
Director



DEPARTMENT OF PLANNING AND ECONOMIC DEVELOPMENT

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

MAY 31 9 51 AM '78

May 25, 1978

Ref. No. 6470

RECEIVED

MAY 30 8 27 AM '78

STATEWIDE TRANSPORTATION PLANNING OFFICE
DEPT. OF TRANSPORTATION

ENV 78-165

MAY 25 1 46 PM '78

DEPT. OF TRANSPORTATION
LAND TRANSPORTATION FACILITIES DIVISION

May 24, 1978

Environmental Quality Commission
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

Subject: EIS for the Farrington Highway Widening,
Luualalei Homestead Road to Vicinity of
Jade Street, Waianae, Hawaii

We have reviewed the subject EIS and have no additional comments.

Very truly yours,

WALLACE MIYAHIRA
Director and Chief Engineer

cc: DOT, Land Transportation Facilities Div.

The Honorable Ryokichi Higashionna
Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Dr. Higashionna:

Subject: Environmental Impact Statement
Farrington Highway Widening, Luualalei Homestead Road
to Jade Street, Waianae, Oahu

Our review of the above document finds that the concerns expressed in our letter of April 29, 1977, as well as the probable adverse impacts which may result from the project have been addressed satisfactorily.

Thank you for the opportunity to provide comments.

Sincerely,

HIDEO KONO

RECEIVED
JUN 2 8 19 AM '78
STATEWIDE TRANSPORTATION PLANNING OFFICE
DEPT. OF TRANSPORTATION

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MAY 31 1 54 PM '78
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



JOHN FARIAS, JR.
CHAIRMAN, BOARD OF AGRICULTURE
YUHO KITAHARA
DEPUTY TO THE CHAIRMAN

RECEIVED
MAY 31 11 36 AM '78
DEPARTMENT OF TRANSPORTATION
LAND TRANSPORTATION DIVISION
MAY 30, 1978

May 26, 1978

Environmental Quality Commission
State of Hawaii
550 Halekauwila Street, Rm. 301
Honolulu, Hawaii 96813

Gentlemen:

Subject: Farrington Highway Widening
Lualualei Homestead Road to
Vicinity of Jade Street
Environmental Impact Statement

We have reviewed the subject Environmental
Impact Statement and have no comments.

Thank you for allowing us the opportunity of
reviewing the statement.

Sincerely,

TYRONE J. KUSAO
TYRONE T. KUSAO
Director

Office of Environmental Quality Control
Department of Transportation
Land Transportation Facilities Division

RECEIVED
MAY 31 11 36 AM '78
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

MEMORANDUM

To: Office of Environmental Quality Control

Subject: EIS for Farrington Highway Widening, Lualualei Homestead
Road to Vicinity of Jade Street, Maianae District, Oahu

The Department of Agriculture has reviewed the Draft EIS for the
proposed Farrington Highway project. The lands that will be acquired
to increase portions of the right of way are vacant lands under the
ownership of either the State or Federal government. Agriculturally
productive lands will not be adversely affected.

Our concern lies in "Section XIII, Reproduction of Comments and
Responses made during the Consultation Process," on pages 98 and
99. It is acknowledged there that this project will be done in
conjunction with the Board of Water Supply's installation of a
20-inch water main. The impact of this new main should be stated,
clarified and examined in the final EIS as it will undoubtedly affect
the community and agricultural enterprises in the area.

John Farias, Jr.

JOHN FARIAS, JR.
Chairman, Board of Agriculture

cc: Department of Transportation

GEORGE R. ARIYOSHI
GOVERNOR

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE ADKINS
DOUGLAS S. SWANSON
CHARLES O. SWANSON



DIRECTOR'S OFFICE

JUN 6 3 20 PM '78

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF STATE PARKS
P. O. BOX 421
HONOLULU, HAWAII 96809

RECEIVED
DIVISIONS
CONSERVATION
FISH AND GAME
FORESTRY
LAND MANAGEMENT
WATER AND LAND DEVELOPMENT
FACILITIES DIVISION

JUN 7 12 43 PM '78

RECEIVED
REGIONAL BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

May 30, 1978

Office of Environmental Quality Control
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Dear Sir:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement for the Proposed Farrington Highway Widening Project No. 93B-01-75, Lualualei Homestead Road to Jade Street, Waiānae, Oahu, May 19, 1978.

Subject: Draft EIS for the Proposed Farrington Highway Widening Project, Lualualei Homestead Road to Jade Street, Project No. 93B-01-75

Thank you for your letter of May 30, 1978 commenting on the above-mentioned Draft EIS. In response to your concern about the Board of Water Supply's installation of a 20-inch water main being done in conjunction with this project, we note that in April 1975, the Board of Water Supply submitted to our Department a Negative Declaration for the installation of the 20-inch water main. The two projects were being combined so that the disruption to traffic movement would be minimized. We will include this information in the Revised EIS.

Very truly yours,

R. Higashionna
R. Higashionna

cc. Mr. Ryokichi Higashionna, Director
Department of Transportation
Land Transportation Facilities Division

Sincerely yours,

Jane L. Silverman
Jane L. Silverman
Historic Preservation Officer
State of Hawaii

RECEIVED
JUN 7 12 54 PM '78
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION



416161-107
TELEPHONE NO
548-1515

RECEIVED
JUN 7 8 20 AM '78
STATE OF HAWAII
ENVIRONMENTAL QUALITY COMMISSION
OFFICE OF THE GOVERNOR
550 HALEKAUWILA ST.
HONOLULU, HAWAII 96813

May 19, 1978

Dear Reviewer:

Attached for your review is an Environmental Impact Statement (EIS) prepared pursuant to Chapter 343, Hawaii Revised Statutes and its Rules and Regulations:

Title - Farrington Highway Widening, Lualualei Homestead
Location - Road to Vicinity of Jade Street
Classification - Agency Action

We would appreciate your comments or acknowledgement of no comments. Please submit one copy each to:

- 1) Accepting Authority: Ofc. of Environmental Quality Control
Address: 550 Halekauwila Street
Room 301
Honolulu, HI 96813
- 2) Proposing Party: Dept. of Transportation
Address: Land Transportation Facilities Division
859 Punchbowl Street
Honolulu, HI 96813

Your comments must be received or postmarked by: June 22, 1978

If you have no future use for this document, please return the EIS to the Commission. (Comments or acknowledgement of no comments should be directed to both the accepting authority and proposing party.)

Thank you for your participation and cooperation in the EIS process:

2 June 1978

No comments.

Patricia A. Greene
PATRICIA A. GREENE
Colonel, AMC
Chief, Preventive Medicine Activity
Directorate of Health Services

DEPT. OF TRANS. STATEWIDE TRANS. PLANNING OFFICE
550 SOUTH KING STREET
HONOLULU, HAWAII 96813

JUN 9 9 42 AM '78



FRANK F. FARI
DIRECTOR

June 2, 1978

Office of the Environmental Quality Commission
Office of the Governor
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Gentlemen:

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT OF THE PROPOSED FARRINGTON HIGHWAY WIDENING, LUALUALEI HOMESTEAD ROAD TO JADE STREET, PROJECT NO. 93B-01-75, WAIANAE, OAHU

Having reviewed the proposed project as it affects the parks in the project area, we would like to bring to your attention the area along Mauna Lāhili Beach Park (between Makaha Valley Road and Orange Street).

Within your right-of-way fronting this park, there are several existing trees (6 Coconut, 1 Hau) as shown on our most current survey. We hope that this area could be reviewed in further detail in your planning so that those trees that do exist could be saved or relocated.

This area along the existing highway is also being utilized by Park users for off-street parking. With the development of this area and the exclusion of on-street parking, the project will have a negative impact on the accessibility to the park.

We hope that you will look further into the details of this area so that these conflicts will be resolved.

Thank you for giving us the opportunity to review this proposal.

Sincerely,

Robert T. Fukuda
ROBERT T. FUKUDA, DIRECTOR

cc: Department of Transportation (State of Hawaii)

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STATE DEPARTMENT OF TRANSPORTATION
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DESIGN BRANCH
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LAND TRANSPORTATION FACILITIES DIVISION
PLANNING BRANCH



RYOKICHI HIGASHIONNA, PH D
DIRECTOR

DEPUTY DIRECTORS
WALTER C. BROWN
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
858 PUNCHBOWL STREET
HONOLULU HAWAII 96813

September 5, 1978

IN REPLY REFER TO:

LT-DS
2.46439

Mr. Robert T. Fukuda
Page 2
September 5, 1978

LT-DS 2.46439

afford your Department the time to review other more permanent parking arrangements for park users.

Thank you for your review and comments.

Very truly yours,

R. Higashionna
R. Higashionna

Mr. Robert T. Fukuda, Director
Department of Parks and Recreation
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Fukuda:

Subject: Draft EIS for the Proposed Farrington Highway Widening Project, Iwalelei Homestead Road to Jade Street, Project No. 93B-01-75

We have received your letter of June 2, 1978 on the above-mentioned Draft EIS. Below, dispositions on your comments are provided:

1. Several coconut, hau and kiawe trees appear to be within 40 feet of the existing Farrington Highway right-of-way (along Mauna Lahilahi Beach Park). If these trees are within the right-of-way, they must be removed; otherwise, they will pose a hazard to vehicles. Should this be the case, the coconut trees will be relocated to other State projects. Wherever possible, consideration will be made to save the trees which will not impose a traffic hazard and are a safe distance from the widened highway.
2. Presently, the parking of vehicles on the highway's right-of-way is being allowed. However, with the widening of Farrington Highway into this right-of-way, parking will not be available. We realize that this is a negative impact on Mauna Lahilahi Beach Park (and we will so state this in the Revised EIS); however, it is unavoidable.

It should also be recognized that Mauna Lahilahi Beach Park will be affected in the second phase of the project. At this time, no funds are available for the second phase; it may be several years before construction begins. This may

1902

UNITED STATES DEPARTMENT OF AGRICULTURE
 SOIL CONSERVATION SERVICE
 P. O. Box 50004, Honolulu, HI 96850

DEPT. OF TRANS.
 STATEWIDE TRANS.
 PLANNING OFFICE

June 2, 1978

June 5 7 58 AM '78

June 5 3 05 PM '78


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

Dear Dr. Higashionna:

Subject: Farrington Highway Widening, Lualualei Homestead Road
 to Vicinity of Jade Street, Project No. 938-01-75

We reviewed the subject draft environmental impact statement and have
 no comments to offer.

Thank you for the opportunity to review this document.


Sincerely,

 Jack P. Kanalz
 State Conservationist

cc: Office of Environmental Quality Control
 550 Halekauwila Street, Room 301
 Honolulu, Hawaii 96813

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 LAND TRANSPORTATION
 DEPT. OF TRANSPORTATION

BUILDING DEPARTMENT
 CITY AND COUNTY OF HONOLULU
 HONOLULU MUNICIPAL BUILDING
 150 SOUTH KING STREET
 HONOLULU, HAWAII 96813

FRANK P. FAR
 JUN 13 10 25 AM '78
 FACILITIES DIVISION
 PLANNING BRANCH



HOWARD M. SHIMA
 DIRECTOR AND BUILDING SUPERINTENDENT
 PB 78-444

DEPT. OF TRANS.
 STATEWIDE TRANS.
 PLANNING OFFICE
 JUN 9 9 45 AM '78

June 5, 1978

Department of Transportation
 Land Transportation Facilities Division
 State of Hawaii
 869 Punchbowl Street
 Honolulu, Hawaii 96813


Gentlemen:

Subject: Environmental Impact Statement
 Farrington Highway Widening, Lualualei
 Homestead Road to vicinity of Jade Street

We have reviewed the EIS for the subject project.

We suggest you consider the effect of the storm water runoff
 from the Waianae Intermediate School, the Waianae Neighborhood Center
 and adjacent areas. Presently, the water flows across Farrington
 Highway, then ponds within the makai area. The culvert crossing the
 highway has no outlet. It appears logical that you include provisions
 with the Kaupuni Bridge and highway construction to divert the flow
 for a short distance into Kaupuni Channel.

Thank you for giving us this opportunity to review the EIS.

Very truly yours,

 HOWARD M. SHIMA
 Director and Building Superintendent

AF:JOH
 cc: Office of Environmental Quality Control
 J. Hatada



GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
889 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

September 5, 1978

RYOICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

IN REPLY REFER TO:
LT-DS
2.46430

Mr. Howard M. Shima
Director and Building Superintendent
Building Department
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Shima:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Lualualei Homestead Road to
Jade Street, Project No. 93B-01-75

Thank you for your letter of June 5, 1978 commenting on the above-mentioned Draft EIS. In response to your concern about improving the existing drainage situation along the highway at the area in question, we would like to point out that the existing ponding condition on the makai side of Farrington Highway, as referenced in your letter, is not attributable to the highway construction and conditions will not be aggravated with the proposed improvements.

We appreciate your concern but the correction of this ponding condition is outside of our highway right-of-way and beyond the jurisdiction of this Department.

Very truly yours,

R. Higashionna
R. Higashionna

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 15TH AIR BASE WING (PACAF)
HICKAM AIR FORCE BASE, HAWAII 96853



6 JUN 1978

REPLY TO
ATTN OFF

DEEV (Mr. Nakashima, 4491831)

Draft Environmental Impact Statement (EIS) for the Proposed Farrington Highway Widening, Lualualei Homestead Road to Jade Street, Waianae District, Oahu

Office of Environmental Quality Control
550 Halekaunila Street
Room 301
Honolulu, Hawaii 96813

1. This office has reviewed the subject draft EIS and has no comment to render relative to the proposed project.

2. We greatly appreciate your cooperative efforts in keeping the Air Force apprised of your projects and thank you for the opportunity to review the document.

Original signed by

ROBERT Q. K. CHING
Chief, Engineering, Construction
and Environmental Planning Div
Directorate of Civil Engineering

1 Atch
Draft EIS

Cy to: Dept of Transportation
Land Transportation
Facilities Division
869 Punchbowl St.
Honolulu, Hawaii 96813

COPY TO: DEPT OF TRANSPORTATION

RECEIVED

JUN 9 9 16 AM '78
OFFICE DIRECTOR
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

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DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

HEADQUARTERS
FOURTEENTH NAVAL DISTRICT

MAIL ROOM NO. 06560
JUN 7 1 25 PM '78
OFFICE OF THE DISTRICT ENGINEER
LAND TRANSPORTATION FACILITIES DIVISION

IN REPLY REFER TO:
002:09F:SH:MRB
SER 1180
6 JUN 1978

GEORGE R. ARIYOSHI
GOVERNOR OF HAWAII



W. Y. THOMPSON, Chairman
CHAIRMAN OF THE BOARD
STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES
EDGAR A. HAMABU
DEPUTY TO THE CHAIRMAN

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
P. O. BOX 851
HONOLULU, HAWAII 96808

Office of Environmental
Quality Control
Office of the Governor
State of Hawaii
550 Halekauwila Street
Room 301
Honolulu, Hawaii 96813

Gentlemen:

Draft Environmental Impact Statement (DEIS)
for the proposed Farrington Highway Widening,
Waianae District, Island of Oahu

The subject Draft Environmental Impact Statement, which
was forwarded by your letter of May 19, 1978, has been
reviewed, and it has been determined that the project does
not affect U. S. Navy property. Therefore, no comments
are submitted.

Thank you for the opportunity to review this DEIS.

Sincerely,

I. H. RUFF
CAPTAIN, CEC, USN
DISTRICT CIVIL ENGINEER
BY DIRECTION OF THE COMMANDANT

Copy to:
Land Transportation Facilities
Division
State Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

RECEIVED
JUN 8 8 00 AM '78
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



June 7, 1978

Honorable George R. Ariyoshi
Governor of Hawaii
550 Halekauwila St.
Honolulu, HI 96813

'Dear Sir:

We have reviewed the draft EIS for the widening of
Farrington Highway in Waianae.

The draft is well written and thorough. The draft,
however, lacks a general description of the coastal town
of Waianae. It also lacks baseline data on pedestrian use
of the right-of-way, in particular data on pedestrian
crossings.

Very truly yours,

W. Y. Thompson

W. Y. THOMPSON
Chairman of the Board

1976

GEORGE R. ARIVOSH
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
668 PUNCHBOWL STREET
HONOLULU HAWAII 96813

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

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LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P. O. BOX 118, HONOLULU, HAWAII 96810

JUN 9 7 58 AM '78

HIDEO MURAKAMI
COMPTROLLER
MIKE N. TOKUNAGA
DEPUTY COMPTROLLER

LETTER NO. (P) 1759.8

JUN 8 1978

LT-DS
2.46429

IN REPLY REFER TO

September 5, 1978

Mr. W. Y. Thompson
Chairman of the Board
Department of Land and
Natural Resources
State of Hawaii
Post Office Box 621
Honolulu, Hawaii 96809

Dear Mr. Thompson:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Lualualei Homestead Road to
Jade Street, Project No. 93B-01-75

We have received your letter of June 7, 1978 on the above-
mentioned Draft EIS. In response to your concern, we have
included in the Revised EIS:

1. A general description of Waianae Town, and
2. Identification of pedestrian crossings.

Unfortunately, no data is available on pedestrian use
of the right-of-way.

Thank you for your comments.

Very truly yours,

R. Higashionna
R. Higashionna

JUN 11 11 03 AM '78
DEPT. OF TRANS.
STATE OF HAWAII

Honorable Ryokichi Higashionna
Director
Department of Transportation
State of Hawaii
Honolulu, Hawaii

Dear Mr. Higashionna:

Subject: Draft EIS for Farrington Highway Widening
Project No. 93B-01-75

Our review of the project revealed that there will be no
adverse environmental effects on any existing or planned facil-
ities serviced by DAGS.

Thank you for this opportunity to review.

Very truly yours,

Hideo Murakami
HIDEO MURAKAMI
State Comptroller

DEPARTMENT OF LAND UTILIZATION
CITY AND COUNTY OF HONOLULU

8997

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650 SOUTH KING STREET
HONOLULU, HAWAII 96813

JUN 13 9 47 AM '78
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FRANK E. FINE
MAKER

GEORGE S. MORIGUCHI
DIRECTOR
78/EC-8 (SE)
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L05/78-3056

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OFFICE BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

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

ATTENTION: Land Transportation Facilities Division
Gentlemen:

Draft Environmental Impact Statement
for the proposed
Farrington Highway Widening
Lualualei Homestead Road to
Jade Street

We have reviewed the draft EIS for the project noted above and would like to offer some specific comments.

- 1. Reference: Page 69 (2. Relevant Public Opinion).

Comment: We question the inclusion of the mail survey results in the EIS document. Although the reliability of the results are questioned in the text, their appearance in the discussion may cause the reader to give them credence. It might be better to remove this section of the text entirely and indicate that no reliable data currently exist. Further, it may be wise to commission a survey which would produce worthwhile results.

- 2. Reference: Page 67 (Table 17, Present Value of Benefits and Costs, Farrington Highway Widening).

Comment: Although some explanatory material is presented below Table 17, there is no direct reference to methodology used. No such documentation exists in appendix form.

- 3. Reference: Page 68 (1. Assessment of Economic Justifiability).

Comment: There is no reference or documentation for the

RECEIVED
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DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION
P.O. Box 339
Honolulu, Hawaii 96809

June 9, 1978

MEMORANDUM

TO: Donald Bremner
Environmental Quality Commission

FROM: Andrew I. T. Chang, Director
Department of Social Services and Housing

SUBJECT: E.I.S. Review - Farrington Highway Widening, Lualualei Homestead Road to Vicinity of Jade Street

120 We have reviewed the attached E.I.S. for the subject project and can offer no comments relating to the proposed development.

Thank you for allowing us to comment on this matter.

Andrew I. T. Chang
Director

cc: DOT

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LAND TRANSPORTATION
FACILITIES DIVISION

method used to derive the figures presented. Methodology for multiplier effects is often convoluted, and different results may be generated by different models. There needs to be some clearer justification for using the "State's interindustry model."

4. Reference: Page 23 (1. Population Characteristics).

Comment: The text mentions that one reasonable method of population estimates is to use the "E-2" projections prepared by the Department of Planning and Economic Development (DPED). These figures have been revised by DPED as of March 1, 1978. These revisions may alter the population figures presented in the EIS.

Furthermore, no mention is made of the population projections for the Waianae Coast in the General Plan for Oahu. The highway project should be related to County planning policies.

5. Reference: Page 21 (Table 2, LIST OF SOIL TYPES WITHIN THE PROPOSED FARRINGTON HIGHWAY WIDENING AREA).

Comment: As described, the information on soils is inadequate. More specific information on erosion hazard and soil permeability should be included.

6. Reference: Page 39 (7. Public Recreation Patterns).

Comment: It is mentioned that Waianae Regional Park presently has four tennis courts. We believe that as of this date, there are eight tennis courts in the park.

We wish to point out that the proposed relocation of overhead utilities may be in conflict with the policies and guidelines of the Shoreline Protection Ordinance. Undergrounding, particularly in areas of high scenic value may be necessary. Also, standards for lighting fixtures may be evaluated in terms of their consistency with Ordinance No. 4529.

As a final comment, we feel it is essential to quote or make reference to specific sources when using non-primary source material. This should be a standard procedure. Second, the inclusion of a bibliography is likewise important for reference and for the reviewer. A document such as an EIS cannot be considered complete with the absence of a bibliography.

Thank you for allowing us to comment on the draft EIS. If you have any questions concerning the points raised above, please call Mr. Scott Ezer of our staff at 523-4256.

Very truly yours,



GEORGE S. MORI
Director of Land Utilization

GSM:sl

cc: OEQC



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
859 PUNCHBOWL STREET
HONOLULU HAWAII 96813

September 5, 1978

IN REPLY REFER TO:

LT-DS
2.46438

RYONICHI HIGASHIHONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE GOWNS
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

Mr. George S. Moriguchi
Page 2
September 5, 1978

LT-DS 2.46438

Mr. George S. Moriguchi, Director
Department of Land Utilization
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Moriguchi:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Lualualei Homestead Road to
Jade Street, Project No. 93B-01-75

Thank you for your letter of June 9, 1978 commenting
on the above-mentioned Draft EIS. Dispositions to your
comments, on an item by item basis, are produced below:

1. Page 69 (2. Relevant Public Opinion). We find that the inclusion of the mail survey results in the Draft EIS is provided with the appropriate explanation, and that the gathering of this data for this project alone would be expensive and time consuming.
2. Page 67 and page 68. The description of the methodology and assumptions were detailed and contained a considerable amount of technical information; reference should be made to Dr. Robert N. Anderson's socioeconomic studies for this proposed project.
3. Page 23. (1. Population Characteristics). The revised population figures issued by DEED have been included in the Revised EIS. These figures do not substantially modify the findings of the socioeconomic impact. The population projections for the Waianae Coast in the General Plan are included in the discussion on page 43 of the Draft EIS.

4. Page 21. (Table 2). Detailed information on the soil types (including a map and identification of the soils' characteristics) will be provided in the Revised EIS.

5. Page 39. (7. Public Recreation Patterns). The Revised EIS will be revised to indicate that there are eight courts presently at Waianae Regional Park. At this time, no monies are available for undergrounding of utilities (e.g., telephone, electric). The relocation of these utilities is felt to have the same impact as present and no further adverse impacts are foreseen.

6. References and Bibliography. Appropriate references and a bibliography will be included in the Revised EIS.

Very truly yours,

R. Higashihonna
R. Higashihonna



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DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

Mr. Richard O'Connell, Director
Office of Environmental Quality Control
550 Halekawila Street, Rm. 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Environmental Impact Statement for Farrington Highway
Widening, Luualaei Homestead Road to Vicinity of
Jade Street Waianae, Oahu

We have no objections to the proposed project. We plan
to install a new 20-inch main in conjunction with the project.

If further information is needed on this matter, please
call Lawrence Whang at 548-5221.

Very truly yours,

EDWARD Y. HIRATA
Manager and Chief Engineer

9630

DEPARTMENT OF GENERAL PLANNING
COUNTY OF HONOLULU
PLANNING OFFICE
805 SOUTH KING STREET
HONOLULU, HAWAII 96813

JUN 21 9 27 AM '78



FRANK F. FARI
MAYOR

June 14, 1978

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

Dear Dr. Higashionna:

Draft Environmental Impact Statement for Proposed
Farrington Highway Widening - Luualaei Homestead Road
to Jade Street, Project No. 93B-01-75, Dated May 19, 1978
Comments Requested May 19, 1978

We offer the following comments:

Population and Housing Estimates

The draft EIS provides population and housing estimates for 1970,
1974 and 1975 from a publication, "Population and Housing for
Oahu Census Tract /Sic/" without giving the proper citation.
(P. 9.) The data are from a DPED report, "Population and Housing
Unit Estimates for Oahu Census Tracts, 1970-1975", Report CTC-32,
April 26, 1976. A more recent report is available from DPED,
presenting estimates to 1976, Report CTC-36, September 27, 1977.
The draft EIS should provide the most recent available data.

Population Forecasts

The draft EIS assumes that Waianae District population will
expand to 4 percent of Oahu's population by the year 2000 and
further increase to 5 percent of Oahu's population by 2020.
(P. 23.) The increase to 5 percent seems high.

Waianae's population increased considerably in the 1950's
because of the low population base. The rate of increase declined
considerably in the 1960's and is declining further. Waianae
accounted for 6.7 percent of the increase in Oahu's population

RAMON DURAN
CHIEF PLANNING OFFICER

DGP5/78-1855 (CF)

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OF TRANSPORTATION
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FACILITIES DIVISION
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GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU HAWAII 96813

September 5, 1978

Ms. Jane L. Silverman
Historic Preservation Officer
Department of Land and Natural Resources
Division of State Parks
State of Hawaii
Post Office Box 621
Honolulu, Hawaii 96809

Dear Ms. Silverman:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Luaiualei Homestead Road to
Jade Street, Project No. 93B-01-75

We have received your letter of May 30, 1978 on the above-mentioned Draft EIS. In your last paragraph you stated: "In the event that any unanticipated sites or remains are encountered, please inform the applicant to contact this office immediately." Although no historical/archaeological sites are anticipated to be found, we will contact your office immediately if any sites or remains are encountered.

Thank you for informing us of your concern on this matter.

Very truly yours,

R. Higashionna
R. Higashionna

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR

DEPUTY DIRECTORS
WALLACE ADKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

GEORGE R. ARIYOSHI
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE ADJUTANT GENERAL
FORT RUCKER, HONOLULU, HAWAII - 96816
3949 Diamond Head Road, Honolulu, Hawaii 96816

HIENG

Dept. of Transportation
Land Transportation Facilities
Division
869 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Farrington Highway Widening,
Luaiualei Homestead Road to
Vicinity of Jade Street
Waianae District, Oahu

We have received a copy of the "Farrington Highway Widening, Luaiualei Homestead Road to Vicinity of Jade Street, Waianae District, Oahu" Environmental Impact Statement, and have no comments to offer at this time.

Yours truly,

Wayne R. Tomoyasu
WAYNE R. TOMOYASU
Captain, CE, HARRNG
Contr & Engr Officer

30 MAY 1978
May 31 1 54 PM '78
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May 31 12 48 PM '78

GEORGE R. ARYOSH
GOVERNOR OF HAWAII



8965

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3278
HONOLULU, HAWAII 96801

JUN 5 2 19 PM '78

GEORGE A. L. YUEN
DIRECTOR OF HEALTH
Audrey W. Mertz, M.D., M.P.H.
Deputy Director of Health
Henry N. Thompson, M.A.
Deputy Director of Health
James S. Kumagai, Ph.D., P.E.
Deputy Director of Health

May 31, 1978

MEMORANDUM

To: Mr. Ryokichi Higashionna, Director
Department of Transportation

From: Deputy Director for Environmental Health

Subject: Environmental Impact Statement (EIS) for Farrington Highway
Widening, Luuluaiei Homestead Road to Vicinity of Jade
Street, Waianae District, Oahu

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 have no
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.

James S. Kumagai
for JAMES S. KUMAGAI, Ph.D.

cc: Environmental Quality Commission
Office of Environmental Quality Control

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REGIONAL BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

In reply, please refer to
File # 8965 - 88



United States Department of the Interior

RECEIVED
JUN 2 2 13 PM '78
FISH AND WILDLIFE SERVICE
300 A.L.A. MOANA BOULEVARD
P.O. BOX 50157
HONOLULU, HAWAII 96850

Division of Ecological Services
Room 5302
LAND TRANSPORTATION
FACILITIES DIVISION

June 1, 1978

Office of Environmental Quality Control
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Re: Farrington Highway
Road Widening
Luuluaiei Homestead
Road to Vicinity of
Jade St. Waianae,
Oahu, Hawaii

Dear Sir:

We are unable to comment on subject project at this time due
to lack of manpower and time.

We are returning the document as requested.

Sincerely yours,

Maurice H. Taylor
Maurice H. Taylor
Field Supervisor

cc: HA

DEPT. OF TRANS.
STATEWIDE TRANS.
PLANNING OFFICE
JUN 6 9 47 AM '78



Save Energy and You Serve America!

between 1950 and 1960; 6.0 percent of Oahu's population increase between 1960 and 1970; but only 4.0 percent of Oahu's increase between 1970 and 1974.

The Waianae District accounted for 2.0 percent of Oahu's population in 1950. This increased considerably to 3.3 percent by 1960; but to only 3.9 percent by 1970. Between 1970 and 1976, this declined slightly to 3.8 percent, even with the impetus of five years of the Model Cities program. (The Revised General Plan indicates that Waianae will maintain this 3.8 percent to the year 2000.)

Accordingly, we feel that the expectation that Waianae will account for 5 percent of Oahu's population seems high. If traffic assignments were made on this basis, they should be revised downward.

Soils

The list of soil types in the project area and the soil associations are indicated. (P. 21.) The soil associations are of little relevance. The characteristics of the soil types listed are important and should be discussed.

We note that the soil erosion hazard is "no more than blight" or "slight to moderate"; while the Mokuleia clay (Mtb) is a sticky, plastic clay whose workability is difficult. (Soil Conservation Service, "Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii", August 1972, p. 95.)

Welfare Data

The statement is made that "Welfare reciprocity data is often also unreliable . . ." (p. 39), but the draft EIS does not indicate the basis of the statement.

The fact that the Waianae District accounts for a disproportionately higher welfare caseload relative to its share of Oahu's population may account in part for the recent slower population growth in Waianae.

Bike Route

It is indicated that "the project includes a bike route which conforms to the Bikeplan." (P. 44.)

The typical Road Sections (pp. 7-8) do not show the bike route.

Project Limits

In our May 2, 1977 review of the EIS preparation notice, we asked for an explanation of the project limits. We questioned why the project was to terminate at Jade Street rather than at the Makaha Beach Park, beyond the developed area of Makaha. (P. 99.)

The Department of Transportation response of July 27, 1977 (p. 101) indicated

"The basis for the project limit is because of the average daily traffic demands. Our information indicates that the widening between Luualalei Homestead Road and the vicinity of Jade Street will accommodate the residential trips generated in this area. Beyond Jade Street there appear to be few residential destination points." (Underscoring is added.)

We cannot agree with the response. A cursory glance at the map of the area which is enclosed will show a considerable number of residential lots beyond Jade Street. In addition, the Makaha Meadows project of 320 Hawaii Housing Authority units will be beyond Jade Street.

The draft EIS should indicate how many units presently exist beyond Jade Street to substantiate the statement made in the July 27, 1977 response. The Department of General Planning's Data Systems Branch has maps showing existing land use and can help you in this regard (Francis Lau, Ph. 523-4404).

Thank you for affording us the opportunity of reviewing your impact statement.

Sincerely,



RAMON DURAN
Chief Planning Officer

RD:fmt

cc: OEOC

Enclosure

RECEIVED
JUN 23 4 03 PM '78
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION



DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES D. SWANSON

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

IN REPLY REFER TO:

IT-DS
2.46458

September 5, 1978

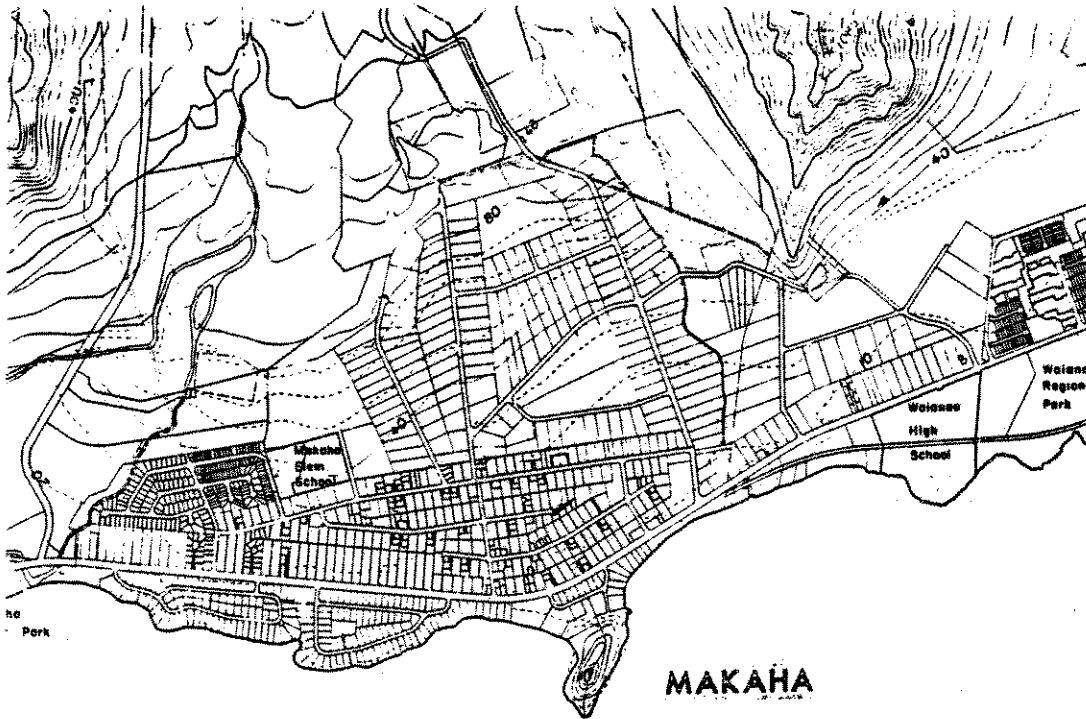
Mr. Ramon Duran, Chief Planning Office
Department of General Planning
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Duran:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Luualaei Homestead Road to
Jade Street, Project No. 93B-01-75

We have received your letter of June 14, 1978 on the above
mentioned Draft EIS. Below we provide dispositions to your
comments on an item by item basis:

1. Population and Housing Estimates. Page 9 will be corrected to include the appropriation citation and the most recent information available.
2. Population Forecast. The forecast (on page 23) was based on DPED's E-2 population projections. Traffic assignments were not based on population because of the heavy recreationally oriented traffic in this area.
3. Soils. Detailed information on the soil types (including a map and identification of the soils' characteristics) will be provided in the Revised EIS.
4. Welfare Data. The basis for the statement: "Welfare reciprocity data is often also unreliable..." was the researcher's (in this case the socioeconomic consultant) experience in dealing with data of this nature. A footnote will be provided to indicate this.
5. Bike Route. The bike route will be provided in the Revised EIS in map form.



MAKAHA

Map Scale: 1 inch = 1,000 feet

Mr. Ramon Duran
Page 2
September 5, 1978

LT-DS 2.46458

6. Project Limits. The statement made in our letter of July 27, 1977 should further be clarified by noting that at the time the project was initiated (middle 1960's) there were few residences beyond Jade Street to warrant widening the highway further. Funding was sought for only the section now being covered in the EIS. Although there is a likely need for extending the project limits, the future plans do not call for this extension.

Thank you for your letter.

Very truly yours,

R. Higashionna
R. Higashionna



RECEIVED
STATE DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION
JUN 13 10 16 AM '78
LAND TRANSPORTATION
PLANNING BRANCH
DEPARTMENT OF THE ARMY
ENGINEERS
BUILDING 23D
FT. SHAFTER, HAWAII 96858
JUN 13 9 05 AM '78

14 June 1978

DEPT. OF TRANS.
STATEWIDE TRANS.
PLANNING OFFICE
JUN 21 9 27 AM '78

Dr. R. Higashionna, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Dr. Higashionna;

We have reviewed the Draft Environmental Statement for the Farrington Highway Widening, Luualai Homestead Road to Jade Street Section, that was forwarded to us by the State Office of Environmental Quality Control on 19 May 1978. Your project does not affect any U. S. Army Corps of Engineers projects in the Waianae District.

We note that nearly the entire length of the proposed project lies within the 100-year tsunami inundation limits as shown in Inclosure 1, which is a portion of the Federal Insurance Administration's Flood Boundary and Floodway Map. Tsunami runup elevations range from 8 feet to 16 feet above mean sea level.

The construction of the bridge over Kaupuni and East Makaha Streams may require U. S. Coast Guard permits. Our regulations specify that fill material incidental to the construction of the bridges across tidal waters, including cofferdams, abutments, foundation seals and temporary construction and access fills, does not require a Department of the Army permit, if the following conditions are met:

- a. The fill material will not be placed in close proximity to a public water supply intake.
- b. The fill material will not be placed in areas of concentrated shellfish production.

14 June 1978

PODED-PV
Dr. R. Higashionna

- c. The discharge will not destroy a threatened or endangered species identified under the Endangered Species Act or critical habitats for those species.
- d. The fill will consist of suitable material free from toxic pollutants in other than trace quantities.
- e. The fill created will be properly maintained to prevent erosion and other non-point sources of pollution.
- f. The fill will not be placed in any component of the National Wildlife and Scenic River System or component of the State Wild and Scenic River System.
- g. The fill will not disrupt the movement of those species of aquatic life indigenous to the waterbody.

As the draft environmental statement does not provide any specific bridge details, we request that plans be submitted for our review to determine conformance to the above conditions and for a formal determination of the need for a Department of the Army permit. In addition, information which identifies the work to be done in the stream, the type of fill to be placed in the streams, the source of the fill material, the presence or absence of toxic material in the fill, the erosion controls to be implemented to prevent any fill from being carried into the water and the measures being taken to prevent disrupting movement of aquatic life in the stream course, should also be provided.

We thank you for the opportunity to participate in the Environmental Impact Statement review process.

Sincerely yours,

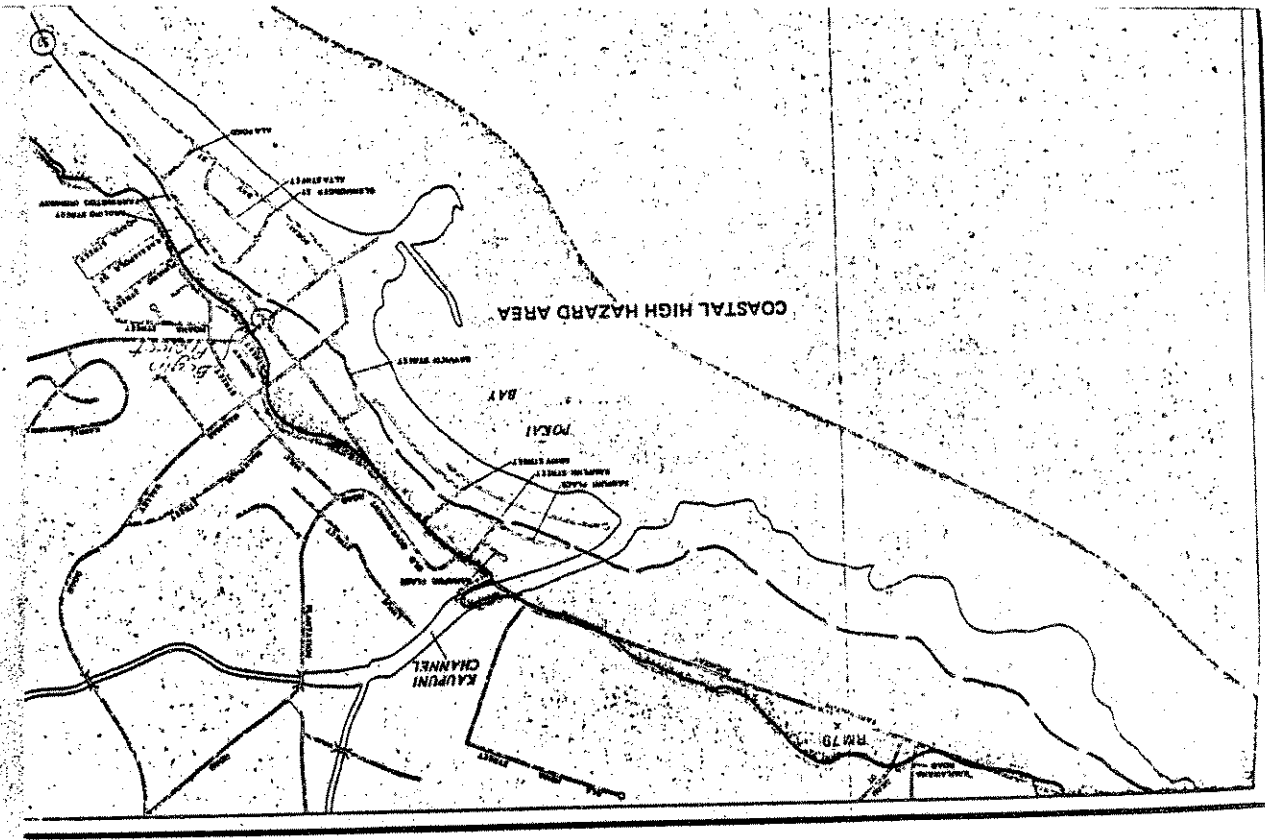
J. R. Schlapak
J. R. SCHLAPAK
Lt Col, Corps of Engineers
Deputy Division Engineer

1 Incl
As stated.

CF (w/incl)
Environmental Quality Commission
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

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JUN 23 4 03 PM '78
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

2



Draft



DEPUTY DIRECTORS
WALLACE ADAMI
DAVID M. KAWANO
CHARLES O. STRANSON

STATE OF HAWAII

DEPARTMENT OF TRANSPORTATION
859 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

IN REPLY REFER TO:

LT-DS
2.46428

September 5, 1978

Lt. Col. B. R. Schlapak
Deputy Division Engineer
Department of the Army
Pacific Ocean Division, Corps of Engineers
Building 230
Fort Shafter, Hawaii 96858

Dear Lt. Col. Schlapak:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Kualalei Homestead Road to
Jade Street, Project No. 93B-01-75

Thank you for your letter of June 14, 1978 on the above-
mentioned Draft EIS. Dispositions on your comments, on an item
by item basis, are provided below:

1. The Revised EIS will be changed to indicate that the proposed project lies within the 100-year tsunami inundation limits, and that tsunami runup elevations ran from 8 to 16 feet above mean sea level.
2. As indicated in page 111 on the Draft EIS (as well as Exhibits I and II), no permits for the bridge construction will be required by the U. S. Coast Guard. Additionally, the work will not require a Department of the Army permit and meets the conditions (a through g) identified in your letter.

We also note that plans for the construction of the bridges were provided to your staff several months ago. Further detailed information regarding the type of fill, source of fill material, erosion controls, et cetera is not available at this stage of the project. However, our Department will continue to coordinate plans for the bridge construction with the Corps.

APPROXIMATE SCALE
1000 0 1000 FEET




NATIONAL FLOOD INSURANCE PROJ

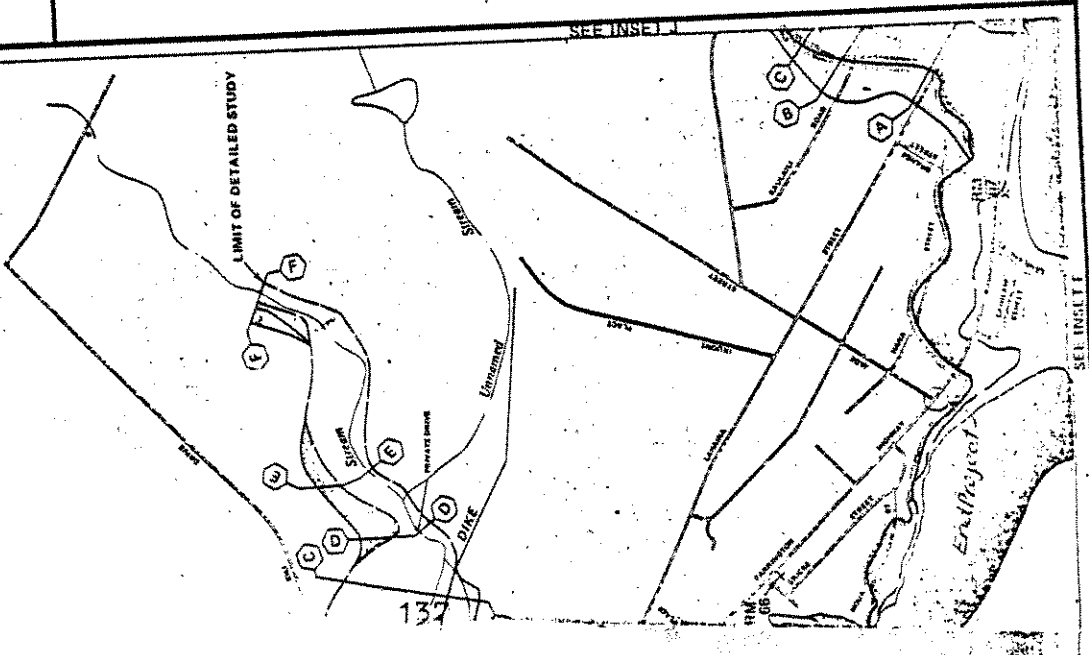
FLOOD BOUNDARY AND FLOODWAY
CITY AND COUNTY OF
HONOLULU, HAWAII

COMMUNITY-PANEL NUMBER
150801 0065 A

PAGE 65 OF 135
SEE MAP INDEX FOR PAGES NOT
EFFECTIVE



U.S. DEPARTMENT OF HOUS
AND URBAN DEVELOPMENT
FEDERAL INSURANCE ADMINIS



GEORGE R. ANTONINI
GOVERNOR

LT-DS 2.46428

Lt. Col. B. R. Schlapak
Page 2
September 5, 1978

Compliance with all applicable requirements regarding the quantity, quality, and placement of fill material will be observed. Also, we will coordinate with your office the final construction plans and specifications.

Thank you for your review and comments.

Very truly yours,

R. Higashionna
R. Higashionna

CHARLES G. CLARK
SUPERINTENDENT



STATE OF HAWAII
DEPARTMENT OF EDUCATION

P. O. BOX 2948
HONOLULU, HAWAII 96813

RECEIVED
JUN 26 8 35 AM '78
OFFICE OF THE SUPERINTENDENT
LAND AND TRANSPORTATION
DEPT. OF TRANSPORTATION

June 22, 1978

OFFICE OF THE SUPERINTENDENT

Mr. Albert Q. Y. Tom
Chairman
Environmental Quality Commission
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. Tom:

SUBJECT: Environmental Impact Statement
Farrington Highway Widening, Lualualei Homestead

We have reviewed the Farrington Highway Widening E.I.S. and concur with the following comments:

1. The comments noted in prior correspondence (see Exhibits on pages 89, 90 and 91) are still appropriate.
2. The noise pollution study has identified two portable classrooms, P-8 and P-9 at Waianae High School as having a noisy condition which will be aggravated by the widening of the highway. It is suggested that the cost of providing noise abatement devices for these two classrooms should properly be included in the cost of the road widening project.

Thank you for the opportunity to review and comment on the subject E.I.S.

Sincerely,

Charles G. Clark

CHARLES G. CLARK
Superintendent

CGC:HL:jl

cc Office of Environmental Quality Control
Dept. of Transportation, Land Transportation Division
Leeward Oahu District
Mr. Koichi H. Tokushige

AN EQUAL OPPORTUNITY EMPLOYER

GEORGE R. ARYUSHII
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
888 KUNCHIKOHI STREET
HONOLULU, HAWAII 96813

September 5, 1978

Mr. Charles G. Clark
Superintendent
Department of Education
State of Hawaii
Post Office Box 2160
Honolulu, Hawaii 96804

Dear Mr. Clark:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Kualalei Homestead Road to
Jade Street, Project No. 93B-01-75

Thank you for your letter of June 22, 1978 commenting on
the above-mentioned Draft EIS. We have reviewed your concerns
and we provide the following responses:

1. The comments sent to us earlier (pages 89, 90 of
the Draft EIS) were responded to and included in the Draft EIS
(pages 90, 91, letter dated July 22, 1978 to the Department of
Education). As stated, the items noted by the Department of
Accounting and General Services (addressing DOE facilities) were
considered and we concurred with these adjustments and improvements.
2. As noted in the Draft EIS, the anticipated highway
widening will aggravate the existing noisy conditions at
Waianae High School's two portable classrooms, P-8 and P-9.
The cost of abating the noise will be included in the cost
of the second phase of our road widening project. We will
include this discussion in the revised EIS.

Your concern in this matter is understandable, and we will
continue to review this potential noise problem in continuing
this project.

Very truly yours,
R. Higashionna
R. Higashionna

RYOKICHI HIGASHIONNA, PH.D.
DIRECTOR
DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES D. SWANSON

IN REPLY REFER TO:
LT-DS
2-46433

CITY AND COUNTY OF HONOLULU
STATEWIDE TRAINS
PLANNING OFFICE
HONOLULU, HAWAII 96813



JUN 26 10 05 AM '78

FRANK F. FARI
MAYOR

JUN 22 1978

Environmental Quality Commission
550 Halekiauila St., Room 301
Honolulu, Hawaii 96813

Gentlemen:

Draft Environmental Impact Statement for
the Proposed Farrington Highway Widening,
Kualalei Homestead Road to Jade Street,
Project No. 93B-01-75

We have reviewed the subject draft Environmental Impact
Statement for the project and request that consideration be
given to the following:

1. Provisions for pull-out bays for bus stops.
2. Provisions for a 10-foot by 20-foot area for future
bus shelters at bus stops.
3. Provisions for left turn storage lanes and two-way
left turn lanes.

Thank you for the opportunity to review the Draft EIS.

Very truly yours,
Kazu Hayashida
(cc) KAZU HAYASHIDA
Director

cc: State DOT
OEQC

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JUN 27 12 04 PM '78
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

KAZU HAYASHIDA
DIRECTOR
TE5/78-2147

DEPUTY DIRECTORS
WALLACE AOKI
RICHARD B. BARNES
CHARLES S. SWANSON



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

September 5, 1978

IN REPLY REFER TO:
LT-DS
2.46436

Mr. Kazu Hayashida, Director
Department of Transportation Services
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Hayashida:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Lualualei Homestead Road to
Jade Street, Project No. 93B-01-75

We have received your letter of June 22, 1978 commenting
on the above mentioned Draft EIS. Dispositions to your comments,
on an item by item basis, are provided below:

1. "Provisions for pull-out bays for bus stops."
The paved shoulders could be utilized to pull into and out of
bus stops.
2. "Provisions for a 10-foot by 20-foot area for
future bus shelters at bus stops." When the County has funds
available to provide bus shelters, our staff engineers will
assist your department in designating appropriate locations
for these shelters.
3. "Provisions for left turn storage lanes and
two-way left turn lanes." Space is not available within the
present and proposed right-of-way to provide these left
turn storage and two-way left turn lanes.

Thank you for your concerns.

Very truly yours,

R. Higashidhina
R. Higashidhina

2064

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AMERICAN  LUNG ASSOCIATIONS of Hawaii PH 78
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

June 22, 1978

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JUN 26 8 36 AM '78
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

Land Transportation Facilities Division
Department of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Gentlemen:

Subject: Draft Environmental Impact Statement
Farrington Highway Widening
Project No. 93B-01-75

We have reviewed those portions of the subject EIS which pertain
to air quality impact, and our technical comments are attached.

Sincerely yours,

James W. Morrow
James W. Morrow, Director
Environmental Health

JWM:ct
Att.

cc: OEQC



AMERICAN LUNG ASSOCIATION OF HAWAII

ENVIRONMENTAL IMPACT STATEMENT REVIEW

... an air quality assurance program

Project: FARRINGTON HIGHWAY WIDENING, Project No. 93B-01-75 Date: June 22, 1978

1. Page 50. It is stated in the first paragraph on this page that there would be very little difference in total vehicle emissions whether the highway is widened or not. We question this statement on the grounds that a change in average route speed ... brings about a larger change in the composite emission factor. For example, a reduction in average route speed from 30 mph to 20 mph results in approximately a 50% increase in the composite emission factor (EF). Since this EF is multiplied times total vehicle miles traveled (VMT), it would therefore result in a 50% increase in total emissions. Furthermore, the projected traffic reported in the EIS (p. 14) indicates increases on the order of 80% or more between 1978 and 1998. That magnitude of increase would surely lower the average route speed if the highway were not widened; thus, it seems logical to expect a rather significant difference between total emissions from the widened or unwidened highway.

2. Page 52. "The over abundance of automobiles in the vehicle mix would tend to produce slightly higher emissions than assumed by the method..."

This statement is incorrect since the greater percentage of automobiles implies a lower percentage of light duty trucks which have higher EF's than the cars; thus, the inherent assumptions of the screening method result in a slight overestimation of CO concentrations.

3. Page 53. "To estimate 8-hour average concentrations, the EPA Guidelines suggest that multiplying the one-hour estimate by a 'meteorological persistence factor' of 0.6 is a viable approach."

This statement is only partially correct. The 0.6 persistence factor is applied to CO estimates which have been based on the mean hourly volume demand for the 8-hour period, not the peak-hour traffic. Thus, the 8-hour CO concentrations in Table 14 have been substantially overestimated, and discussion relating to them should be revised.

4. Page 56, Table 14. See Comment 3.

5. Finally, we would note that the Environmental Protection Agency has recently (March, 1978) published an updated compendium of motor vehicle emission factors based on the latest measurements of in-use vehicles. Generally, these are of substantially greater magnitude than those presented in Supplement 5 to AP-42. Thus, estimates based on Supplement 5 EF's would be on the low side, at least through the early 1990's. It is recognized that the EIS preparer did account to some extent for these differences in his analysis.

STATE OFFICE	HAWAII COUNTY	KAUAI COUNTY	MALO COUNTY
215 N. Kukui St.	Post Office Box 915	Post Office Box 991	Wailuku, Hawaii 96790
Honolulu, Hawaii 96817	Honolulu, Hawaii 96826	Lihoe, Hawaii 96766	Wailuku, Hawaii 96790
Telephone 535-5068	Telephone 925-1206	Telephone 235-4142	Telephone 214-5110



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

September 5, 1978

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

Dear Mr. Morrow:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Luualalei Homestead Road to
Jade Street, Project No. 93B-01-75

Thank you for your letter of June 22, 1978 on the above-mentioned Draft EIS. The air quality consultant, Barry Root, for the project reviewed your comments and provided the following responses:

1. The criticism is valid. An increase in route width would be likely to increase average route speed, thus decreasing the total vehicle emissions that could be expected from a widened roadway.

2. A greater percentage of automobiles in the vehicle mix implies a lower percentage of both light duty trucks and heavy-duty diesel-powered vehicles. In 1977, carbon monoxide emissions per mile were much lower for heavy-duty diesels than for automobiles. It is probably true, however, that for this case "the inherent assumptions of the screening method result in a slight overestimation of the CO concentrations."

3. & 4. The mean traffic volume for an eight-hour period was not provided as input for this study. With just peak hour and average daily volume estimates available it seemed most prudent and conservative to base the 8-hour analysis on the peak hour traffic volumes. This point should have been emphasized in the discussion, however, since it does provide a mitigating explanation for the somewhat high 8-hour CO values shown in Table 14.

Mr. James W. Morrow
Page 2
September 5, 1978

LT-DS 2.46432

5. This study was completed in December, 1977. It is unreasonable for a reviewer to expect that data from a March, 1978, EPA publication be included in the analysis. In any case, the method used in the analysis to account for recent changes in emission standards is in good agreement with the March, 1978 EPA data.

Very truly yours,



R. Higashionna



DEPT. OF TRANS.
STATEWIDE TRANS.
PLANNING OFFICE

University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7381

Office of the Director

Mr. Richard L. O'Connell
Office of Environmental Quality Control
550 Halekauwila Street
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Draft Environmental Impact Statement for the
Proposed Farrington Highway Widening
Luahalei Homestead Road to Jade Street

The Environmental Center's review of the above cited EIS has been prepared with the assistance of Tamotsu Sahara, Physical Planning; Costakis Papacostas, Civil Engineering; Jacquelin Miller, Environmental Center; and Margaret Kimmerer and Barbara Vogt, Pacific Urban Studies Planning Program.

In general, the document covers many of the known and potentially significant environmental impacts that can be expected to occur as a result of this project. The areas in which our reviewers would suggest clarification or expansion include the following:

1. In the summary, comments on the socio-economic impacts should be included. For example, how will the widening of the highway affect small businesses adjacent to the roadside? How will altering ingress and egress patterns affect commercial activity? What will be the social impacts of geographically dividing the community? The possible impacts on commercial activity should be discussed in further detail.
2. Page 2, Item 4: The controlling factor on achieving the State's carbon monoxide standard is apparently the stricter automobile emission standards since compliance with the standards is not expected to be met prior to 1998 and the highway will presumably be in use in late 1980 some 18 years earlier. If the 1998 date is correct, it is inappropriate to imply that the highway construction is the primary controlling factor on air emissions.
3. Page 2, Item 9: The statement that "the highway is not expected to significantly alter the present or future growth of the community" is unrealistic and misleading. The widened highway is likely to act as a catalyst to rapidly developing this area, especially if the cost of homes are lower than for other locations on Oahu and the driving time is reduced.

AN EQUAL OPPORTUNITY EMPLOYER

June 22, 1978
RE:0251



University of Hawaii at Manoa

Environmental Center
Crawford 317 • 2550 Campus Road
Honolulu, Hawaii 96822
Telephone (808) 948-7201

Office of the Director

Mr. Richard L. O'Connell
Office of Environmental Quality Control
550 Halekaiwila Street
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Draft Environmental Impact Statement for the
Proposed Farrington Highway Widening
Luahalei Homestead Road to Jade Street

The Environmental Center's review of the above cited EIS has been prepared with the assistance of Tamotsu Sahara, Physical Planning; Costakis Papacostas, Civil Engineering; Jacquelin Miller, Environmental Center; and Margaret Kluemper and Barbara Vogt, Pacific Urban Studies Planning Program.

In general, the document covers many of the known and potentially significant environmental impacts that can be expected to occur as a result of this project. The areas in which our reviewers would suggest clarification or expansion include the following:

1. In the summary, comments on the socio-economic impacts should be included. For example, how will the widening of the highway affect small businesses adjacent to the roadside? How will altering ingress and egress patterns affect commercial activity? What will be the social impacts of geographically dividing the community? The possible impacts on commercial activity should be discussed in further detail.
2. Page 2, Item 4: The controlling factor on achieving the State's carbon monoxide standard is apparently the stricter automobile emission standards since compliance with the standards is not expected to be met prior to 1998 and the highway will presumably be in use in late 1980 some 18 years earlier. If the 1998 date is correct, it is inappropriate to imply that the highway construction is the primary controlling factor on air emissions.
3. Page 2, Item 9: The statement that "the highway is not expected to significantly alter the present or future growth of the community" is unrealistic and misleading. The widened highway is likely to act as a catalyst to rapidly developing this area, especially if the cost of homes are lower than for other locations on Oahu and the driving time is reduced.

AN EQUAL OPPORTUNITY EMPLOYER

Mr. Richard O'Connell

- 2 -

June 22, 1978

4. Page 3, Item 10: The decrease in congestion would be an advantage, but what about the increase in volume and speed? A map should be included showing signalized intersections and pedestrian crossings for the residents of the immediate area.
5. Page 4, Item 8: A bikeway is being planned along the highway but there are no indications of where it will be placed. Provision of bikeways might well be considered a benefit of the proposed highway improvements.
The juxtaposition of bicycles, pedestrians, and automobile traffic presents inevitable hazards. Problems are reducible by provision of distinct lanes including provision of physical separations such as grass strips or curbs. If there can be only one set of separations it should be between the motor vehicle roadways and the bikeways, and not between the bikeways and the sidewalks. There seems to be no compelling reason why the sidewalks and bikeways should not be separated from the roadways by gutters.
6. Page 15, Section III-Description of the Environmental Setting: The section on the description area and in particular the socio-economic background is quite detailed. What seems to be almost totally lacking is a discussion of the relevance of this information to the proposed project. For example, the soil types are listed in Table 2. No information is given as to where these types exist in relation to the highway nor of their significance to the construction. Some 14 pages are devoted to population characteristics yet there is no discussion of the pertinence of the data to the highway expansion. Certainly, some population statistics such as traffic counts versus worker destinations are obvious. What, however, is the rationale behind including such statistics as illegitimate births, elective abortions, education, income, hours worked last week, weeks unemployed, etc.?
7. Page 15, Item 4-Flora and Fauna: To support the statement that the flora in the project's vicinity are weeds, the list of species should be included with the dominant plant types. This also applies to fauna.
8. Page 43, Item A-General Plan: In discussing the General Plan, contradictory goals are set forth. One goal justifies the highway expansion project on the projected traffic increase. The State's goal, however, is to limit the number of cars on Oahu as well as growth particularly in the Maunaea area. He also note the reference to inaccuracies in the population projections for the Maunaea area. A brief discussion of the rationalization of these conflicting projections should be included in the final EIS.
9. Page 63, Item 4-Noise: The EIS adequately addresses the final noise impacts on Maunaea Intermediate and High Schools. It does not specifically address noise impacts during the actual construction phases which will logically occur during school hours. What mitigating effects will be used during school hours?



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
888 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

IN REPLY REFER TO:
LT-DS
2.46437

September 5, 1978

June 22, 1978

Mr. Richard O'Connell

- 3 -

10. Page 69, Item H-Impact on Costs of Traffic: Although an evaluation of traffic accidents and their costs are made, there is no discussion on measures to reduce accidents. What steps will be taken to ensure proper safety precautions are observed in the design?

Thank you for the opportunity to review this document.

Sincerely,

Doak C. Cox
Director

DCC/ck

cc: Dept. of Transportation ✓
Tamotsu Sahara
Costakis Papacostas
Jacquelin Miller
Margaret Kummerer
Barbara Vogt

Dr. Doak C. Cox, Director
Environmental Center
University of Hawaii at Manoa
Crawford 317/2550 Campus Road
Honolulu, Hawaii 96822

Dear Dr. Cox:

Subject: Draft EIS for the Proposed Farrington Highway
Widening Project, Lualualei Homestead Road to
Jade Street, Project No. 93B-01-75

We have received your letter of June 22, 1978 on the above-mentioned Draft EIS. Dispositions to your comments, on an item by item basis, are provided below:

1. We have met with the Waianae Businessmen's Association regarding the improvement which will be made to the highway. At that meeting there was no opposition to the project. The ingress and egress to these businesses will not be significantly modified and curbside parking in the Waianae commercial area will be permitted from 8:30 a.m. to 3:30 p.m. (on a trial basis).
2. Page 2, Item 4. The statement summarizes the findings of the air quality study. It does not imply that the purpose of the highway widening is to lessen air emissions.
3. Page 2, Item 9. The statement summarizes the findings in the Draft EIS. On page 43 of the Draft EIS, it was stated that: "The widening project is not expected to act as a primary catalyst (emphasis added) to population growth or urbanization. It is felt that the urban designations and residential zoning are the primary catalyst to growth." (The paragraph continues in support of the first sentence.) We recognize that in many situations the availability of (or improvement to) infrastructures enhances any decision for higher zoning. Unfortunately, although the highway is being widened to improve the existing traffic flow, it also will indirectly enhance urbanization of the Waianae area. This will be so stated in the Revised EIS.

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REGIONAL BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

Dr. Doak C. Cox
Page 2
September 5, 1978

LT-DS 2.46437

Mr. Doak C. Cox
Page 3
September 5, 1978

LT-DS 2.46437

4. Page 3, Item 10. The summary will also note that the widening project will accommodate an increase in traffic volume and may result in voluntary speeding between the signals. Additionally, the Revised EIS will include a map showing the signalized intersections and pedestrian crossings.

5. Page 4, Item B. The bikeway being planned will be located on the shoulder section of the highway. There will be no physical separation between the widened highway and bikeway.

6. Page 15, Section III. The proposed section of Farrington Highway which will be widened crosses several soil groups. (A map showing these soil groups will be provided in the Revised EIS.) No soil problems or adverse impacts are foreseen; the existing highway also crosses these same soil groups. We also note that the proposed widening will not alter the existing drainage conditions. Therefore, the existing drainage problems will not be mitigated. We will include this information on drainage in the Revised EIS. The information relating to population statistics was given in order to provide the characteristics of the area. This information was necessary in the first part of the socioeconomic study which was provided to and available at the office of the Environmental Quality Commission.

7. Page 15, Item 4. More detailed information on the plant types and fauna will be provided in the EIS. We will also identify trees which will be removed (if necessary) for the highway widening.

8. Page 43, Item A. Population projections whether produced by the City and County or the State are sometimes incorrect and, therefore, are modified from time to time. A rationalization for these conflicting population projections would not be within the scope of the EIS. It was acknowledged, however, that the present population projections for the Waianae area appear to be conservative when one considers the number of proposed dwelling units for this area.

9. Page 63, Item 4. The impact of construction noise at Waianae Intermediate and High Schools will be addressed in the Revised EIS. The inconvenience of construction noises and interruption of traffic access to and from Waianae Intermediate and High Schools appear to be unavoidable.

10. Page 69, Item H. The highway design will take into consideration the appropriate safety standards which apply to highways. It is noted that a significant number of accidents are related to an individual's driving habits (e.g. speeding, driving under the influence of alcohol, judgement), subsequently, highway design per se is usually not the major factor in contributing to accidents.

Thank you for your comments.

Very truly yours,

R. Higashionna
R. Higashionna

GEORGE R. ARIYOSHI
GOVERNOR

RECEIVED

JUN 30 3 16 PM '78



DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
OFFICE OF THE GOVERNOR
550 HALEKUALA ST.
HONOLULU, HAWAII 96813

June 27, 1978

RICHARD L. O'CONNELL
DIRECTOR
TELEPHONE NO.
5466915

DEPT. OF TRANS.
STATEWIDE TRANS.
PLANNING OFFICE
JUN 28 2 36 PM '78

MEMORANDUM

TO: R. Higashionna, Director
Department of Transportation

FROM: Richard L. O'Connell, Director
Office of Environmental Quality Control

SUBJECT: ENVIRONMENTAL IMPACT STATEMENT FOR PROPOSED HIGHWAY
WIDENING - LU'ALUALEI HOMESTEAD ROAD TO JADE STREET
PROJECT NO. 93B-01-75

We have reviewed the subject environmental impact statement and offer the following comments for your consideration:

- 1) P. 13. The location of Ala Waiua Street should be shown on one of the figures.
 - 2) P. 21. More details should be provided regarding the soils within the project area and the proposed bridges. Where will drainage from the roadway be directed? Will neighboring properties be affected?
 - 3) P. 23. Are the average daily traffic estimates based upon the DPED E-II projection? Would the new lower F-2 projections affect these estimated ADT's? Will the same road design be required based upon these new estimates?
 - 4) P. 43. The statement that occupancy of the proposed 1,702 dwelling units would increase the Waianae population by over 6,000 persons fails to take into account the percentage of persons that would only relocate within the area rather than move into Waianae from other parts of Oahu.
- We note that the statement on page 73 of the eis refers to an alternate route in the project area. It is growth in the Waianae area that should be evaluated and not just the impacts on those properties abutting the project's right-of-way. We therefore recommend a thorough discussion of this topic in the revised eis.
- 5) P. 46. The impacts of removing on-street parking should be discussed.
 - 6) P. 57. The channel is 80 feet wide, not deep.
 - 7) P. 65 and 66. Who will implement the noise mitigation measures? Are the costs involved covered by the project funds?
 - 8) A list of references should be included in the eis.
- As of this date, we have received a total of twenty-four (24) comments as indicated on the attached list.

Mr. R. Higashionna
Page 2
June 27, 1978

We question the statement, "the widening project is not expected to act as a catalyst to population growth or urbanization." No evidence is provided in the eis which supports this statement. In fact, there are statements within the eis and the cost-benefit analysis which support the opposite point of view. These are:

- a. increase accessibility and significantly enhance urbanization in the area served (p. 73 of eis)
- b. the subject widening project which will result in increased accessibility will accommodate and enhance our projected housing plans in the Waianae area and any future plans for further urbanization (p. 95 of eis)
- c. ...it must be remembered that highway improvements are designed to enhance accessibility for people to recreational attractions, commercial outlets, job locations, and desirable housing (p. 44, cost-benefit analysis)
- d. these controls can be seen as planning constraints on land uses that will be made more valuable by the enhanced accessibility created by the proposed project (p. 46, cost-benefit analysis).

As of this date, we have received a total of twenty-four (24) comments as indicated on the attached list.



DEPUTY DIRECTORS
WALLACE AOKI
DOUGLAS S. SAKAMOTO
CHARLES O. SWANSON

Mr. R. Higashionna
Page 3
June 27, 1978

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

IN REPLY REFER TO:

September 5, 1978

LT-DS
2.46435

We have not attempted to summarize the comments of other reviewers but recommend that each comment be given consideration.

The EIS Regulations allow the accepting authority or his authorized representative to consider responses received after the fourteen day response period. We will exercise the option and will consider responses after the fourteen day period.

Thank you for allowing us to review this eis. We trust that our comments will prove useful in the revision of the document.

Attachment

Mr. Richard O'Connell, Director
Office of Environmental Quality Control
Office of the Governor
State of Hawaii
550 Halekauwila Street, Room 301
Honolulu, Hawaii 96813

Dear Mr. O'Connell:

Subject: Draft EIS for the Proposed Farrington Highway Widening Project, Lualualei Homestead Road to Jade Street, Project No. 93B-01-75

We have received your letter of June 27, 1978 on the above-mentioned Draft EIS. Dispositions to your comments, on an item by item basis, are provided below:

1. Page 13. A new location map will be added. The location of Ala'Walu Street will be provided on this new location map.

2. Page 21. The proposed section of Farrington Highway which will be widened crosses several soil groups. (A map showing these soil groups will be provided in the Revised EIS.) No soil problems or adverse impacts are foreseen; the existing highway also crosses these same soil groups. We also note that the proposed widening will not alter the existing drainage conditions. Therefore, the existing drainage problems will not be mitigated. We will include this information on drainage in the Revised EIS.

3. Page 23. The traffic estimate was not based on population projections. Because of the number of beaches in the area and Waianae's distance from Honolulu, the traffic patterns differ considerably from other areas on Oahu. Traffic volume increases significantly during weekends and holidays, and peak hour traffic occurs in the early afternoon during weekdays. Traffic estimations were based on the past traffic volume increases.

4. Page 43. It was felt that the number of replacement homes provided in the proposed 1,702 dwelling units would be minimal. In addition, a figure of 1,702 dwelling units is felt to be conservative and thus, an increase of 6,000 people is likely. The entire sentence relating to the impact of the proposed widening was not quoted. On page 43 of the Draft EIS, it was stated that: "The widening project is not expected to act as a primary catalyst (emphasis added) to population growth or urbanization. It is felt that the urban designations and residential zoning are the primary catalyst to growth." (The paragraph continues in support of the first sentence.) We recognize that in many situations the availability of (or improvement to) infrastructures enhances any decision for higher zoning. Unfortunately, although the highway is being widened to improve the existing traffic flow, it also will be a positive factor if lands are being considered for higher zoning. This will be so stated in the Revised EIS. Because the improvement is not considered to be the primary catalyst to population growth or urbanization, it would be inappropriate for our Department to evaluate the impact of future growth in the Waianae area. Such an in-depth analysis would require considerable time and monies which are not available in the funding of this project.

5. Page 46. On-street parking is presently occurring within the highway's right-of-way. The removal of on-street parking, especially in the Waianae commercial area and Mauna Lahilahi Park will likely have a negative impact on certain shopkeepers and park users, respectively. However, the elimination of on-street parking is unavoidable and no monetary loss has been assigned to this impact. It also should be noted that parking in Waianae Town from 8:30 to 3:30 will be provided on a trial basis. This will be along the curbs on both sides of Farrington Highway. The trial basis will be tested for an undetermined period of time.

6. Page 57. The statement will be corrected to read: "this trapezoidal channel is approximately 80 feet wide; plans call for the bridge to be widened."

7. Page 65 and 66. As noted in the Draft EIS, the anticipated highway widening will likely aggravate the existing noisy conditions at Waianae High School (two portable classrooms, P-8 and P-10). If this impact does occur, the cost of abating

the noise will be included in the cost of the road widening project. Because the section affecting Waianae High School will not be widened in the initial phase, the noise abuse problem may not exist since the federal vehicular noise reduction mandates will have effectively mitigated car noise, thus ambient noise level may be reduced significantly. We will include this information in the Revised EIS.

8. A Bibliography will be included in the Revised EIS.

Very truly yours,

R. Higashionna
R. Higashionna

BIBLIOGRAPHY

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7. Baker, J.S. "Traffic Accident Analysis," in Bearwald, J.E. (ed.), Transportation and Traffic Engineering Handbook (Englewood Cliffs: Prentice-Hall, Inc., 1976), pp. 377-403.
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And other publications as cited in the text.

.....

EXHIBITS



EXHIBIT I

DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

RECEIVED
NOV 18 2 01 PM '77
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

9117

COMMANDER (oan)
Fourteenth Coast Guard District
Prince Kalaniana'ole Federal Bldg.
300 Ala Moana Blvd.
Honolulu, Hawaii 96850
Phone: (808) 546 7130

16590
Serial 32320

16 NOV 1977

Mr. Tetsuo Harano
Chief, Highways Division
State of Hawaii
Dept. of Transportation
869 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Harano:

Concerning the State's project to widen Farrington Highway
Lualualei Homestead Road to Jade Street, this letter is in response
to a letter from Paul Taniguchi, Ltd.

After review of the planned project, it has been determined that
because East Makaha Stream is dry except during periods of storm
runoff, and because Kaupuni Stream Bridge is to be replaced with
a wider bridge providing the same navigational clearances, with
no effect on the few non-motorized rafts that sometimes use the
watercourse, a permit to replace these two bridges will not be nec-
essary.

As previously stated, the Coast Guard has no authority to render
official decisions relating to matters involving permit determina-
tions to parties other than those that have the authority to con-
struct bridges. It is preferable that the Coast Guard deal directly
with the State of Hawaii on matters such as these rather than through
the consultant firms engaged by the State.

Thank you for the opportunity to comment.

Your consideration and attention is appreciated.

Sincerely yours,

A. J. HAGSTROM

Captain, U. S. Coast Guard
Chief, Aids to Navigation Branch
Fourteenth Coast Guard District
By direction of the District Commander

Copy to:
Paul Taniguchi, Ltd.
1700 Kapiolani Blvd., Suite 203
Honolulu, Hawaii 96814

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LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

EXHIBIT II



PODCO-0

RECEIVED
Nov 23 12 34 PM 1977
DEPARTMENT OF THE ARMY
U. S. ARMY ENGINEER DISTRICT, HONOLULU
BUILDING 230
ST. SHAFTER, HAWAII 96858
DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION

FILE

05-107-00-14

17 November 1977

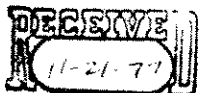
Paul T. Taniguchi, Ltd.
1700 Kapiolani Blvd., Suite 203
Honolulu, Hawaii 96814

Gentlemen:

This is in response to your letter dated 4 November 1977 concerning the Kaupuni Channel Bridge and East Makaha Stream Bridge construction for the Farrington Highway Widening Project.

The construction of the bridges will not require Department of the Army (DA) permits. However, permits from the Coast Guard may be required. The construction of temporary earthen berms or such other working platforms within the channel or stream for pile driving purposes will not require DA permits.

Our regulations specify that fill material incidental to the construction of bridges across tidal waters including, cofferdams, abutments, foundation seals, piers, and temporary construction and access fills does not require DA permits. The following conditions must be satisfied: (1) the fill material will not be located in the proximity of a public water supply intake; (2) the fill material will not occur in areas of concentrated shellfish production; (3) the discharge will not destroy a threatened or endangered species as identified under the Endangered Species Act, or endanger the critical habitat of such species; (4) the fill will not disrupt the movement of those species of aquatic life indigenous to the waterbody; (5) the fill will consist of suitable material free from toxic pollutants in other than trace quantities; (6) the fill created will be properly maintained to prevent erosion and other non-point sources of pollution; (7) the fill will not



PODCO-0

Paul T. Taniguchi, Ltd.

17 November 1977

occur in a component of the National Wild and Scenic River System or in a component of a State wild and scenic river system. We recommend that the above conditions be provided in the contract.

Thank you for the opportunity to review the plans and for your cooperation.

Sincerely yours,



B. R. SCHLAPAK

Lt Col, Corps of Engineers
Deputy District Engineer

Copy furnished:

14th Coast Guard District w ltr Taniguchi 4 Nov 77 wo incl

EXHIBIT III

July 22, 1977

LT-DS
2.38809

Mr. Andrew I. T. Chang
Director
Department of Social Services
and Housing
P. O. Box 339
Honolulu, Hawaii 96809

Attention Mr. Harold Kurihara
Hawaii Housing Authority

Dear Mr. Chang:

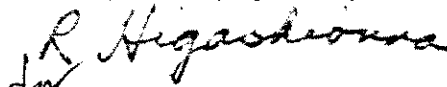
Subject: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to
Vicinity of Jade Street, Project No. 93B-01-75

Thank you for your comments of April 25, 1977 regarding the above indicated EIS Preparation Notice. The information provided by your department will be useful in determining approximately how many future homes will be serviced by the proposed road widening project. We would, however, appreciate further information from your staff regarding the following:

1. The number of existing dwelling units served by Farrington Highway from Lualualei Homestead Road to Jade Street.
2. Your department's plans to construct or acquire housing units in this vicinity and in Makaha.
3. A location map which shows the location of the existing and future homes planned to be constructed by your department over the next five years.

This information would be most appreciated, and if we can provide clarification, please contact Herbert Tao (548-6932) of our Technical Design Services Office, Land Transportation Facilities Division.

Very truly yours,


E. ALVEY WRIGHT
Director

E-4

cc: Environmental Communications, Inc. (w/cpy of ltr dtd 4/25/77)

GEORGE R. ARIYOSHI
GOVERNOR



RECEIVED
AUG 12 8 52 AM

STATE OF HAWAII
DEPT. OF TRANSPORTATION
LAND DEPARTMENT OF SOCIAL SERVICES AND HOUSING
FACILITIES DIVISION
HAWAII HOUSING AUTHORITY

P. O. BOX 17907
HONOLULU, HAWAII 96817

DIRECTOR'S OFFICE

FRANKLIN Y. K. SUNN
EXECUTIVE DIRECTOR

AUG 5 11 26 AM

WILLIAM A. HALL
ASS'T. EXEC. DIRECTOR

TRANSPORTATION

IN REPLY REFER

August 4, 1977

DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION
AUG 15 8 26 AM '77

RECEIVED

MEMORANDUM:

TO: E. Alvey Wright, Director
Department of Transportation

FROM: Franklin Y. K. Sunn, Executive Director

SUBJECT: EIS Preparation Notice, Farrington Highway Widening,
Lualualei Homestead Road to Vicinity of Jade Street,
Project No. 93B-01-75

This is in reference to your letter of July 22, 1977 on the above-named subject.

We do not know the number of existing dwelling units served by Farrington Highway from Lualualei Homestead Road to Jade Street. However, our present inventory in the Waianae coast area are as follows:

<u>Projects Committed but Not Yet Under Construction</u>	<u>Number of Scheduled Units</u>
Waianae Kai	300
Kahakai Nani	500
Maili Court	40
Maile Sands	42
Sub Total	882

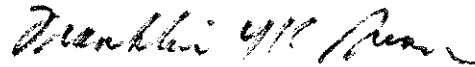
<u>Projects Presently Under Construction</u>	<u>Number of Scheduled Units</u>
Makaha Meadows	320
Total	1,202

Attached are location maps of the above-mentioned projects.

E. Alvey Wright, Director
Department of Transportation -2-

August 4, 1977

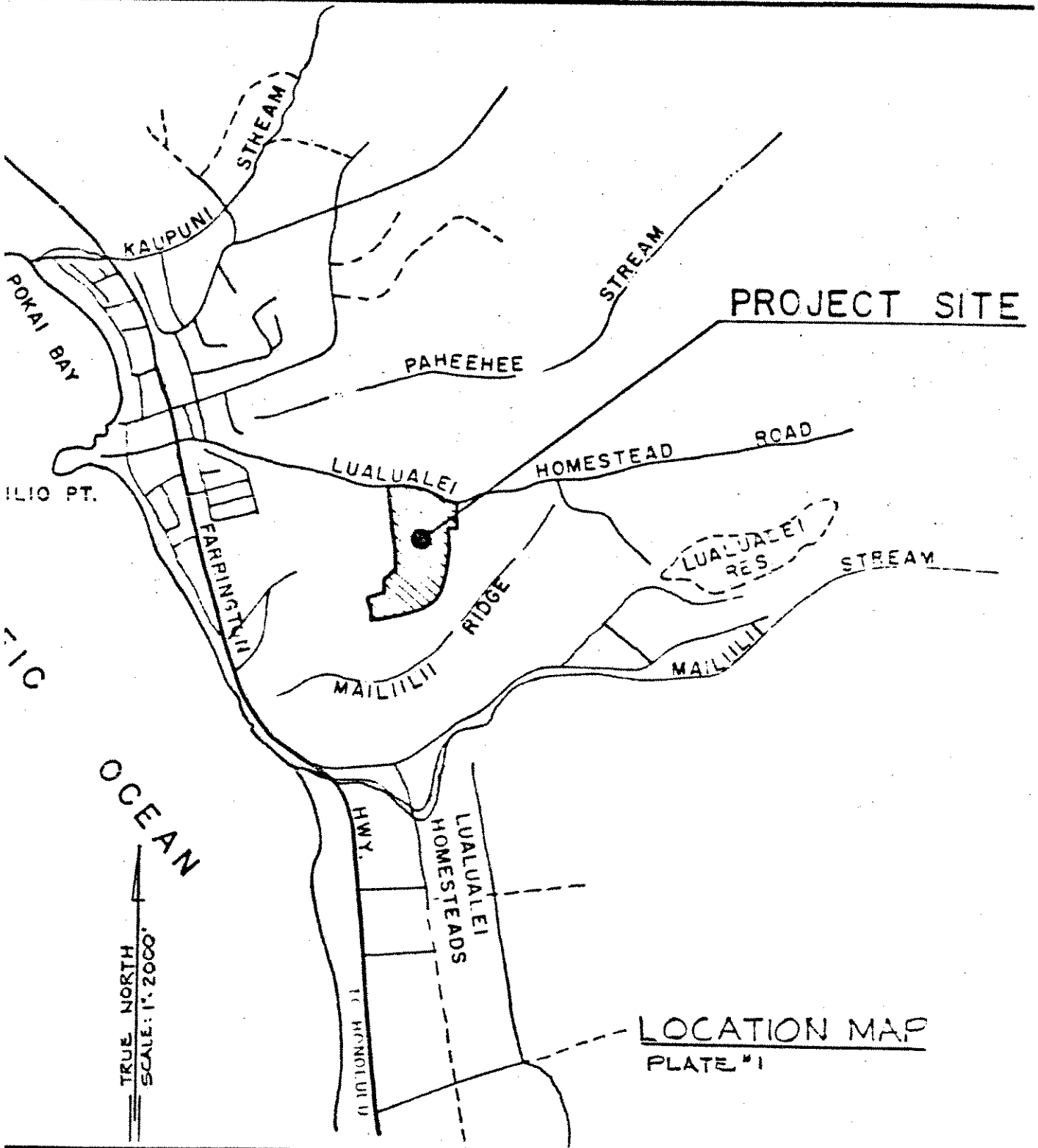
Please contact Norman Wong (848-3211) of the Hawaii Housing Authority if you have further questions.



FRANKLIN Y. K. SUNN
Executive Director

Attachments

WAIANAË KAI

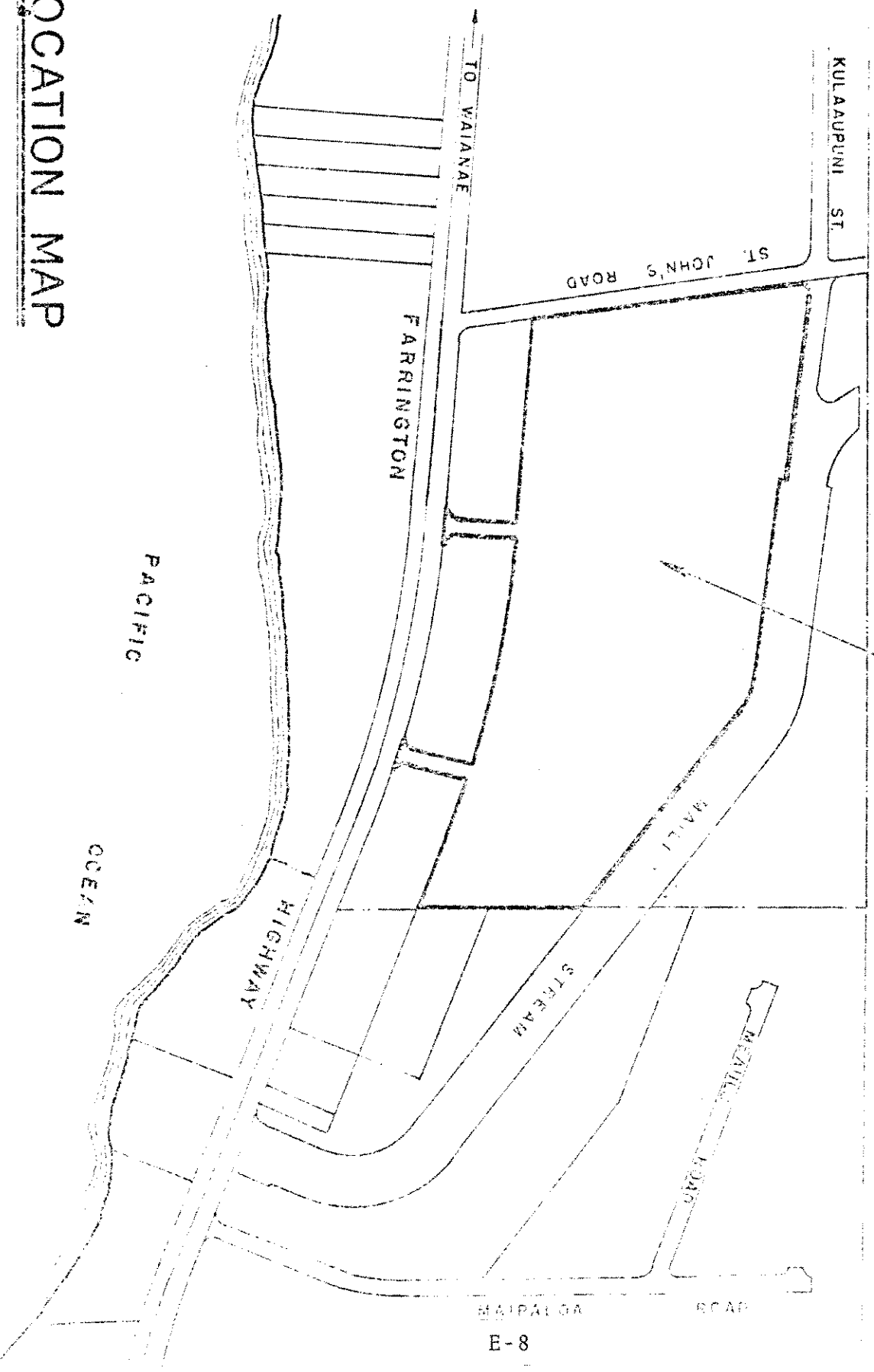


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PROJECT SITE

Scale: 1" = 400'

LOCATION MAP

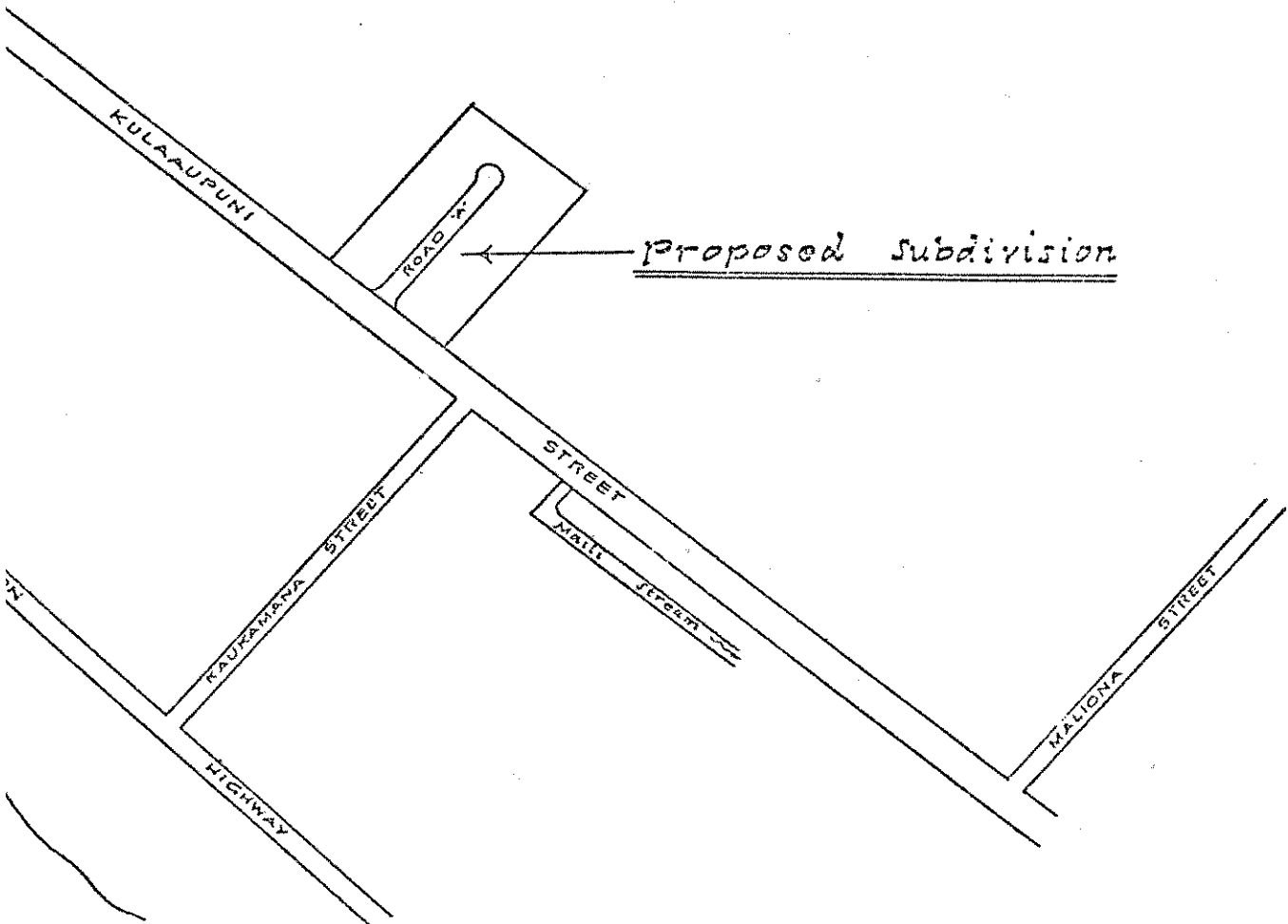


LOCATION MAP

MAILE COURT

TAX MAP KEY: 8-7-03:10

LANE ROAD



MAKAHA MEADOWS

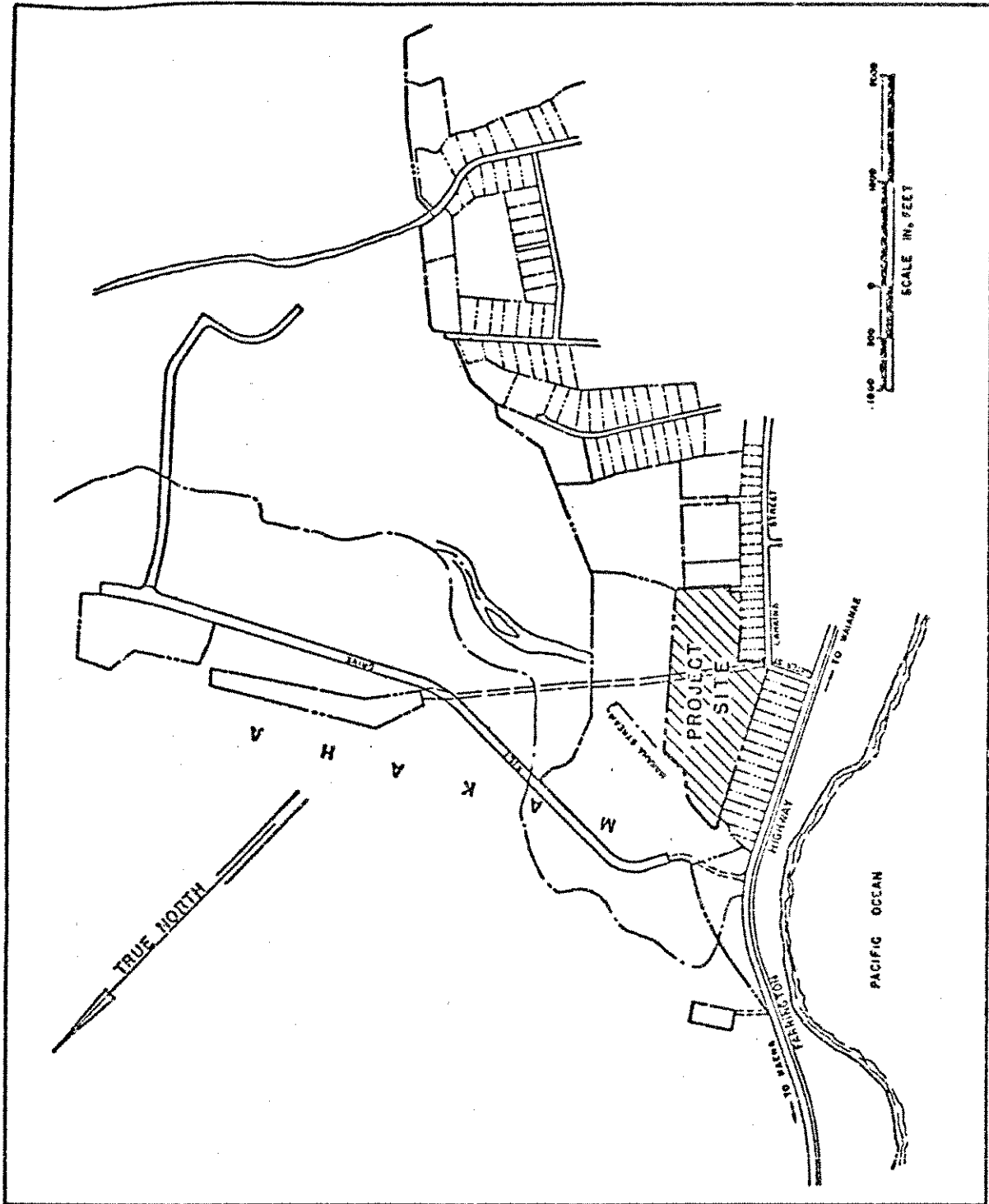


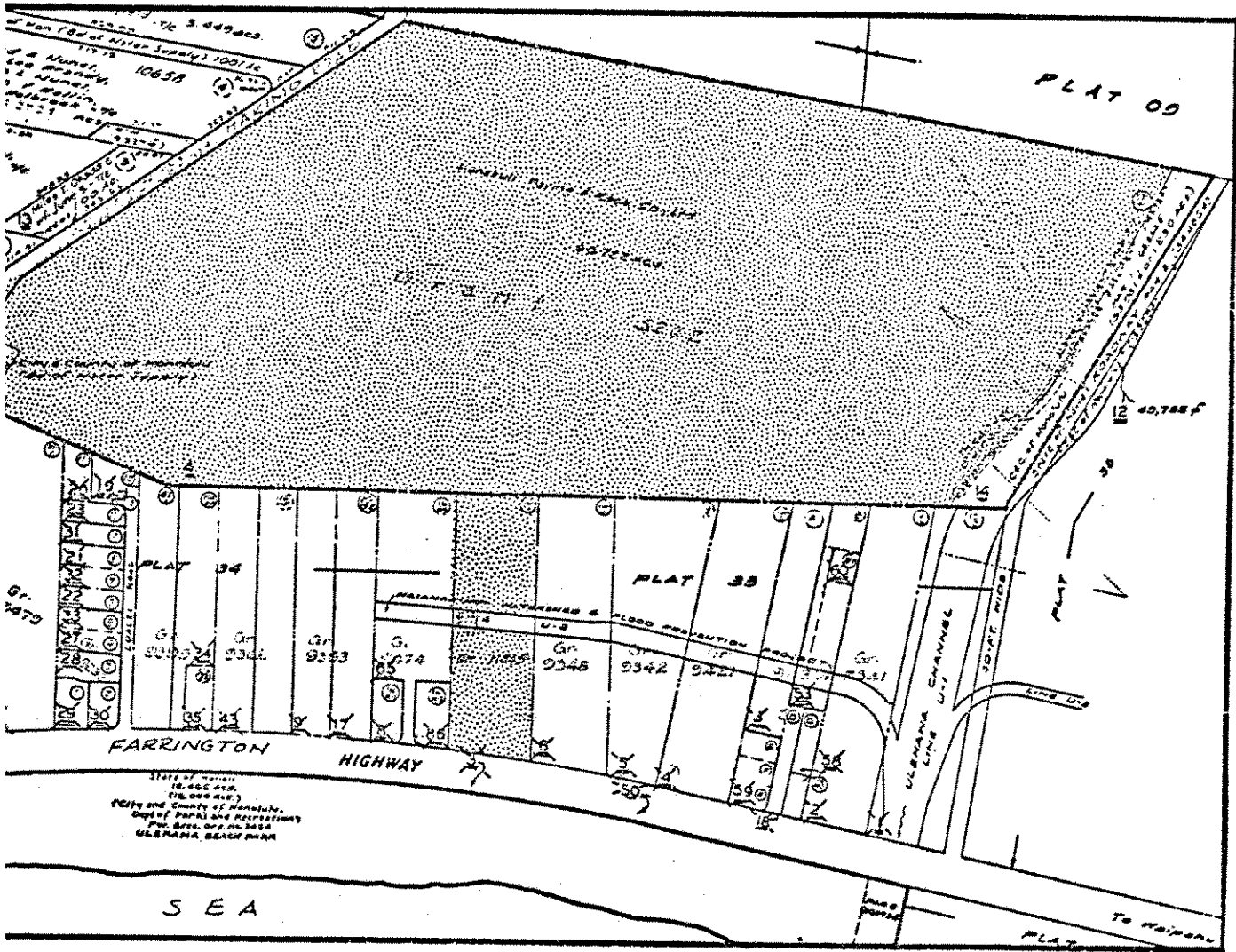
Figure 4.

Makaha Meadows Subdivision - Location Plan

PROPERTY DESCRIPTION

KAHAKAI NANI

Land



The irregular shaped parcel consolidation is identified as Tax Map Keys 8-7-07:04 and 8-7-33:14 and 19^{1/2} and contains a total area of 53.266 acres with a 1,762[#] roadway easement. Tax Map Key 8-7-33:14 is situated along Farrington Highway and contains an area of 1.246 acres. It has 188.00 feet of frontage along Farrington Highway, its southwesterly property line. Parcel 14 is 186.91 wide along its northeasterly and rear property line

1/ See also Exhibit 1 of the Addenda, "Tax Maps Of The 53.266-Acre Kahakai Nani Property."

EXHIBIT IV

July 22, 1977

LT-DS
2.38823

Mrs. Billie Beamer
Chairman
Department of Hawaiian
Home Lands
P. O. Box 1879
Honolulu, Hawaii 96805

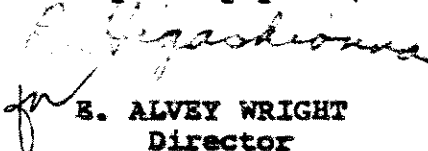
Dear Mrs. Beamer:

Subject: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to Vicinity
of Jade Street, Project No. 93B-01-75

Thank you for your response of April 13, 1977, on the above indicated EIS Preparation Notice. At this time we would like to request your assistance in providing us with information on the existing number of Hawaiian homes and future plans for constructing homes utilizing Farrington Highway as an access in the project area (Lualualei Homestead Road to Jade Street). This would help us determine the existing number of homes which will be served by the proposed road widening section. A map of the existing Hawaiian homes and future area to be constructed (over the next five years) would also be of assistance.

We look forward to your Department's response, and if we can provide further clarifications, please contact Herbert Tao (548-6932) of our Technical Design Services Office, Land Transportation Facilities Division.

Very truly yours,


E. ALVEY WRIGHT
Director

cc: Environmental Communications, Inc.
(w/copy of letter dated April 13, 1977)

1007

PROJECT OFFICES

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

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

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



AUG 10 3 03 PM '77

DESIGN BRANCH
LAND TRANSPORTATION
DEPT. OF TRANSPORTATION
STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOME LANDS
P. O. BOX 1879
HONOLULU, HAWAII 96805

RECEIVED
AUG 9 8 21 AM '77
DEPT. OF TRANSPORTATION
LAND TRANSPORTATION
FACILITIES DIVISION

August 3, 1977

MEMORANDUM

TO: E. Alvey Wright, Director
Department of Transportation

FROM: (Mrs.) Billie Beamer, Chairman

SUBJECT: EIS Preparation Notice, Farrington Highway
Widening, Lualualei Homestead Road to Vicinity
of Jade Street, Project No. 93B-01-75

In response to your letter dated July 22, 1977, regarding the subject EIS Preparation Notice, please find attached a map indicating the location (cross hatched) of future home construction by this Department. You will notice that the primary means of ingress and egress fall within your project area.

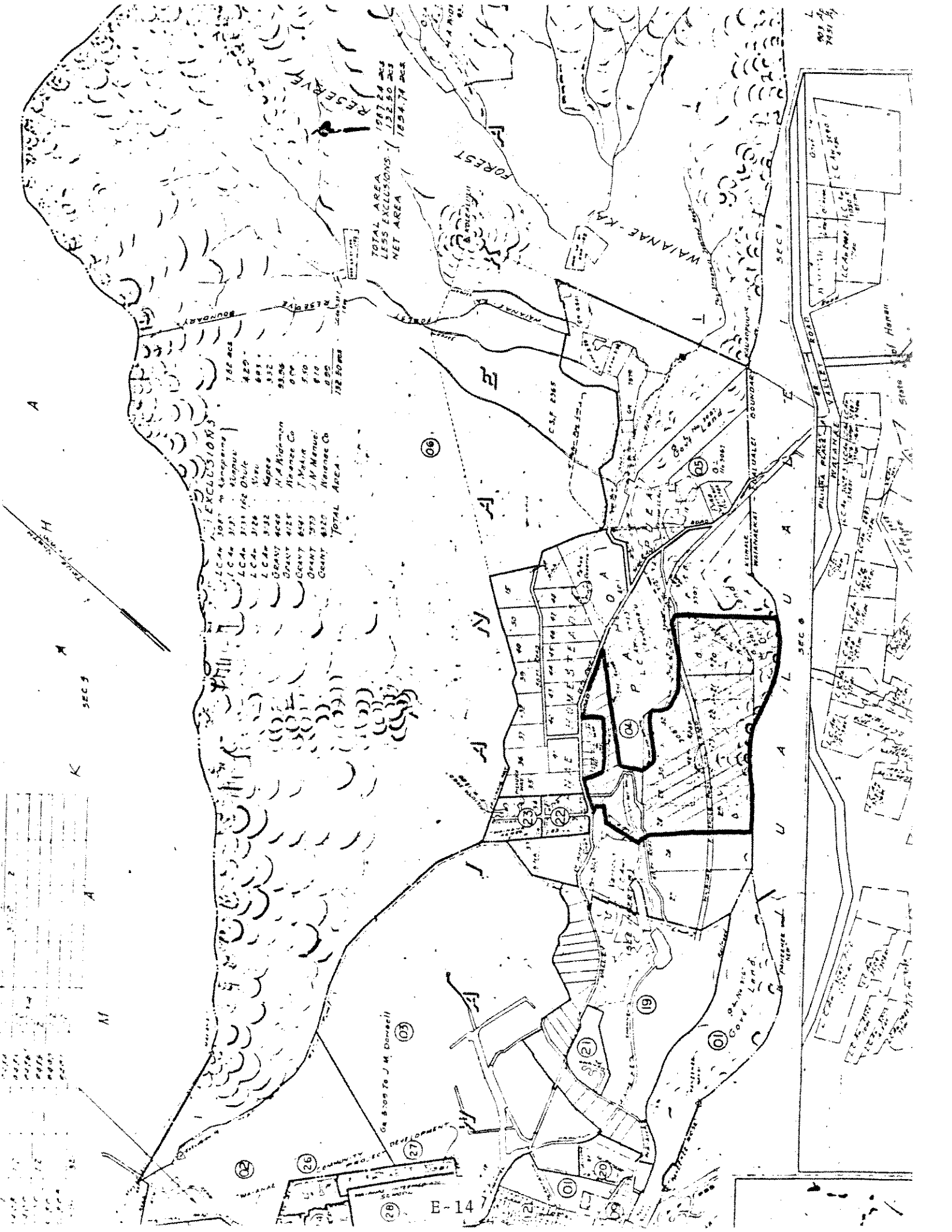
The area can accommodate approximately 600 single family units, however, only 500 are projected for occupancy within the next five (5) years. The remainder should be occupied shortly thereafter. Initial occupancy of the first 500 units is scheduled for September of this year.

Should there be any questions, please contact William Blaisdell, telephone 548-2684.

Billie Beamer
(MRS.) BILLIE BEAMER, CHAIRMAN

WB
WB:mkn
Enc.

32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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EXCLUSIONS

LCA# 3087	48.00	48.00
LCA# 3121	1.00	1.00
LCA# 3122	1.00	1.00
LCA# 3123	1.00	1.00
LCA# 3124	1.00	1.00
LCA# 3125	1.00	1.00
GRANT 4000	1.00	1.00
GRANT 4125	1.00	1.00
GRANT 6491	1.00	1.00
GRANT 5873	1.00	1.00
GRANT 4320	1.00	1.00
TOTAL AREA	58.00	58.00

TOTAL AREA 1917.74 AC
LESS EXCLUSIONS 58.00 AC
NET AREA 1859.74 AC

Gr 8-00 to J. M. Donnell

EXHIBIT V. INFORMATION ON SOILS TYPE IN THE HIGHWAY RIGHT-OF-WAY¹

Engineering interpretations: Review of the soils type in the area reveals that highway construction on these soils are acceptable in most instances. Some flooding (local) may be encountered in the Hanalei silty clay, 0 to 2 percent slopes (HnA) and Pulehu clay loam, 0 to 3 percent slopes (PsA). (Refer to the following map for the location of these soil types along the project area.)

Specifically the engineering interpretation for each soils type (for highway construction) is provided below.

Coral Outcrop - This land type is used for military installations, quarries, and urban development. Vegetation is sparse. It consists of kiawe, koa haole, and fingergrass.

EmB - All features favorable for highway location.

HnA - High water table; subject to flooding.

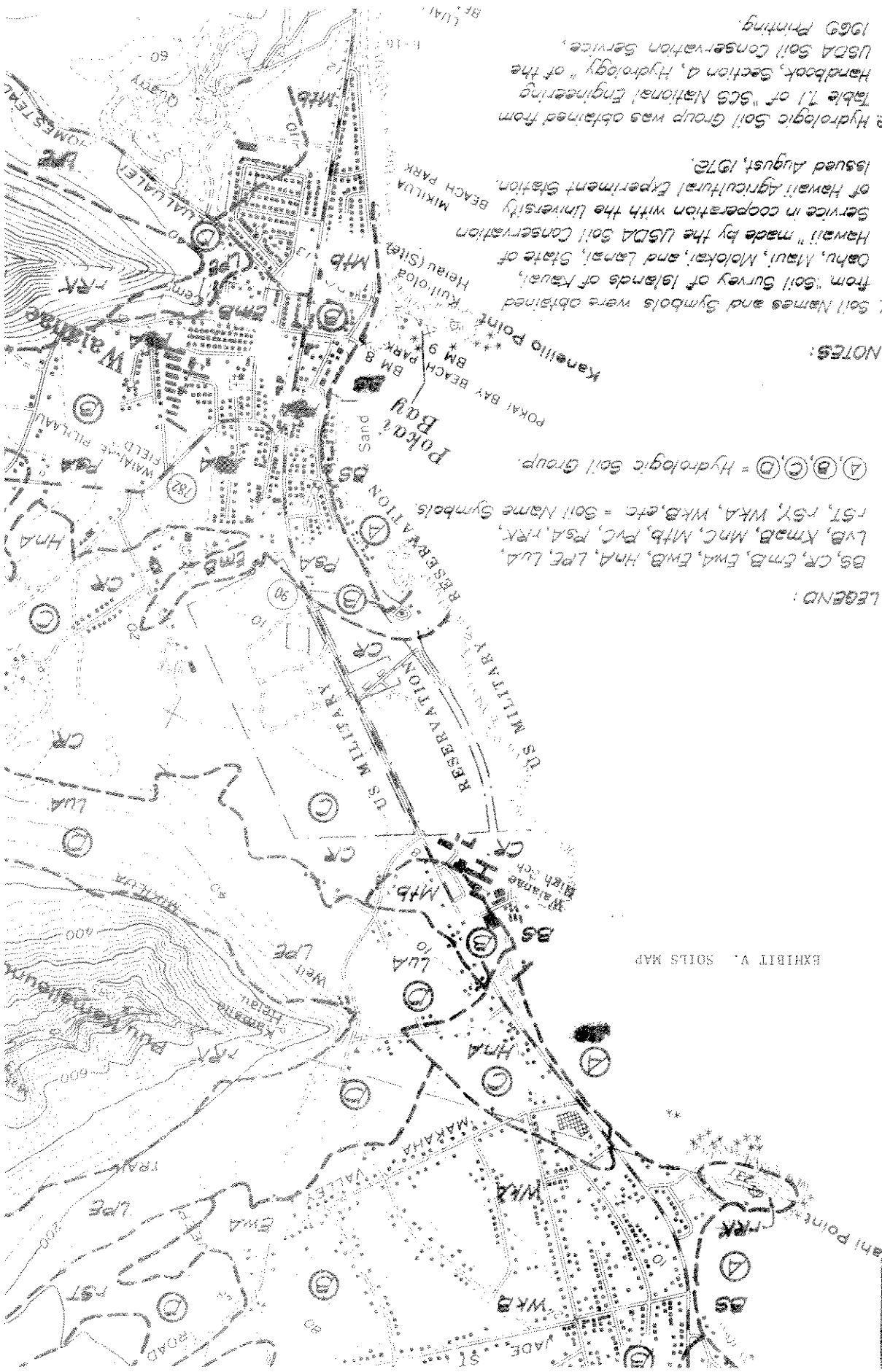
Mtb - Loose sand at a depth of 20 inches.

PsA - Subject to flooding in low areas

No significant or adverse impact on soils is anticipated due to this widening. The present highway already travels through these soils type and no severe problems have been encountered.

¹ Information obtained from USDA Soil Conservation Service in cooperation with the University of Hawaii Agricultural Experiment Station, Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, issued August 1972.

EXHIBIT V. SOILS MAP



LEGEND:

BS, CR, EMB, EWA, EWB, HMA, LPE, LUA, LVB, KMA, MNC, Mtb, PVC, PSA, RK, NST, NSY, WKA, WKB, etc = Soil Name Symbols.

(A), (B), (C), (D) = Hydrologic Soil Group.

NOTES:

1. Soil Names and Symbols were obtained from "Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii" made by the USDA Soil Conservation Service in cooperation with the University of Hawaii Agricultural Experiment Station, issued August, 1972.

2. Hydrologic Soil Group was obtained from Table 7.1 of "SCS National Engineering Handbook, Section A, Hydrology" of the USDA Soil Conservation Service, 1969 Printing.

