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'87 MAY 21 P3:36

February 26, 1987

Honorable John C. Lewin  
Director  
Department of Health  
1250 Punchbowl Street  
Honolulu, Hawaii 96813

Dear Dr. Lewin:

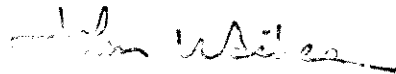
Based on the recommendation of your office, I am pleased to accept the final environmental impact statement for Kahuku High, Intermediate and Elementary School as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes.

This environmental impact statement will be a useful tool in the process of deciding whether the action described therein should be allowed to proceed. My acceptance of the statement is an affirmation of the adequacy of that statement under applicable laws and does not constitute an endorsement of the proposed action.

When the decision is made regarding the proposed action itself, I expect the proposing agency to 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, provide a useful analysis to the proposed action.

With kindest regards,

Sincerely,



JOHN WAIHEE

cc: Honorable Russel Nagata

21 MAY 22 1987

30 MAY 1987

KAHUKU HIGH, INTERMEDIATE  
AND ELEMENTARY SCHOOL

**FINAL  
ENVIRONMENTAL IMPACT  
STATEMENT**

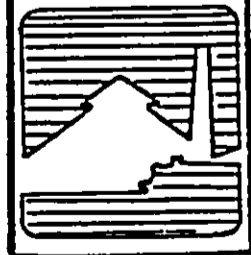
Department of Accounting  
and General Services

STATE OF HAWAII

DECEMBER 1986

OA  
365

H. MOGI PLANNING & RESEARCH INC.  
Honolulu, Hawaii



FINAL  
ENVIRONMENTAL IMPACT STATEMENT

FOR THE  
KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL  
Kahuku, Oahu, Hawaii

PROPOSING AGENCY

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

ACCEPTING AUTHORITY  
GOVERNOR, STATE OF HAWAII

SUBMITTED PURSUANT TO CHAPTER 343, HAWAII REVISED STATUTES

RESPONSIBLE OFFICIAL

  
HIDEO MURAKAMI, Comptroller

2/27/86

Date

Prepared by  
H. Mugi Planning and Research, Inc.  
Honolulu, Hawaii

December 1986

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SUMMARY  
FINAL ENVIRONMENTAL IMPACT STATEMENT  
for the  
KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL  
Kahuku, Oahu, Hawaii

1. Responsible Office:

Planning Branch  
Division of Public Works  
Department of Accounting and General Services  
State of Hawaii  
P. O. Box 119  
Honolulu, Hawaii 96810  
Contact: Cedric Takamoto (808) 548-5460

2. Accepting Authority: Governor

3. Name of Action: Kahuku High and Elementary School  
Campus Development Plan

4. Description of Proposed Action:

The development of a new elementary facility and the additional construction activity for the existing campus (TMK:5-6-06:03,09,10, & 11 (PCR), 22.8 acres) involves land acquisition of the new elementary facility site (TMK:5-6-06:11(PCR) and 5-6-09:134(PCR) and 135-146, 4.74 acres) and three additional parcels for parking (TMK:5-6-06:19(PCR) approx. 0.43 acre), a portion of an archeological site (TMK:5-6-06:19(PCR) approx. 0.07 acre), and a drainage retention basin (TMK:5-6-06:15(PCR) approx. 1 acre). (See Figures 1, 6, 7 and 1a of Appendix B). All of the TMK areas cited above in connection with the new elementary school site will be consolidated into one parcel. A subdivision application will be submitted to the City and County Department of Land Utilization.

Construction of facilities will take place in increments for both the elementary facility and secondary school areas. Incremental construction will take place in phases as indentified in the Kahuku High and Elementary School Campus Development Plan.

The site for the elementary facility is a parcel adjoining the existing Kahuku High and Elementary School and proposed Kahuku District Park. The land will be purchased from the City and County of Honolulu. The Department of Education has received \$625,000 from the 1986 Legislature for land acquisition. The elementary school land purchase will be arranged between the State Department of Land and Natural Resources and the City and County's Department of Finance.

Purchase of the other parcels for parking, the archeological site, and the retention basin will be arranged between the State Department of Land and Natural Resources and Campbell Estate. CIP funding will have to be approved.



Design funds in the amount of \$400,000 was appropriated in 1985. Design of the first increment is being initiated. The proposed elementary facility location, being contiguous to the existing campus, will be part of the expanded school campus which will encompass the high, intermediate, and elementary grades.

The expanded school will retain both elementary and secondary grades under one school administration, while relocating the elementary students away from the existing situation of co-mingling students in the K-12 mixed age groups to a situation where there is a separate area where the buildings and student population are limited to the K-6 age group.

PLAT 02

See figure 1-a

James Campbell Trust Estate  
(Kahuku Housing Corp.) in order  
10288 AC

224,827 AC.  
(204,624 AC.)

527,664 AC.

James Campbell Trust Est.

PLAT 05

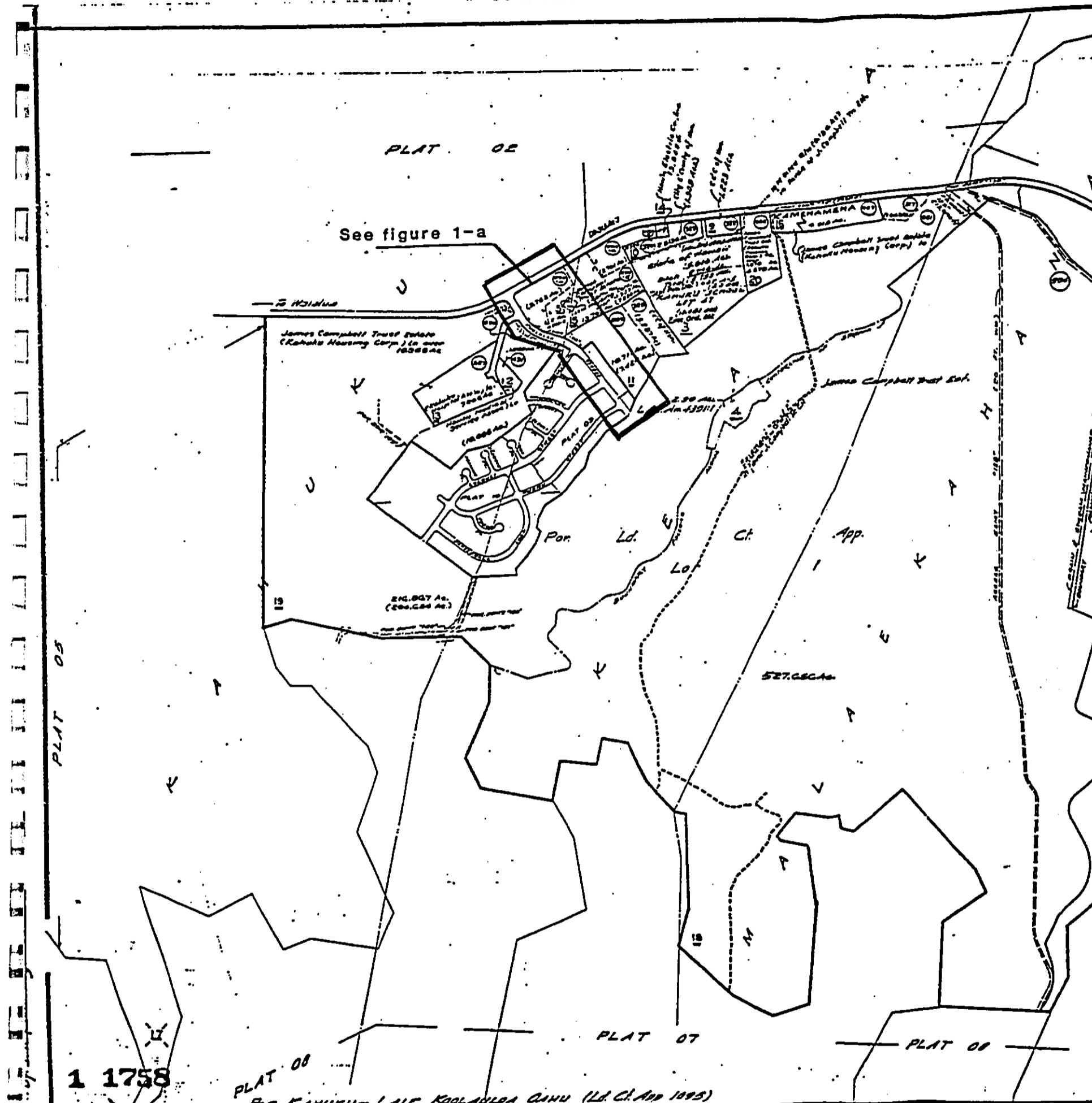
PLAT 07

PLAT 06

1 1758

PLAT 08

FOR KAHUKU - LAIE KOOLAHOA CANAL (L.I. Ch. App. 1095)



5 6 06

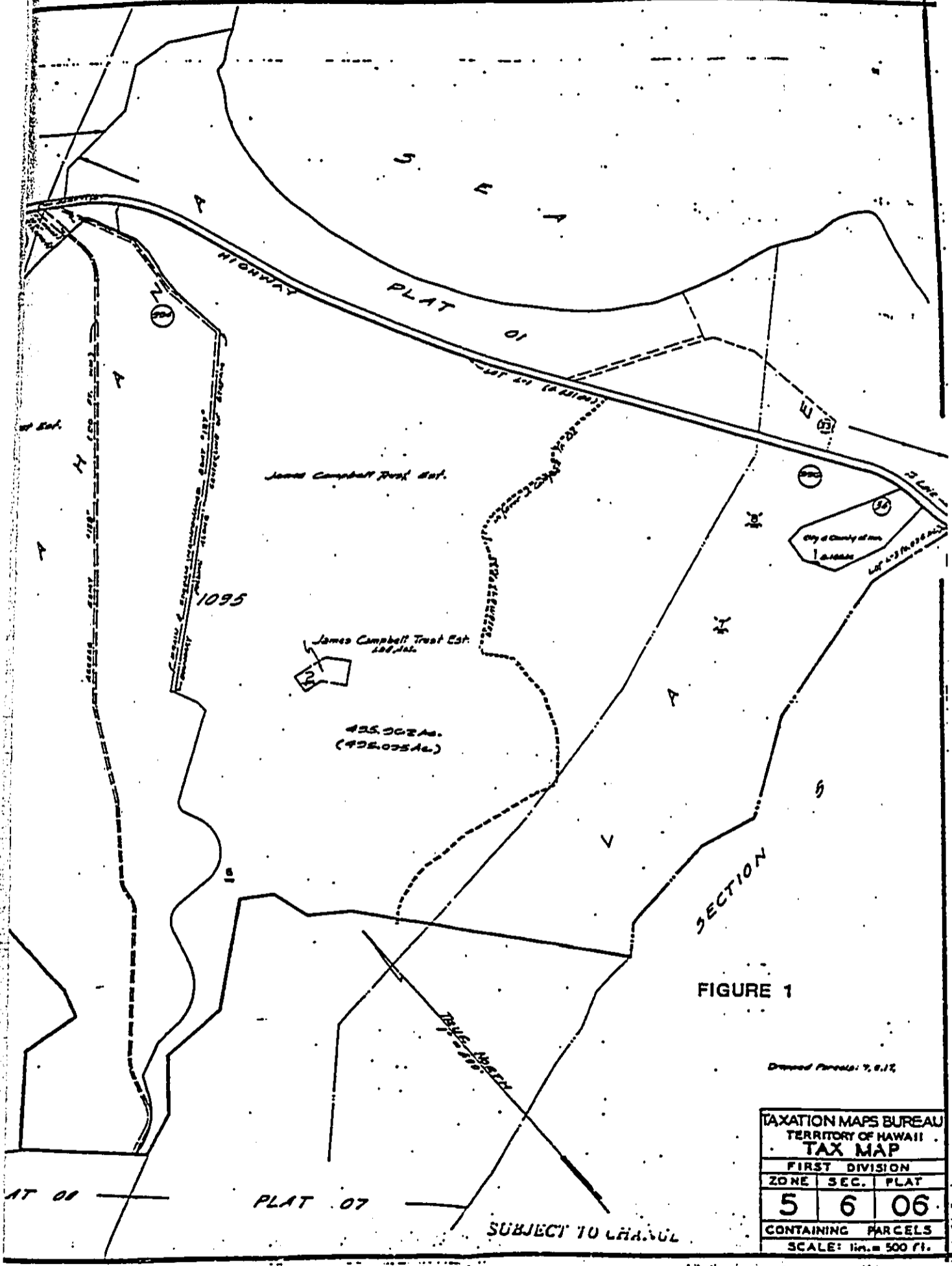


FIGURE 1

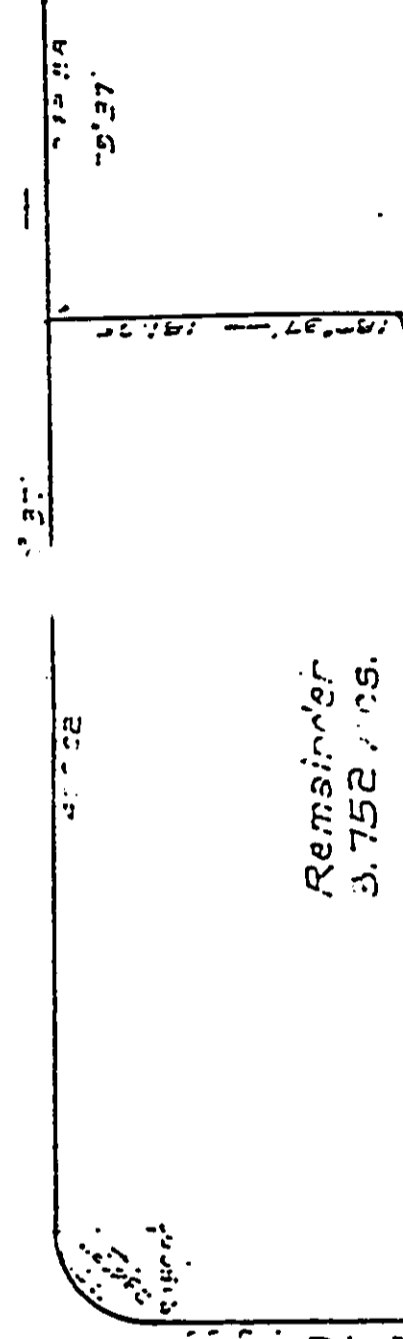
Detailed Parcel: 7, 8, 12

TAXATION MAPS BUREAU		
TERRITORY OF HAWAII		
TAX MAP		
FIRST DIVISION		
ZONE	SEC.	PLAT
5	6	06
CONTAINING PARCELS		
SCALE: 1 in. = 500 ft.		

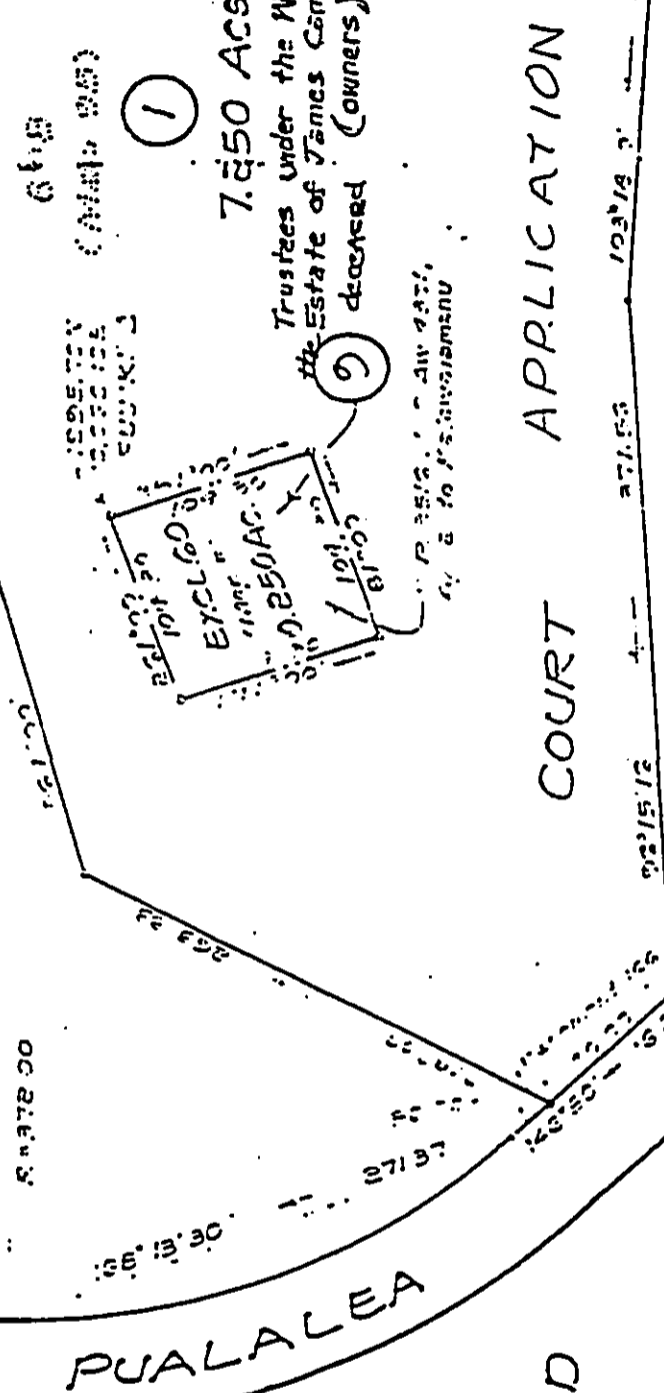
0 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

To Naima

KAMEHAMEHA



Remainder  
3.752 ACS.



7.250 ACS.

Trustees under the Will and of  
the Estate of James Campbell  
(deceased Owners)

①

②

COURT APPLICATION

PUALALEA

LAND

③

3.701 ACS.

PUALALEA PL.

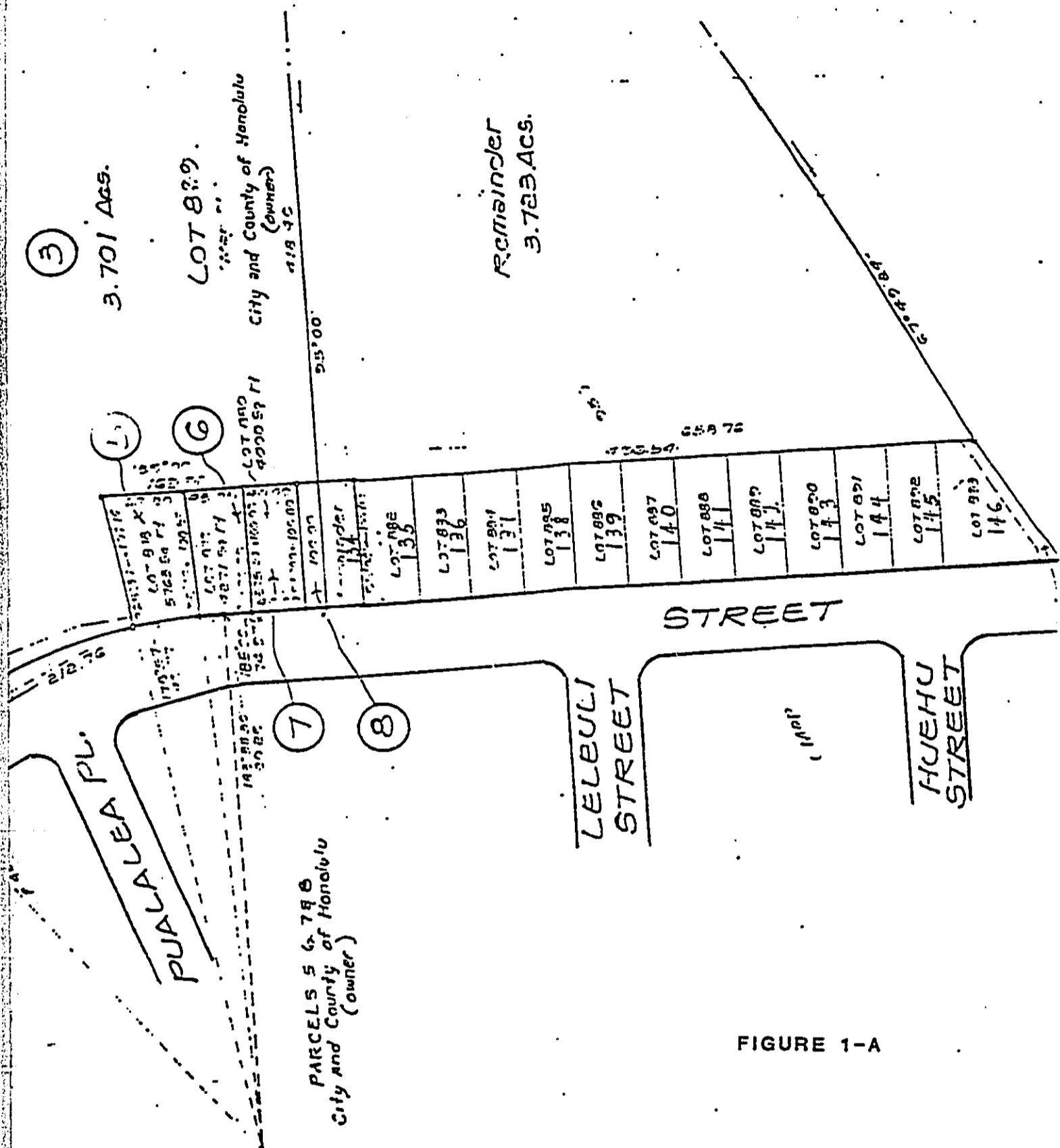


FIGURE 1-A

5. Alternatives Considered:

Elementary Facility

No Action. The no action alternative would entail the continuation of existing operations and would not alleviate current facility needs. For this reason this alternative was rejected.

Alternative Sites. During the site selection process for the elementary facility, three alternative sites were identified as candidate sites (See Figure 2). Site No. 1 (4.43 acres) is located towards the western end of the school district near the Turtle Bay Hilton. Site No. 2 is the selected site. Site No. 3 (4.98 acres) has been developed by the City and County of Honolulu for their police, fire, and ambulance services facilities.

Site No. 1 was rejected because it did not meet school and community criteria. Site No. 2 meets both the school and community criteria. Site No. 3 is unavailable.

Intermediate and High Facilities Alternatives

A number of alternatives were considered for the existing campus. Of the alternatives considered all concerns centered about the placement of the buildings on the existing campus because the issue of placing buildings on other sites did not arise.

6. Environmental Impacts

There are a number of elements that have environmental effects. The potential impacts resulting from the proposed actions are summarized below.

a. Land Use

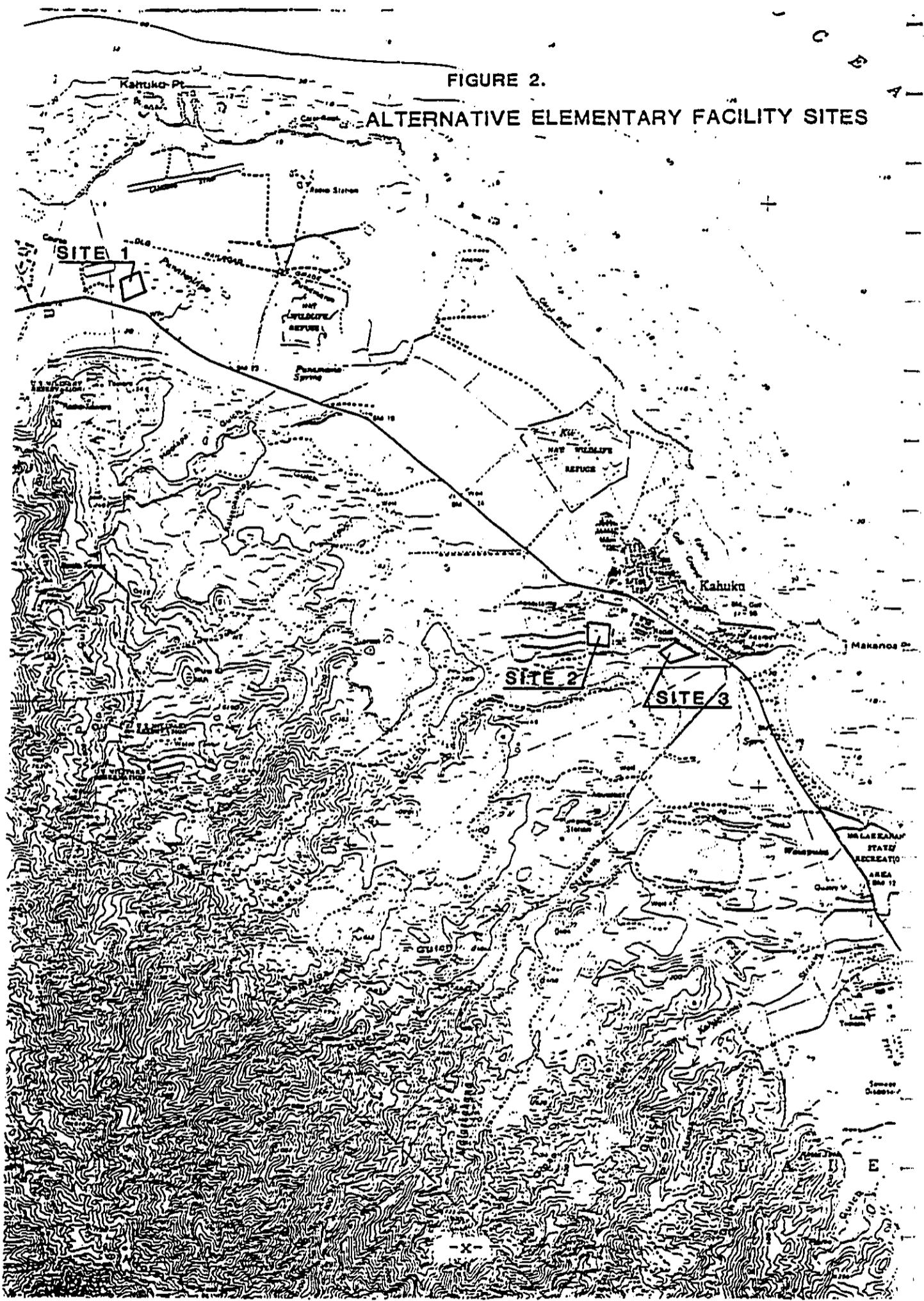
Elementary Facility. The change in land use will be the most significant impact to the environment at the elementary facility site. The proposed site for the elementary facility is currently vacant and is covered with plant material. With the development of the elementary facility the land will be cleared and graded for the new structures. The change in land use will not cause any dislocation.

Short term impacts will mostly be associated with construction activity. Current laws and ordinances associated with construction activity should be adequate to mitigate any adverse impacts.

Long term impact of the development of the site will be beneficial to the community. The new facility will alleviate the conflicts associated with having the elementary students located with secondary students. The location of the new facility will also provide a safer environment for the school children as it relates to minimizing traffic hazards.

FIGURE 2.

ALTERNATIVE ELEMENTARY FACILITY SITES



Intermediate and High Facilities. Minimal land conversion is planned for the intermediate and high facilities. No impacts are anticipated in the purchase and use of the two small parcels to be acquired for parking and a retention basin. The retention basin will be approximately 1 acre in area and of sufficient depth to provide for the 50-year flood.

- b. Traffic Circulation. With the relocation of the Elementary facility there will be additional burden placed on Pualalea Street and at the intersection of Pualalea Street and Kamehameha Highway. This additional burden will not require the expansion of storage lanes along Kamehameha Highway to handle peak hour traffic.
- c. Noise. The impact of noise created by the Fire Station siren and the take-off and landings of Police and Fire helicopters appear to be minimal because the noise interference will be occasional.
- d. Air Quality. Impacts to air quality will be generally associated with construction activity. Current laws and ordinances which govern construction activity are adequate to mitigate any adverse impacts. There are no long term impacts to air quality.
- e. Water Quality. Impacts to water quality will be generally associated with construction activity. Current laws and ordinances which govern construction activity are adequate to mitigate any adverse impacts.  
  
There are no long term impacts to water quality anticipated.
- f. Sewage. The existing wastewater treatment system can accommodate the sewage flow from the existing campus and the new elementary facility.
- g. Drainage. The existing City and County drainage system on Pualalea Street and Kamehameha Highway was designed to include 16 lots that were to be built on the elementary facility site. The runoff from these lots were to amount to 8.2 cfm. The total remainder of the elementary facility runoff will be disposed of by dry wells and the retention basin. The existing campus runoff will be disposed of by a combination of existing drywells which will be connected to the retention basin. In almost all cases, the drywells will dispose of runoff with only a minor amount entering the retention basin. Moreover, the basin is situated in a low area which is 1 to 2 feet below Kamehameha Highway. Thus, even in the most severe storm, there will be no possibility of stormwater leaving the school and affecting Kamehameha Highway. The drywell receive no regular maintenance but can be cleaned out periodically as required. After



a period, performance may diminish to the point where a new drywell must be constructed. However, drywells on the existing campus have been utilized with satisfactory results for a sufficiently long period to constitute a workable system. Injection wells were not considered because they would be costlier to construct and maintain. Runoff would have to be filtered before injection to keep from damaging the pumps or plugging the injection wells. Based on the above discussion, none of the existing campus or new elementary facility's runoffs will directly affect the nearby James H. Campbell National Wildlife Refuge. A drainage report will be prepared during the first increment design of the elementary facility.

- h. Relocation of Tenants. There are two residences on the site if the proposed retention basin. The residents will be provided relocation assistance according to Chapter 111, HRS.
- i. Social Impacts. The development of a new Elementary facility will improve the social environment of the elementary students. The facility's location adjoining the district park will also provide additional recreational opportunities for the elementary students. The new location will also improve traffic safety because the elementary facility will not longer be located along a major thoroughfare.
- j. Impacts Which Cannot Be Avoided. Short-term impacts which cannot be avoided are those primarily related to construction activity. Mitigative measures will be imposed during construction, however, they will not eliminate all impacts related to noise, dust, traffic congestion, and air pollution. The contractor must obtain a noise permit if the noise levels from construction activities are expected to exceed the noise regulation levels. Construction equipment and on-site vehicle with exhaust must be equipped with mufflers. The contractor must comply with the conditional use of the permit as specified in the permit conditions and regulations.

Long-term impacts associated with the project will have both beneficial and negative impacts which cannot be avoided. Negative impacts include the conversion of potential agricultural use to school use. There will be increased traffic along Pualalea Street that may affect residents that use this street. Should it become necessary, monitoring of the traffic can be done to determine if any improvements need to be made to Pualalea Street and/or the elementary facility parking lot connecting to Pualalea Street.

The long-term benefit derived from the development of the new elementary facility will be the creation of an educational facility specifically intended for elementary students and programmed for the increased student enrollment.

ENVIRONMENTAL IMPACT STATEMENT  
Public Review Phase  
FOR THE  
KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL

I. INTRODUCTION

A. PURPOSE

The purpose of this Environmental Impact Statement (EIS) is to identify, evaluate, disclose, and provide for the detailed study of major impacts resulting from (1) the acquisition of land for, and the construction of, the new but not autonomous elementary facility and (2) the construction of additional facilities for the existing secondary facility.

The State Public Works Engineer has determined that an Environmental Impact Statement is required for the proposed action pursuant to HRS Chapter 343 and the "Environmental Impact Statement Rules", Chapter 200, Title 11 (Department of Health) of the State of Hawaii Administrative Rules. Specifically, Subchapter 5, Section 11-200-5, paragraph (b) which states:

". . . when an agency proposes to implement an action to use state or county lands or funds, it shall be subject to the provisions of Chapter 343, Hawaii Revised Statutes, and this chapter. . . ."

This action proposes both the use of State funds and lands.

B. BACKGROUND

Kahuku Elementary Facility

An elementary facility is needed which provides a separate environment for elementary students and which provides for the increased elementary enrollment and Department of Education Educational Specifications requirements.

The proposed location for the elementary facility will retain both elementary and secondary grades under one school administration, while relocating the elementary students away from the existing situation of co-mingling students from the K-12 mixed age groups to a situation where there is a separate area where the buildings and student population are limited to the K-6 age group.

The proposed elementary facility location, being contiguous to the existing campus, will be part of the expanded school campus which will encompass the high, intermediate, and elementary grades.

The principal will continue to remain in the present Administration building. A vice-principal for the elementary facility will be permanently assigned to an office in the elementary facility.

Main support services will continue to be provided by the secondary school. This includes library and food preparation services. However, two rooms will be provided for a library annex for the elementary facility. Two other rooms will be used for a temporary service kitchen/dining area until the permanent service kitchen/dining area building is constructed.

Since the site is too small to include play areas, these will be provided in the proposed Kahuku District Park to be provided adjacent to the existing campus and new elementary facility.

#### Design Enrollment

The design enrollment for the Kahuku High, Intermediate and Elementary School is 2,250 students in Grades K-12. Four hundred fifty (450) students will be in grades K-6, and 1,800 students in grades 7-12.

## Enrollment Projections

The annual enrollment projections for the next four years are shown in Table 1.

---

TABLE 1  
KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL  
ENROLLMENT PROJECTIONS

<u>SCHOOL YEAR</u>	<u>ENROLLMENT</u>
1986-87	1,870
1987-88	1,892
1988-89	1,999
1989-90	2,043

Source: Department of Education, Student Information Service

---

The existing Kahuku High and Elementary School is located on Kamehameha Highway. Figure 3 show the location of the existing school campus and the proposed elementary facility.

Figure 4 shows the Feeder Complex of the elementary schools to be serviced by the Kahuku High, Intermediate and Elementary School.

The service limits for the elementary facility are shown in Figure 5.

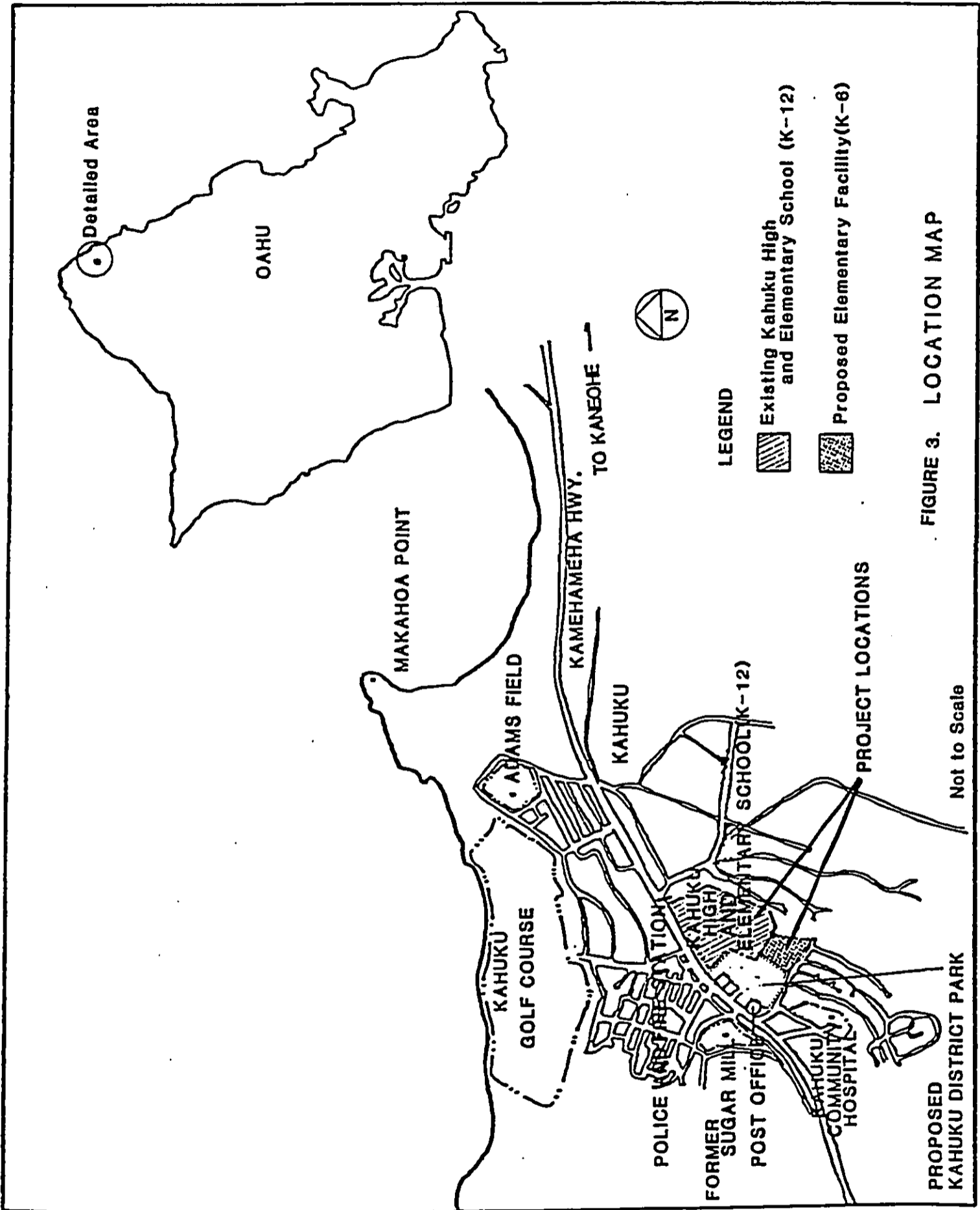
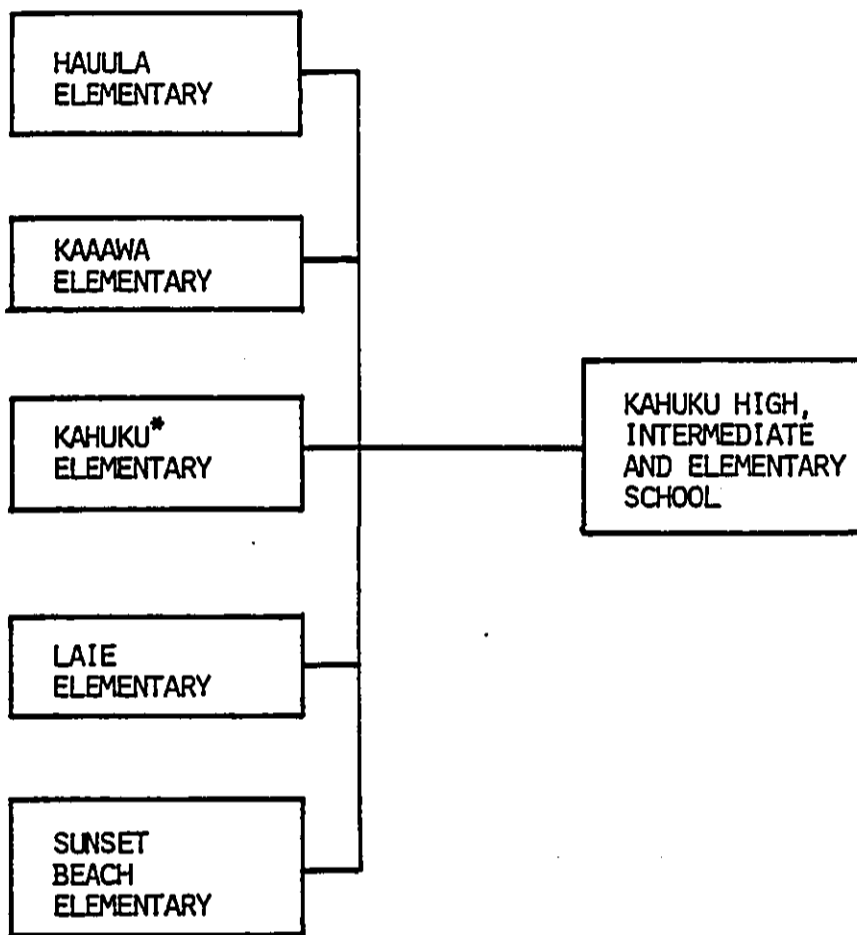


FIGURE 3. LOCATION MAP

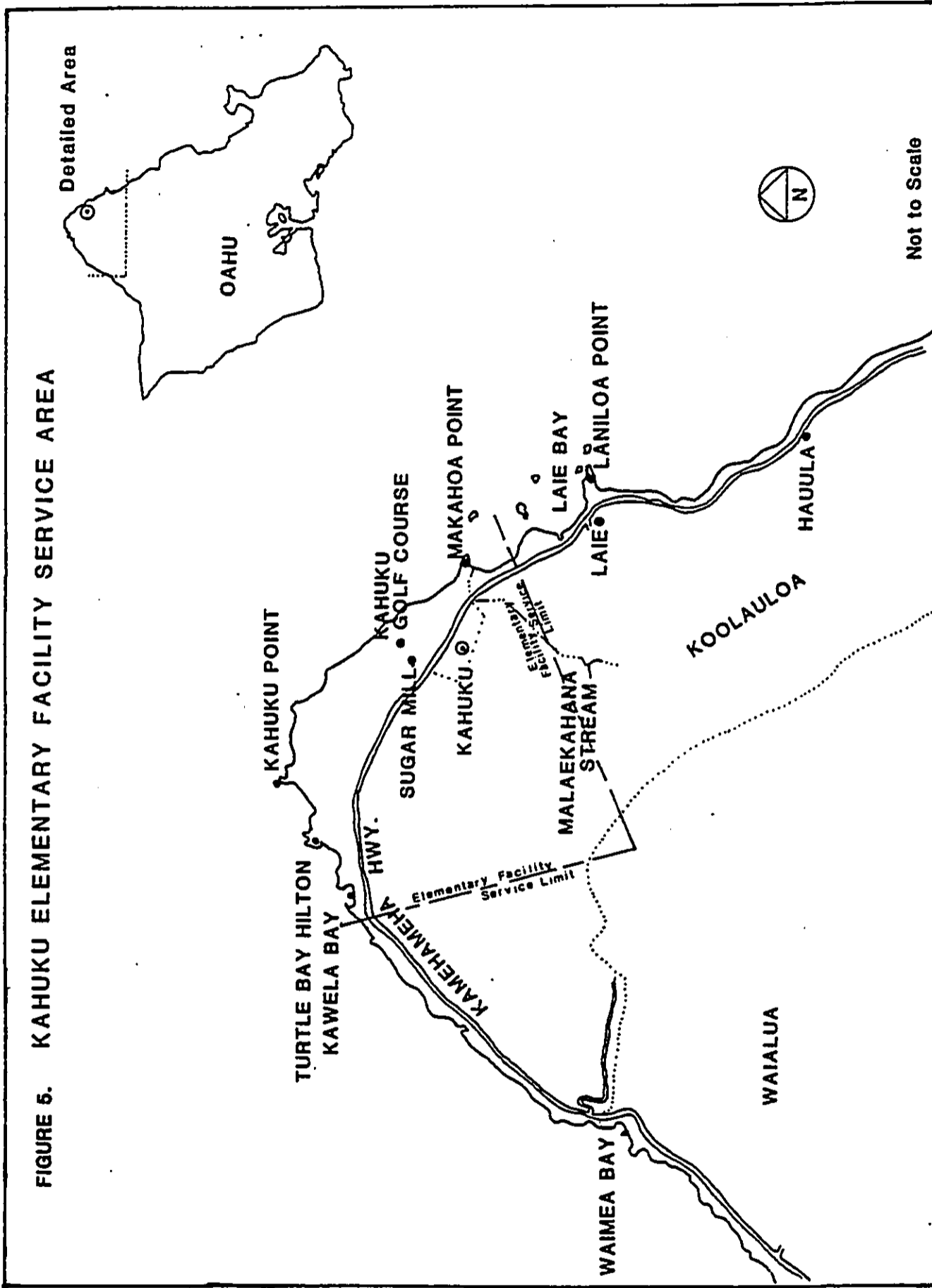
25 22 19 17 14 11 8 5 2

**FIGURE 4.**  
**FEEDER COMPLEX**  
**KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL**



\*Not an independent school.  
Part of Kahuku High, Intermediate and  
Elementary School.

FIGURE 5. KAHUKU ELEMENTARY FACILITY SERVICE AREA



3- 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

## II. DESCRIPTION OF THE PROPOSED ACTION

### A. INTRODUCTION

The development of new elementary facility and the additional construction activity for the existing campus involves land acquisition of the new elementary facility and additional parcels for parking and a drainage retention basin for the existing campus. Construction of facilities will take place in increments for both the elementary facility and secondary school areas and described in Paragraph F of this section.

### B. LAND ACQUISITION AND DESIGN

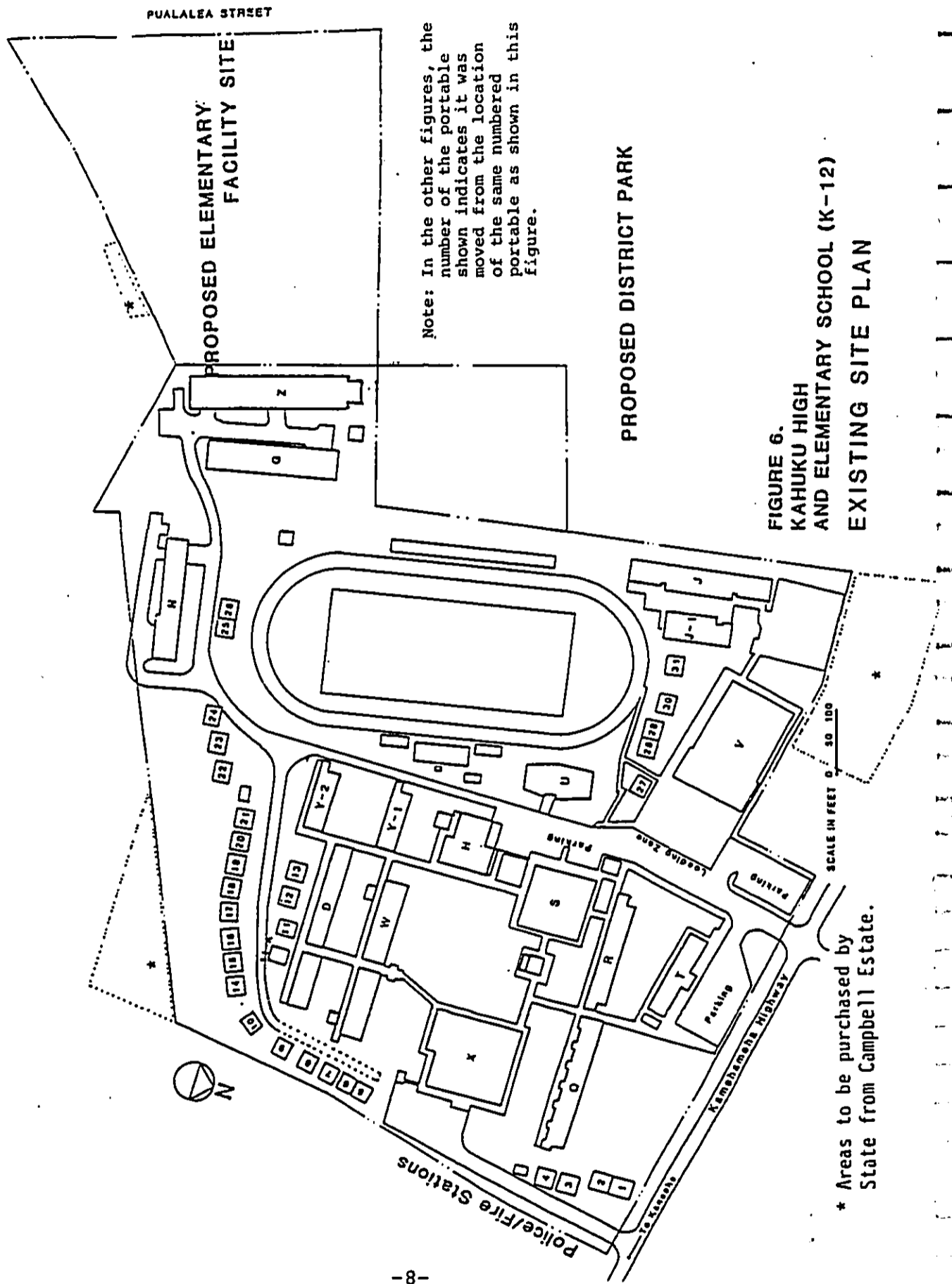
#### Kahuku Elementary Facility

The site for the elementary facility is a parcel which adjoins the existing Kahuku High and Elementary School and proposed Kahuku District Park. The land will be purchased from the City and County of Honolulu. The City and County Department of Housing and Community Development, in preliminary discussions with the Department of Education, has agreed to sell the school site to the State. However, the actual acquisition will be processed formally by the City and County Department of Finance and the State Department of Land and Natural Resources. The 1986 Legislature has appropriated \$625,000 for land acquisition. Design funds in the amount of \$400,000 was appropriated in 1985. Design of the first increment has begun. The site and its relationship to the existing Kahuku High and Elementary School is shown in Figure 6. Land acquisition and consolidation of acquired parcels will proceed as described on page v of this EIS.

#### Kahuku High and Intermediate Facilities

Purchase of two additional parcels from Campbell Estate for





Note: In the other figures, the number of the portable shown indicates it was moved from the location of the same numbered portable as shown in this figure.

FIGURE 6.  
KAHUKU HIGH  
AND ELEMENTARY SCHOOL (K-12)  
EXISTING SITE PLAN

\* Areas to be purchased by State from Campbell Estate.

parking and a retention basin is planned as part of the incremental construction for the secondary school. The parcels are shown in Figure 6. The costs are identified in Paragraph F of this section.

### C. FACILITY PROGRAM

#### Kahuku Elementary Facility

The elementary facility's programs are shown in Tables 2 and 3. (See Figure 7 for the Ultimate Site Plan. See Figures 8 and 9 for schematics of the individual buildings. Only the Service Kitchen/Dining building is not shown).

The main access to the elementary facility will be from Pualalea Street. There will be a service road connection to the secondary school for maintenance and food service kitchen/dining area building.

The campus will be on two levels. The first level will be accessible directly from the parking lot off of Pualalea Street. Building F, I and K will be on the first level (See Figure 7). Since these are two story buildings, an elevator will be provided for handicapped access to the second floor. A second floor walkway will connect Buildings F and K.

The second (lower) level will be accessible by stairs and a ramp for handicapped accessibility from the first level. Buildings C and E, the portables numbered 1, 2, 4 and 8, and the portable toilet 4-A are located on this level.

The campus will be provided with water, and sewer connections as shown in Figures 10 and 11, and drainage will be provided as shown in Figure 12. The utility system is described in Appendix A.

TABLE 2

## KAHUKU ELEMENTARY FACILITY

<u>Program/Use</u>	<u>No.</u>	<u>Bldg.</u>
a. Regular Classroom - General Classroom	16*	6F,3I,7K
b. Special Education		
Regular Program		
1. Self-Contained Classroom	1	E
2. Resource Services Classroom	1	I
District Center		
1. Self-Contained Classroom	2	K
2. Resource Services Classroom	1	E
c. Supplementary -- General Classroom	2	Portable
d. Peak Enrollment - General Classroom	2	Portable
e. Other		
1. Administration	1	I
2. Library (annex)	2	I
3. Computer Room	1	K
4. Itinerant Services	<u>1</u>	E
TOTAL	30	
f. Faculty Center	1	I

Note: Of the thirty(30) rooms four(4) will be portables. Two (2) portables will be used to meet supplementary classroom needs. Two(2) portables will be used to meet peak enrollment classroom needs.

\* Two rooms to be used as temporary food service/dining until the Service Kitchen/Dining Room Building is constructed.

TABLE 3

SUPPORT FACILITIES FOR THE HIGH, INTERMEDIATE  
AND ELEMENTARY SCHOOLS

<u>Program/Use</u>	<u>No.</u>
a. Administrative Center	1
b. Cafetorium/Multi-purpose Center	1
c. Kitchen	1
d. Library	1
e. Kindergarten Grassed Field (District Park)	1
f. Kindergarten Apparatus Area (District Park)	1
g. Grades 1-6 Grassed Field (District Park)	1
h. Grades 1-6 Apparatus Area (District Park)	1
i. Grades 1-6 Paved Playcourt (District Park)	1
j. Grades 7-12 Grassed Area (District Park)	1
k. Grades 7-12 Paved Playcourt Unit (District Park)	1
l. P.E. Locker/Shower Building (Bldg. J, J-1)	1
m. Football/Track Field	1
n. Baseball Field (District Park)	1
o. Swimming Pool (District Park)	1
p. Gymnasium	1
q. Varsity/J.V. Locker/Shower (Building B)	1

Parking provided:

Elementary School = 38 stalls  
High School = 465 stalls

Bus Loading: Elementary = 1 space (future); High School = 4 spaces.

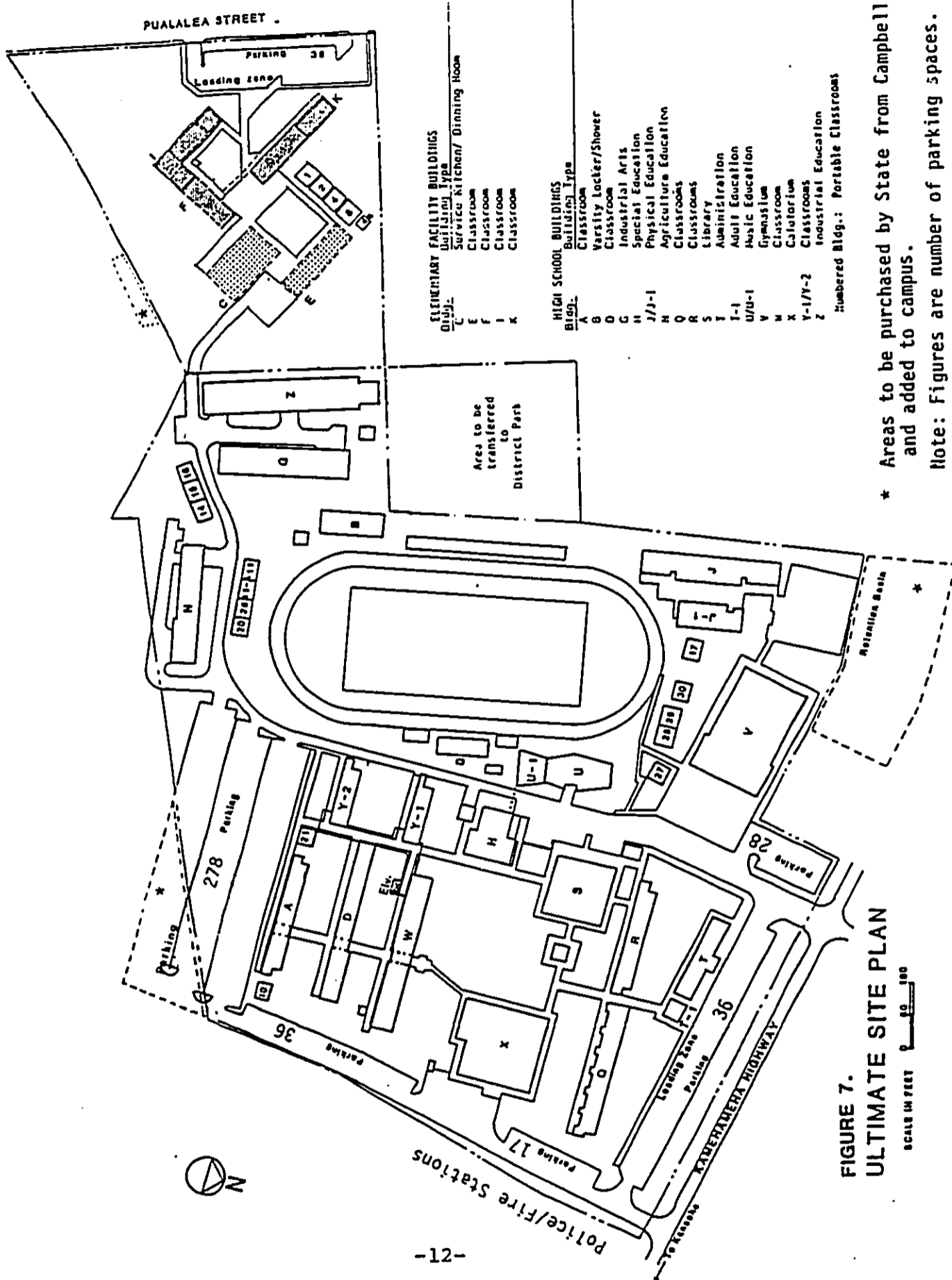
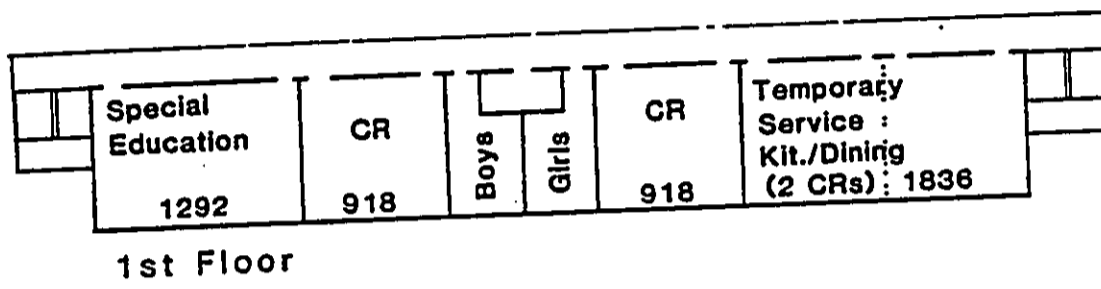
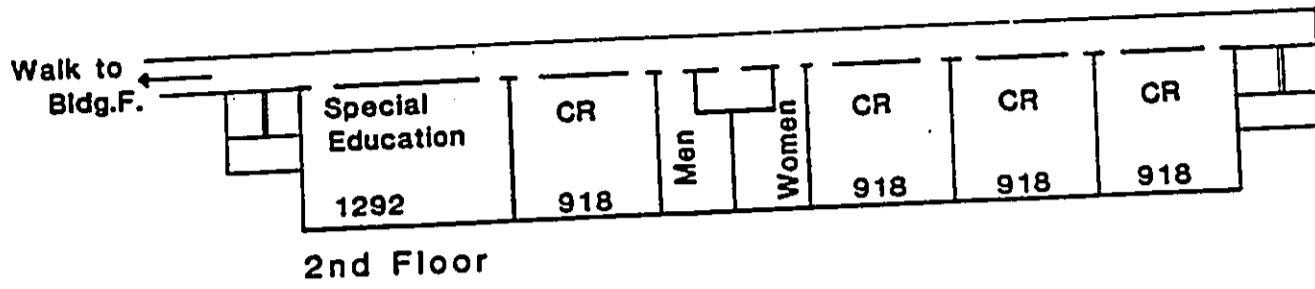


FIGURE 7.  
ULTIMATE SITE PLAN

\* Areas to be purchased by State from Campbell Estate and added to campus.  
Note: Figures are number of parking spaces.

Classroom Building K:



Classroom Building E.

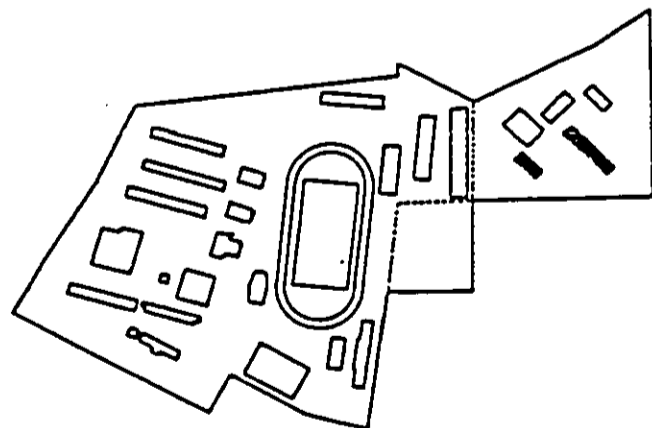
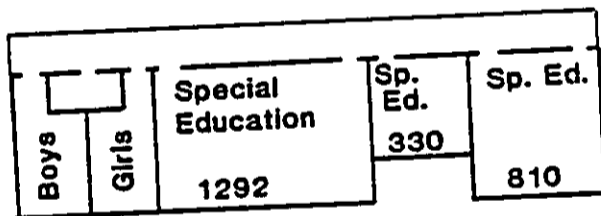
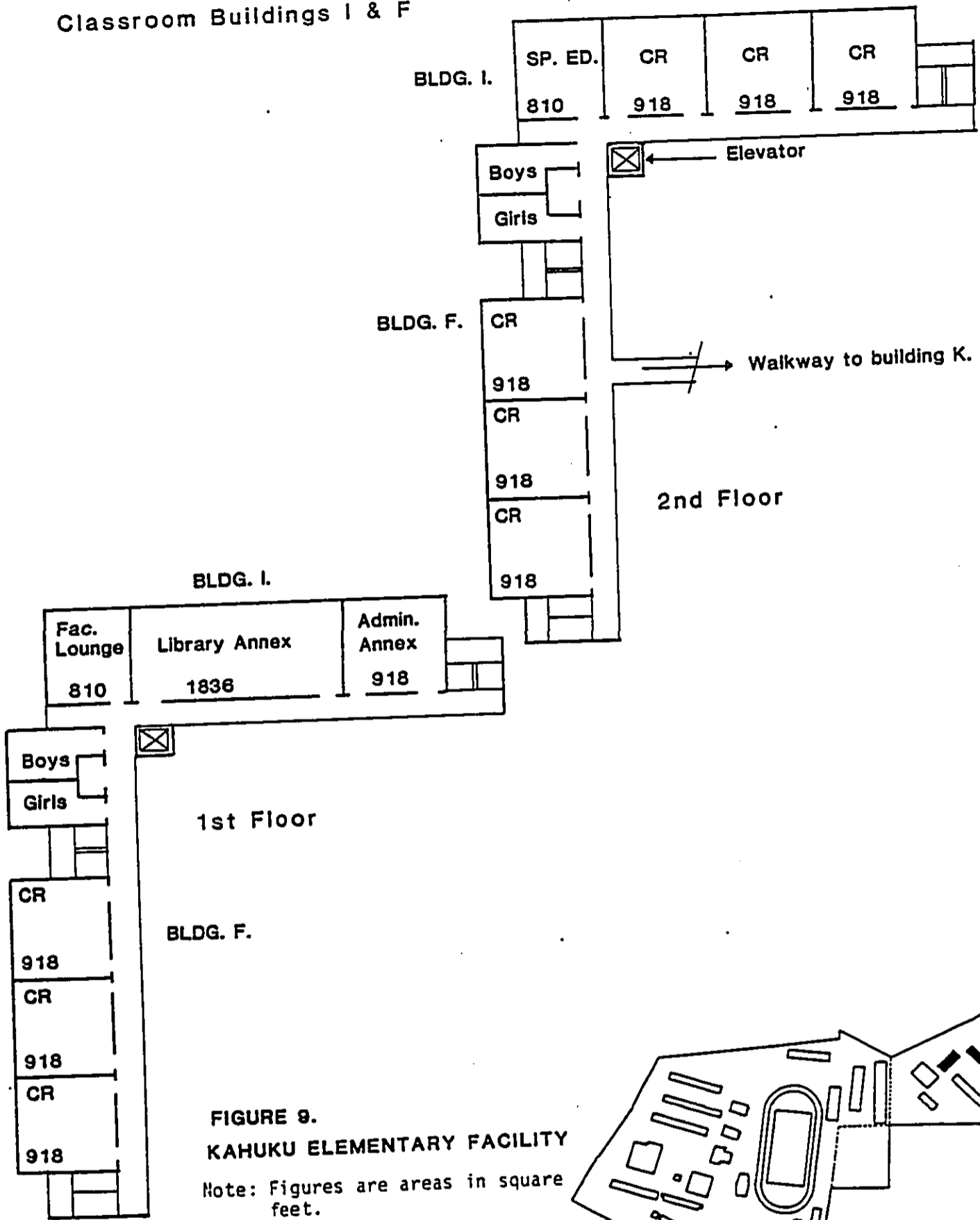


FIGURE 8.  
KAHUKU ELEMENTARY FACILITY  
Note: Figures are areas in square feet.

Classroom Buildings I & F



**FIGURE 9.**  
**KAHUKU ELEMENTARY FACILITY**  
 Note: Figures are areas in square feet.

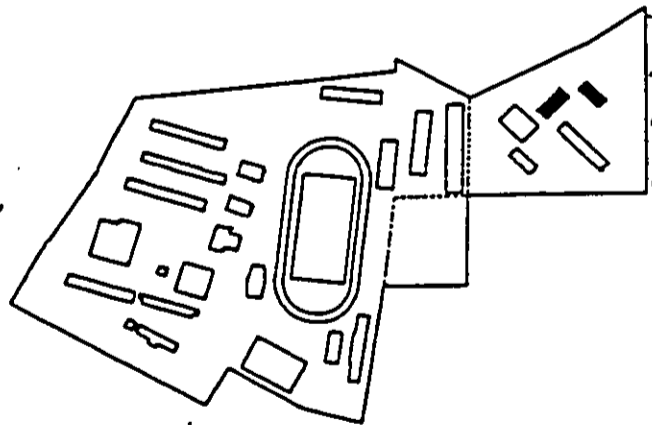


FIGURE 10.  
 WATER MASTER PLAN  
 KAHUKU ELEMENTARY FACILITY

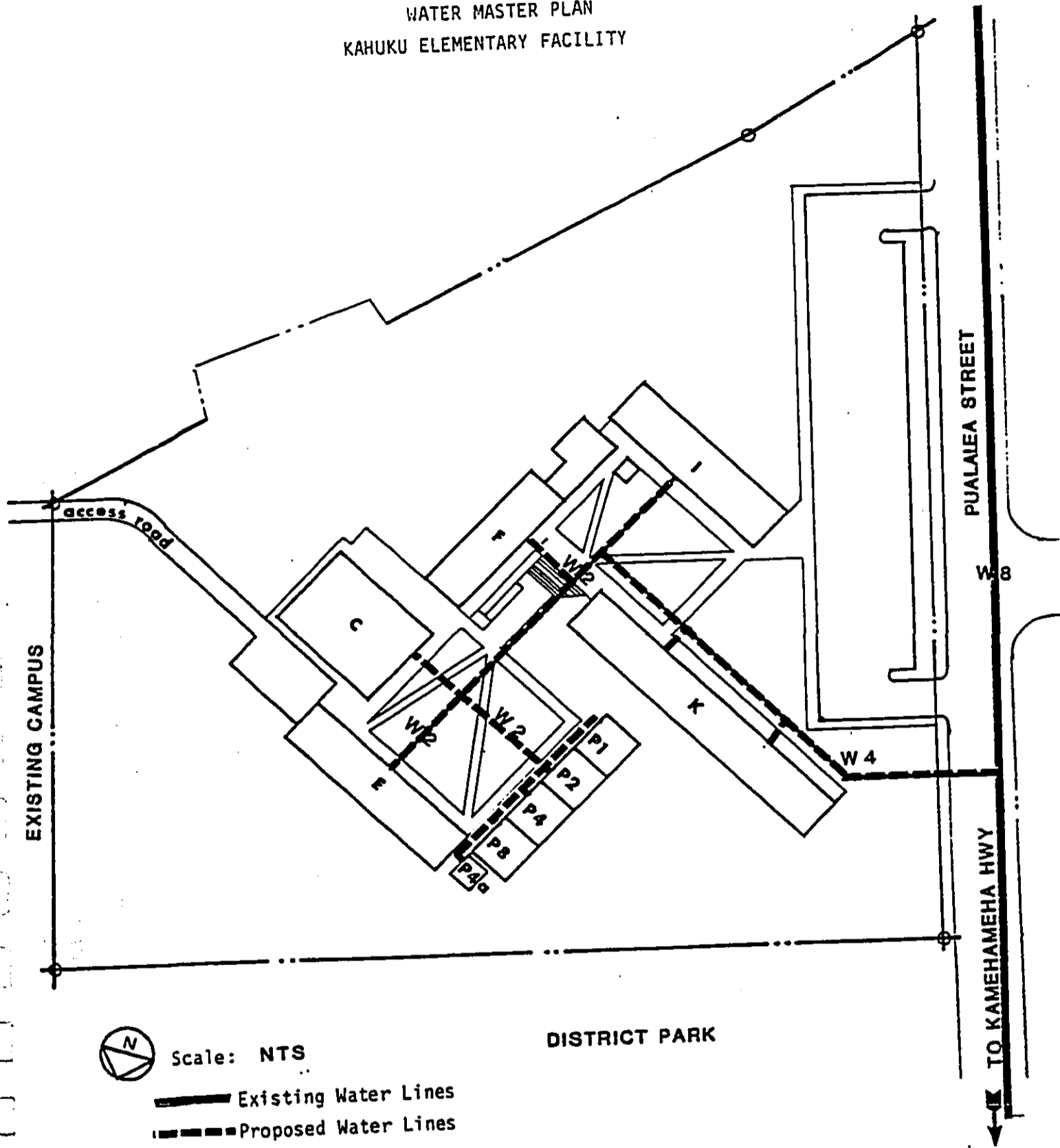




FIGURE 11.  
SEWER MASTER PLAN  
KAHUKU ELEMENTARY FACILITY

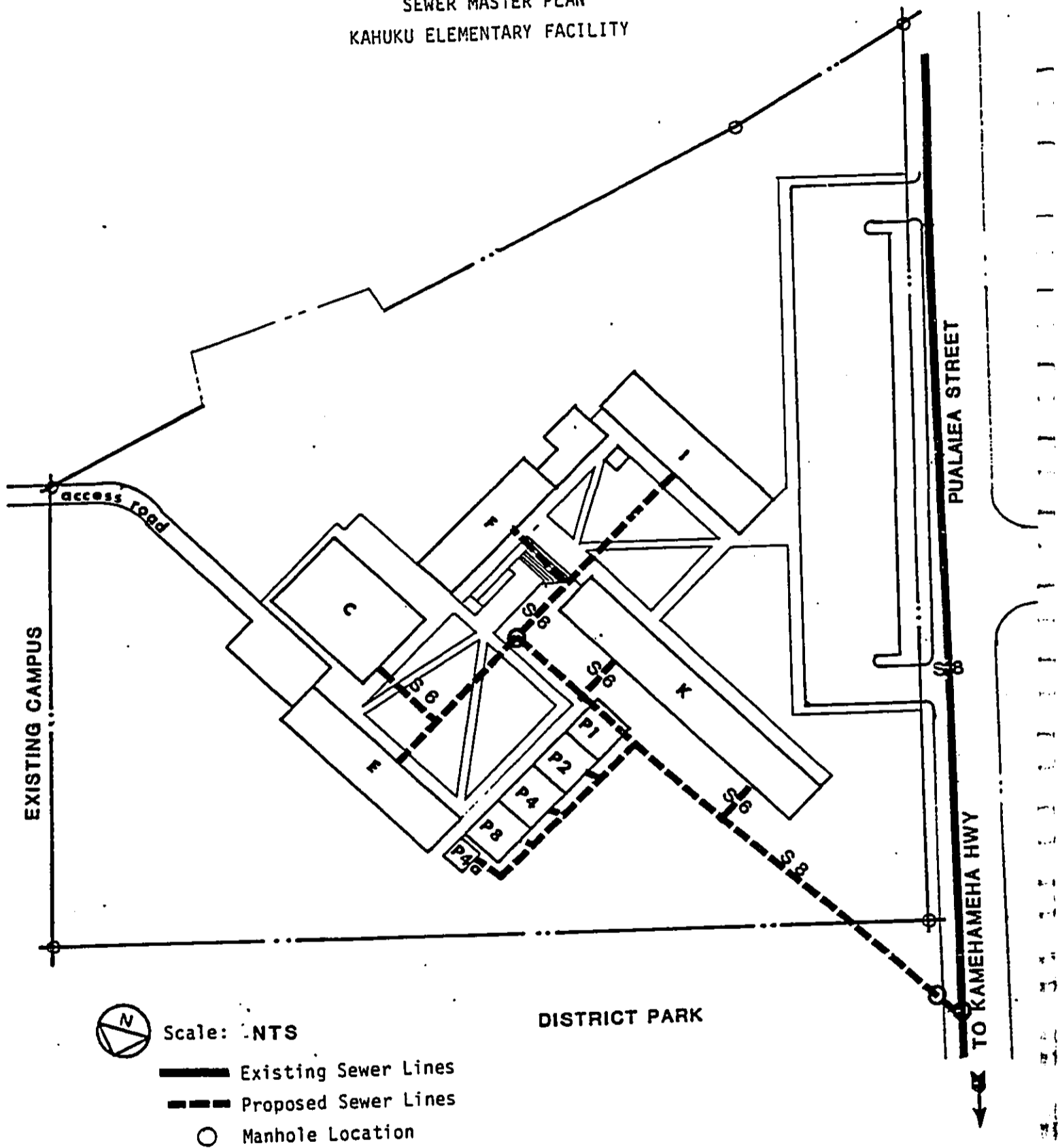
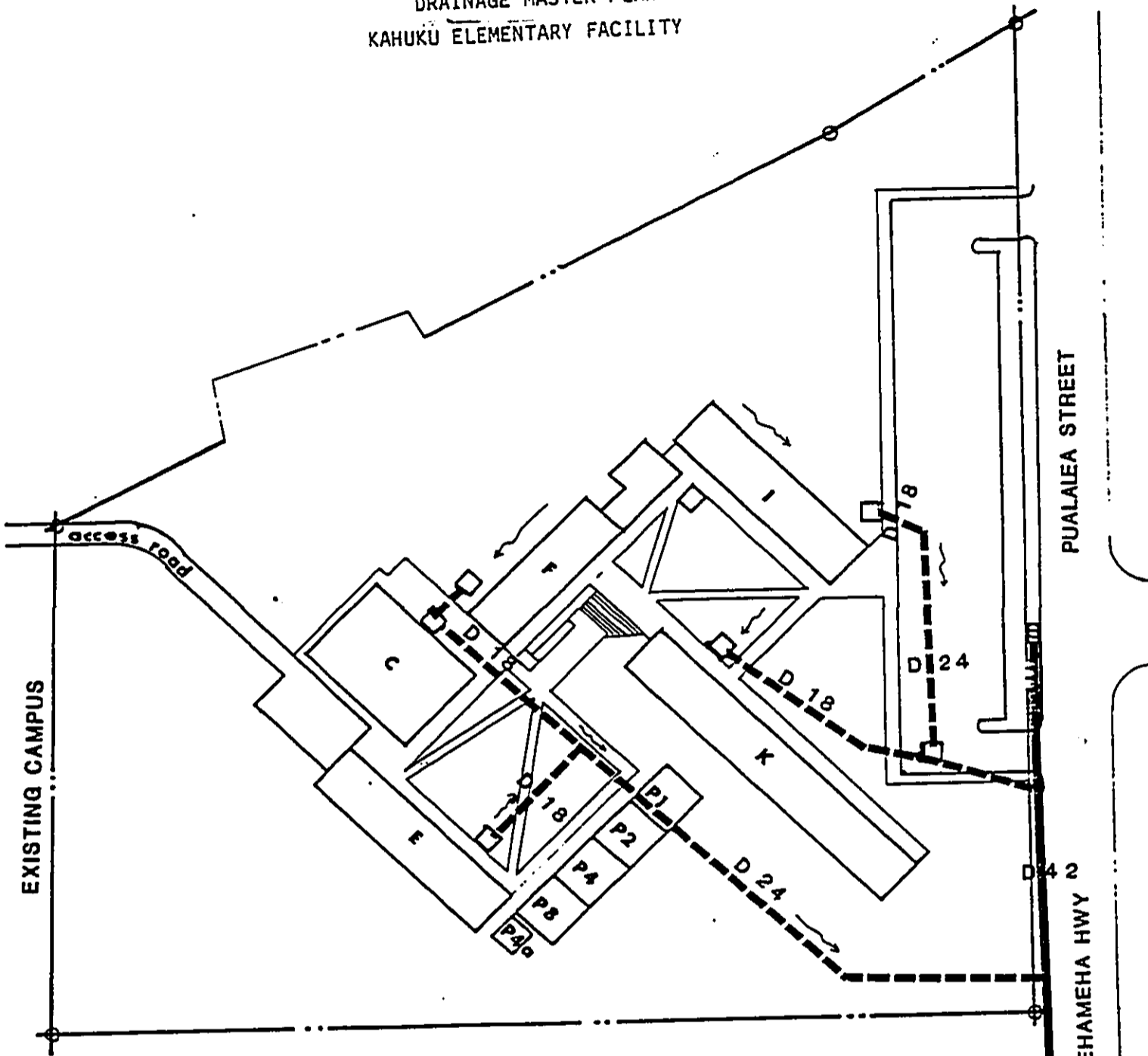


FIGURE 12.  
DRAINAGE MASTER PLAN  
KAHUKU ELEMENTARY FACILITY



- Scale: NTS
- Existing Drain Lines
  - - - Proposed Drain Lines
  - Drain Inlets
  - Flow Direction

DISTRICT PARK

- Note: 1. Drywells will dispose of the approx. 50% of runoff that is not handled by the C&C drainage system.
2. Excess runoff not handled by the drywells will be disposed of by a swale, running north between the existing campus and Kahuku District Park, connecting to the retention basin.

Unless there is a noise problem, only the library annex will be air conditioned to provide acoustical and humidity control. The school will be designed to accommodate handicapped persons.

A parking and loading zone for the elementary facility will be located off of Pualalea Street. The parking area will be able to accommodate 38 vehicles. Parking is determined by the DOE Educational Specifications which require 1 stall per 15 students. For 450 students, this is 30 stalls. Four stalls are required for visitor parking. Although not required, 4 additional stalls are provided. At present there is not much private vehicle use for transporting elementary students. However, should car use increased to a significant degree, monitoring of the traffic flow at the parking lot off Pualalea Street can be done to determine if any construction improvements are necessary to Pualalea Street and/or the parking lot entrance.

#### Kahuku High and Intermediate Facilities

The intermediate and high school facilities currently use a large number of portable classrooms. The redevelopment program for the intermediate and high facilities involves the construction of new and permanent structures to accommodate the current and future needs of the secondary students. After the permanent facilities are available, only 14 portables will be retained.

The secondary facilities' program is shown in Tables 3 and 4. (See Figure 7 for the Ultimate Site Plan. See Figures 13 and 14 for schematics of Buildings Y-1, Y-2 and A, the new classroom buildings).

To improve the traffic pattern through the existing campus, a new road will be provided at the eastern edge of the campus. This will provide a through route from Kamehameha Highway to the rear of the campus and to the main parking lot on the mauka edge. The existing road through the campus will remain but will

TABLE 4

## KAHUKU SECONDARY FACILITIES

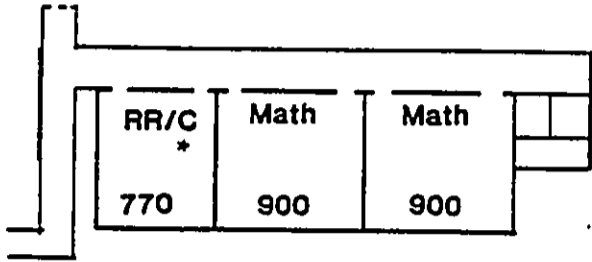
<u>Program/Use</u>	<u>No.</u>	<u>Bldg.</u>
a. Agricultural Education Agricultural Technology	1	N
b. Art Education Drawings/Painting Crafts	1 1	W W
c. Business Education Accounting Shorthand/Typing Coop. Dist. Education Office Proc./Bus. Machines	1 2 1 1	W W D W
d. Foreign Language	1	D
e. Guidance General Classroom	1	Q
f. Health General Classroom	1	A
g. Home Economics Gen. Home Econ. - Intermediate Gen. Home Econ. - High	1 1	W W
h. Industrial Education General Industrial Arts Drafting & Designing Lab Electricity/Electronics Lab Metals Lab Power/Automotive Lab Woods Construction Lab	1 1 1 1 1 1	Z Z Z Z G G
i. Language Arts General Classrooms  Newswriting/Yearbook	12  1	4R 4Y 4A W
j. Mathematics General Classrooms	10	2D 2R 4Y 2A
k. Music Education Band Choral	1 2	U U, U-1

Table 4. Continued

<u>Program/Use</u>	<u>No.</u>	<u>Bldg.</u>
l. Physical Education General Classrooms	4	J
m. Science Education Intermediate Science	1	W
Biology	2	1A 1W
Chemistry	1	W
Physics	1	W
n. Social Studies General Classrooms	13	1D 2R 6Y 4A
o. Special Education Regular Program		
Resource Service Classrooms	3	2H 1Q
Type X	1	H
Type Y	1	Q
District Center		
Self-Contained Classrm Type Y	1	Q
Resource Service Classroom	1	Q
p. Supplementary General Classrooms	7	Portable
q. Additional Rooms		
Language Lab	1	D
Adult Education	1	T-1
Computer Room	1	Y
Itinerant Services	2	H
r. Peak Enrollment General Classrooms	<u>7</u>	Portable
<b>TOTAL</b>	<b>93</b>	
s. Faculty Center	4	1A,1Q,1Y,1W

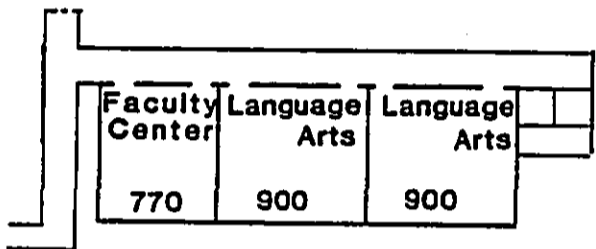
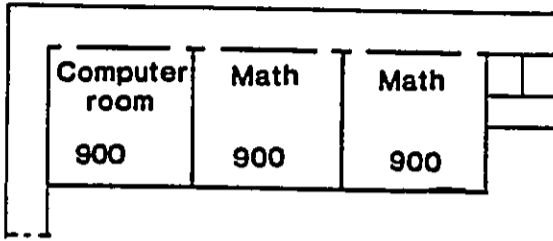
Note: Of the ninety-three (93) rooms, fourteen (14) will be portables. Seven (7) portables will be used to meet peak enrollment classroom needs and seven (7) portables will be used to meet other general classroom needs.

Classroom Building Y-1

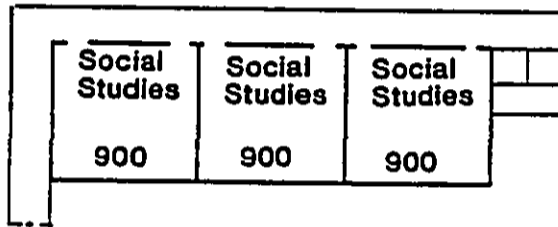


3rd Floor

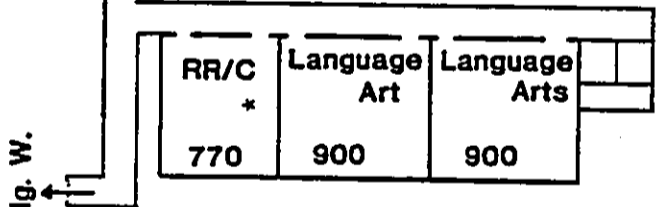
Classroom Building Y-2



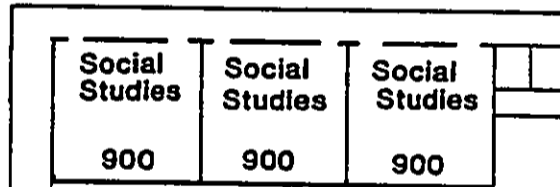
2nd Floor



Bldg. Y-2



1st Floor



Bldg. Y-1

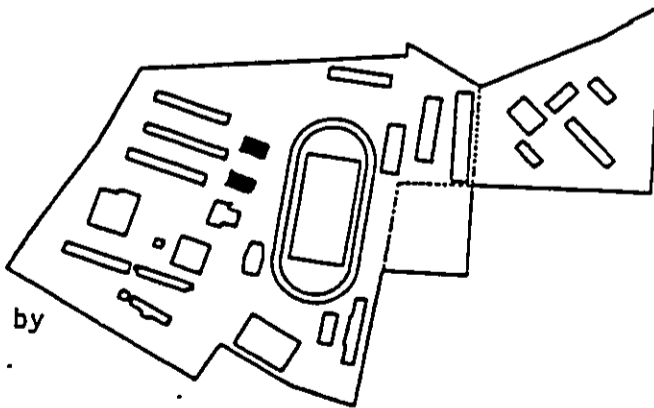
Bldg. W.

FIGURE 13.

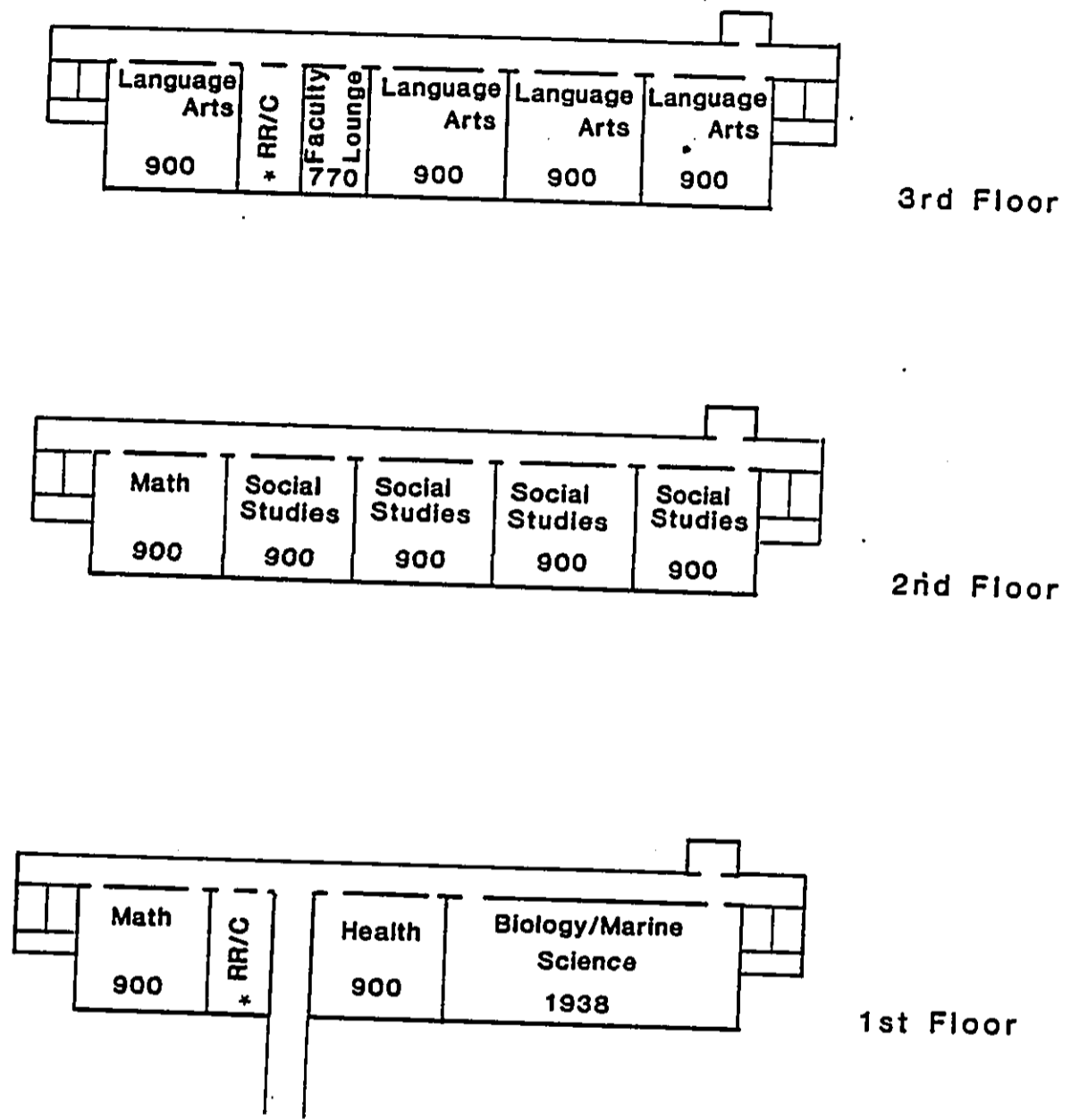
KAHUKU INTERMEDIATE AND HIGH FACILITIES

\* RR/C= Restroom/ Janitor's Closet.

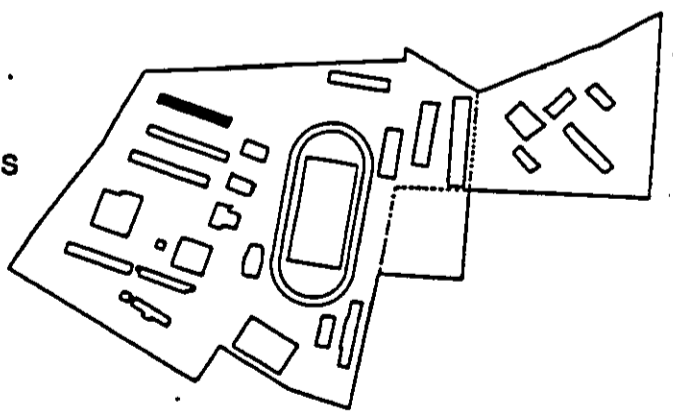
- Note: 1. Figures are areas in square feet.  
 2. Second and third floors are to be connected by walkways to Bldg. W which has an elevator.



Classroom Building A.



**FIGURE 14.**  
**KAHUKU INTERMEDIATE AND HIGH FACILITIES**  
 \*RR/C= Restroom/ Janitor's Closet.  
 Note: Figures are areas in square feet.



be chained between Buildings H and U to prevent regular traffic from passing through the center of the campus. This will provide better and safer pedestrian traffic through the campus center. The existing road will also provide access to the Music Building, Gym, and Library.

Drainage improvements will be provided to eliminate pockets of flooding at various points. Because of technical difficulties with providing off-site drain transmission lines, an enclosed retention basin will be provided. See Figure 15 for the drainage plan. See Appendix A for description of utility plans. The use of landscaping and/or berming to minimize any adverse visual effects of the basin from Kamehameha Highway will be addressed during design.

The entire campus will be provided with new sewer connections which will be connected to the City and County's main sewer line on Kamehameha Highway. See Figure 16 for the sewer plan. Figure 17 shows the Water Master Plan. Figure 18 shows the Fire Protection lines.

A redesigned parking and loading zone for the secondary facility will be located off of Kamehameha Highway. Additional parking areas will be provided on the campus which will provide parking for a total of 465 vehicles. Parking is determined by the City and County of Honolulu CZC which requires 5 stalls for each classroom. Since there are 93 classrooms, 465 stalls are required.

#### D. ALTERNATIVES CONSIDERED

No Action. The no action alternative would entail the continuation of existing operations and would not alleviate current facility needs. For this reason this alternative was rejected.



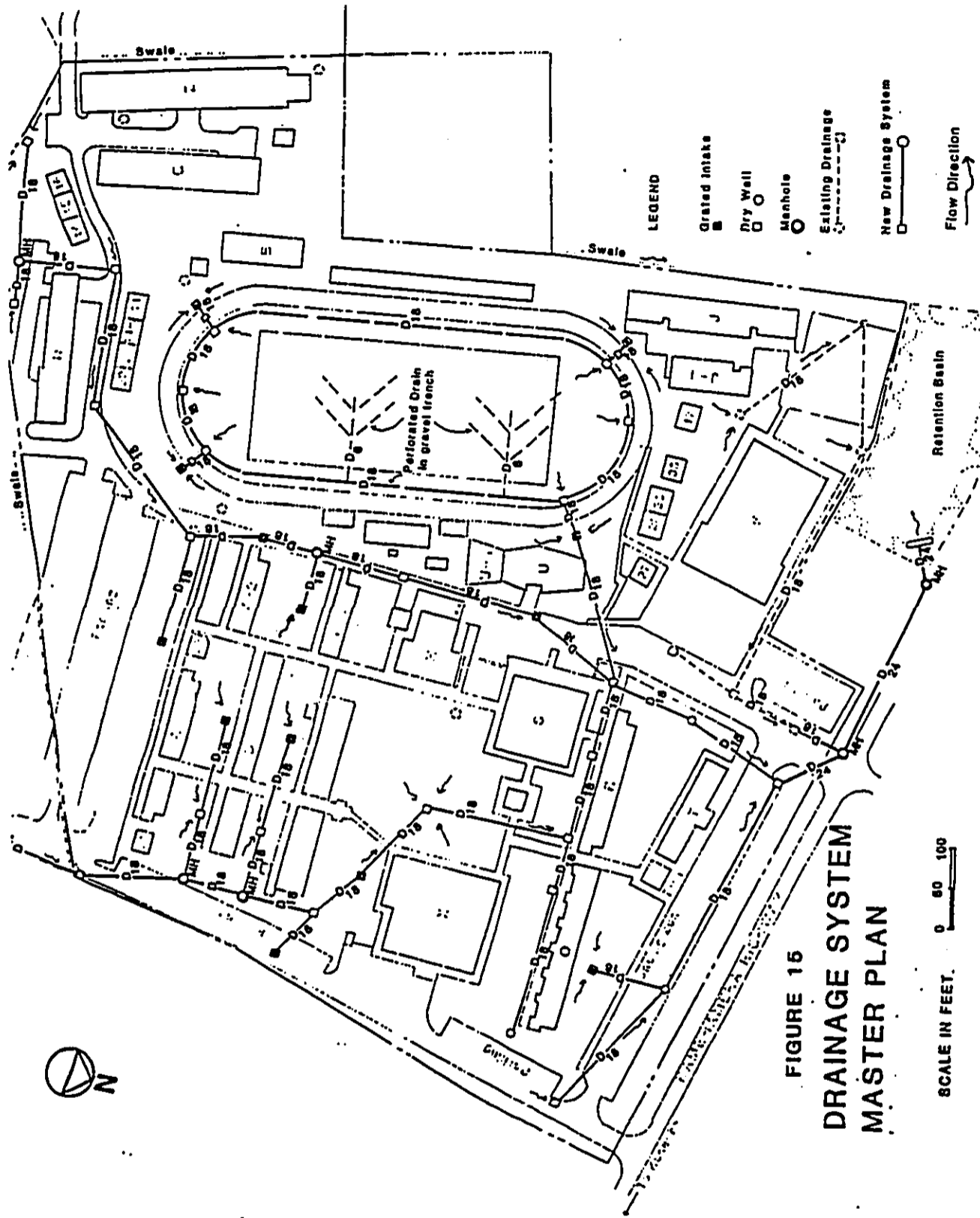
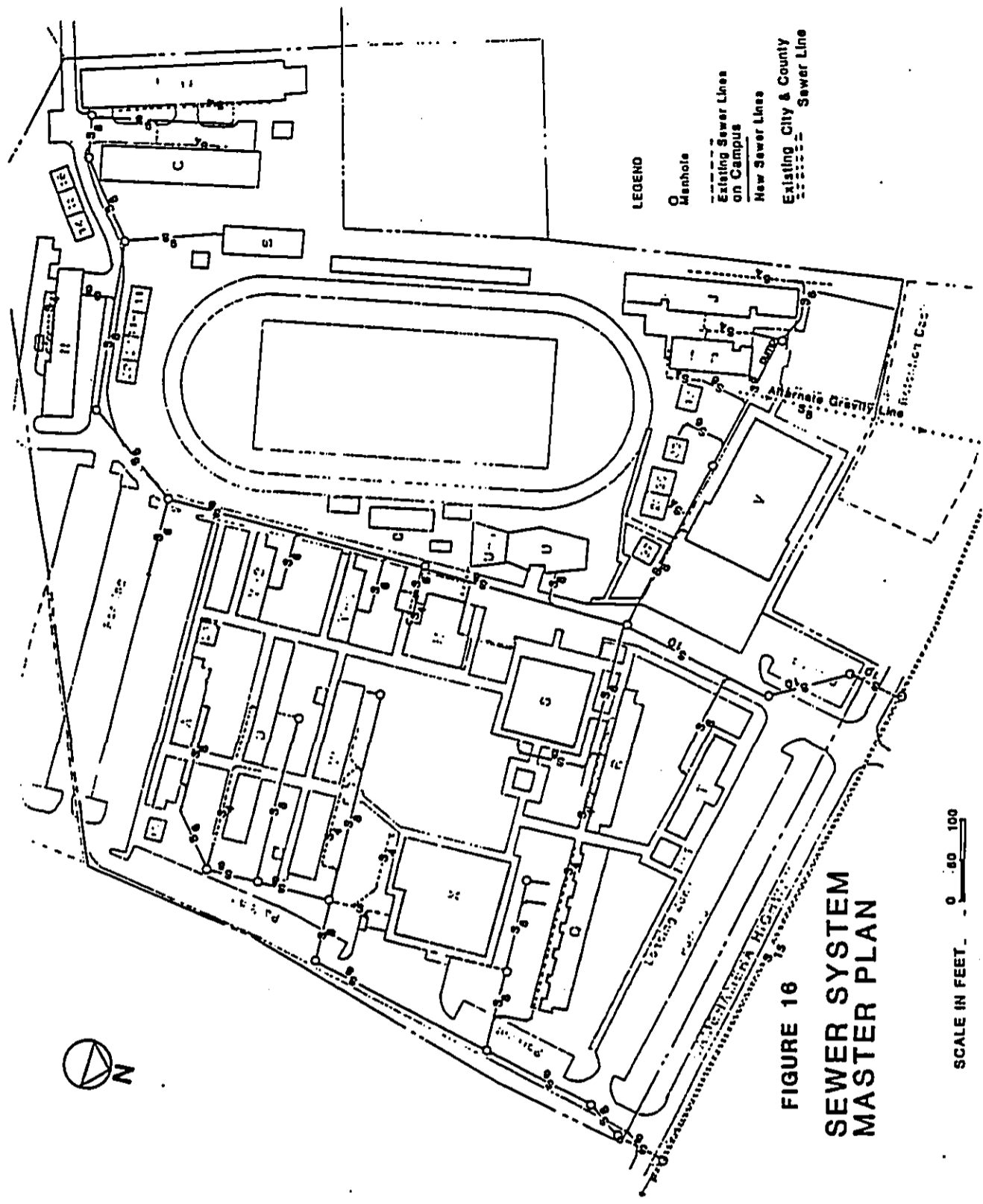


FIGURE 15  
DRAINAGE SYSTEM  
MASTER PLAN

SCALE IN FEET. 0 50 100



**LEGEND**  
 O Manhole  
 - - - Existing Sewer Lines on Campus  
 — New Sewer Lines  
 ····· Existing City & County Sewer Line

**FIGURE 16  
 SEWER SYSTEM  
 MASTER PLAN**

SCALE IN FEET. 0 50 100

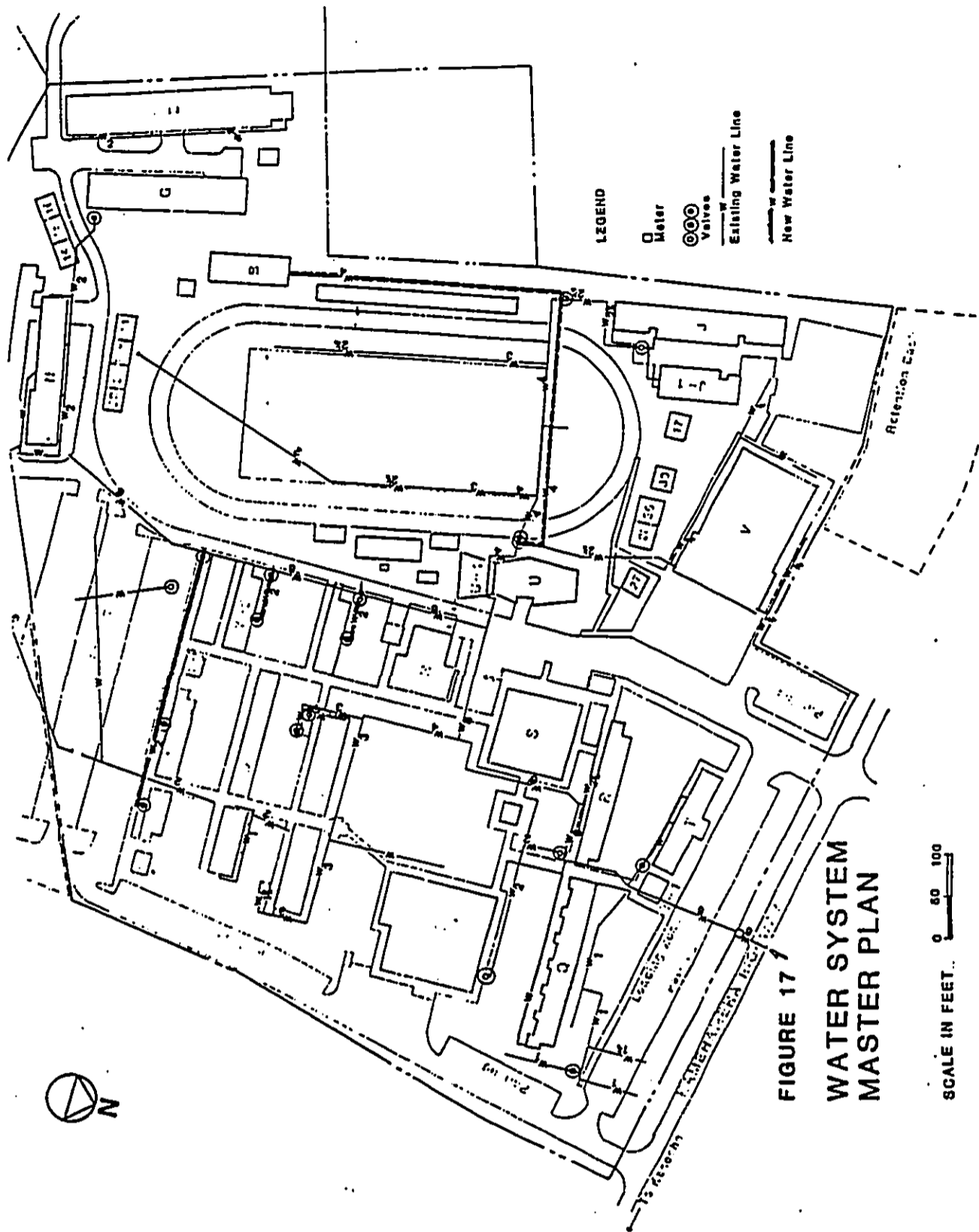
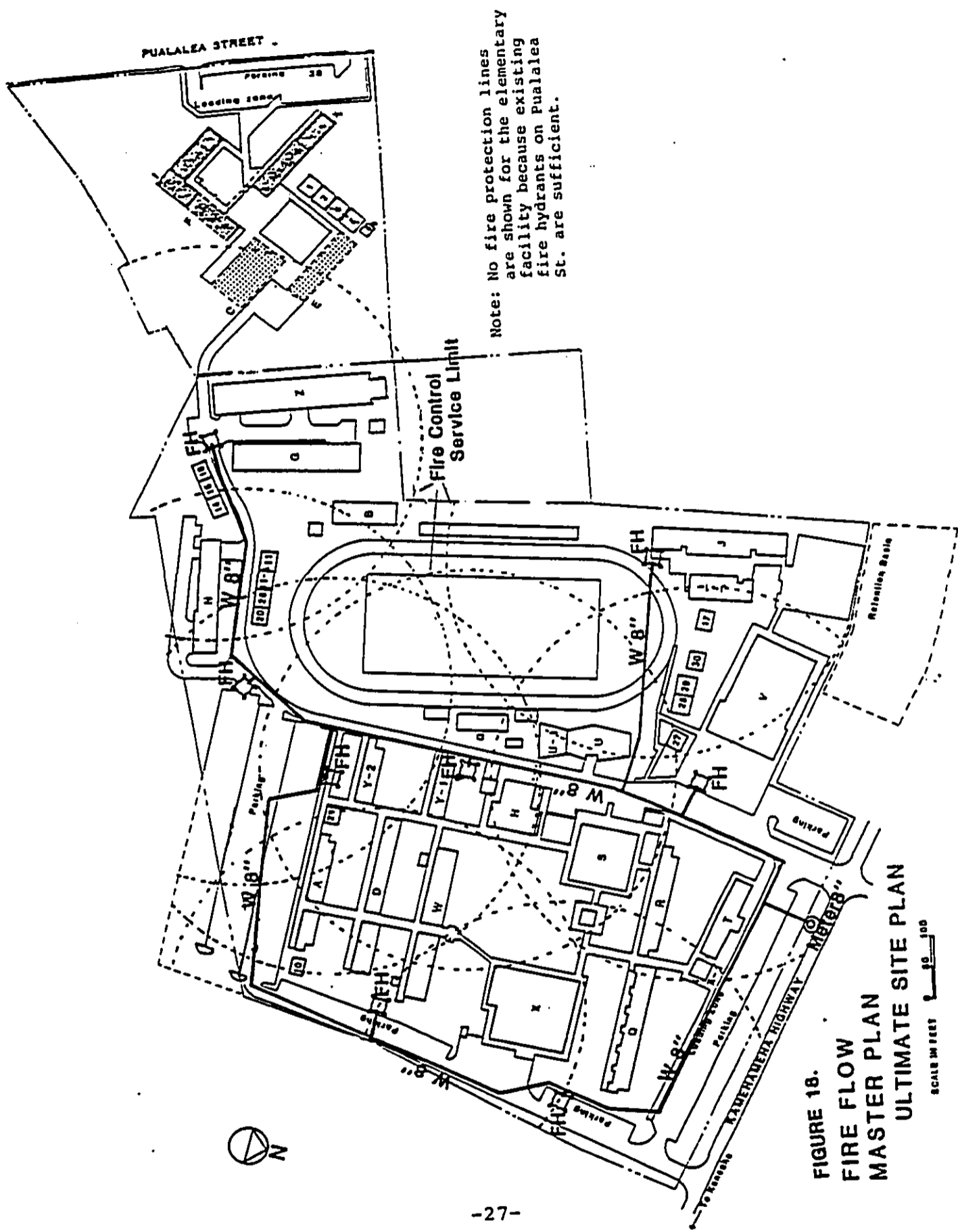


FIGURE 17  
 WATER SYSTEM  
 MASTER PLAN

SCALE IN FEET. 0 50 100



Note: No fire protection lines are shown for the elementary facility because existing fire hydrants on Pualalea St. are sufficient.

FIGURE 16.  
FIRE FLOW  
MASTER PLAN  
ULTIMATE SITE PLAN

SCALE IN FEET 0 50 100

Alternative Sites. During the site selection process for the elementary facility, three alternative sites were identified as candidate sites for the new facility. Site No. 1 is a site located towards the western end of the school district near the Turtle Bay Hilton. Site No. 2 is the selected site. Site No. 3 has been developed by the City and County of Honolulu for their police, fire, and ambulance services facilities.

Site No. 1 was rejected because it did not meet school and community criteria. Site No. 2 meets both the school and community criteria. Site No. 3 is unavailable.

Intermediate and High Facilities Alternatives. A number of alternatives were considered for the existing campus. Of the alternatives considered, all concerns centered about the placement of buildings on the existing campus because the issue of placing buildings on other sites did not arise.

E. COMPATIBILITY WITH LAND USE PLANS AND POLICIES.

The improvements planned for the Kahuku Intermediate and High Facilities do not conflict with any State or City and County Land use plans or policies.

The land use proposed for the elementary facility is consistent with both State and City and County land use plans.

The elementary facility site is in conformance with the City and County's DP/PF Maps. The site is designated for residential use but the zoning permits its use for a school. At the appropriate time during project implementation, an application will be made to the City and County for a DP amendment to redesignate the land use from residential to Public Facility (School):

## F. INCREMENTAL PLANS

Existing Campus. Construction of the existing High and Intermediate facility will be done in five increments. These increments are shown in Figures 19, 20, and 21.

Elementary Facility. Construction of the Elementary facility will be done in three increments. These increments are shown in Figures 22, 23, and 24.

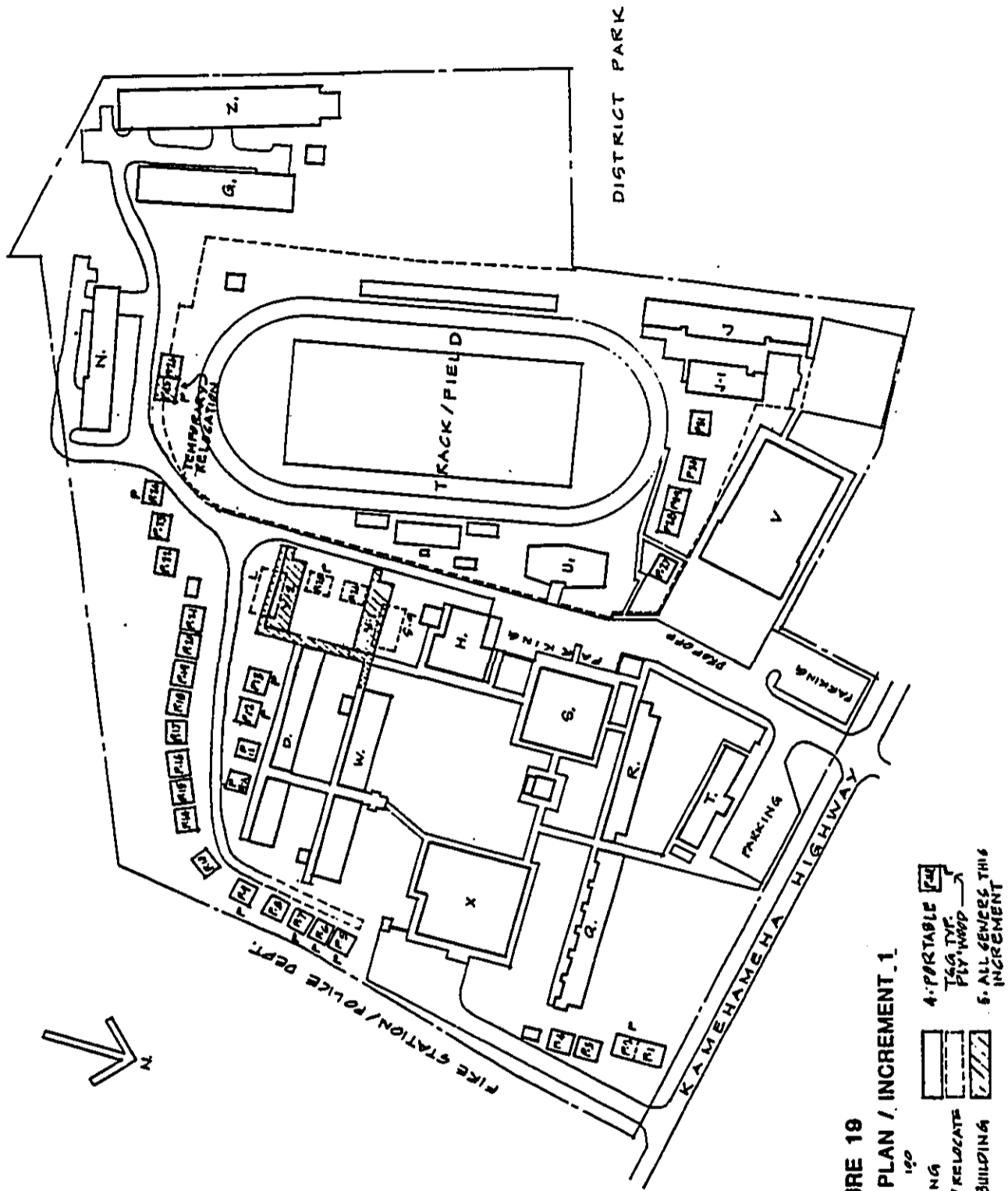
Electrical Incremental Plans. The Electrical Incremental Plans are detailed in Appendix C.

Incremental Cost. The incremental cost estimates for the Elementary Facility are shown in Table 5 (Increment 1), 6 (Increment 2), and 7 (Increment 3). The incremental cost estimates for the existing campus are shown in Table 8 (Increment 1), Table 9 (Increment 2), Table 10 (Increment 3), Table 11 (Increment 4), and Table 12 (Increment 5).

The estimated cost for the land acquisition for the retention basin was calculated as follows: approximately one (1) acre at \$2.50 per square foot. Total cost equals \$109,000.00.

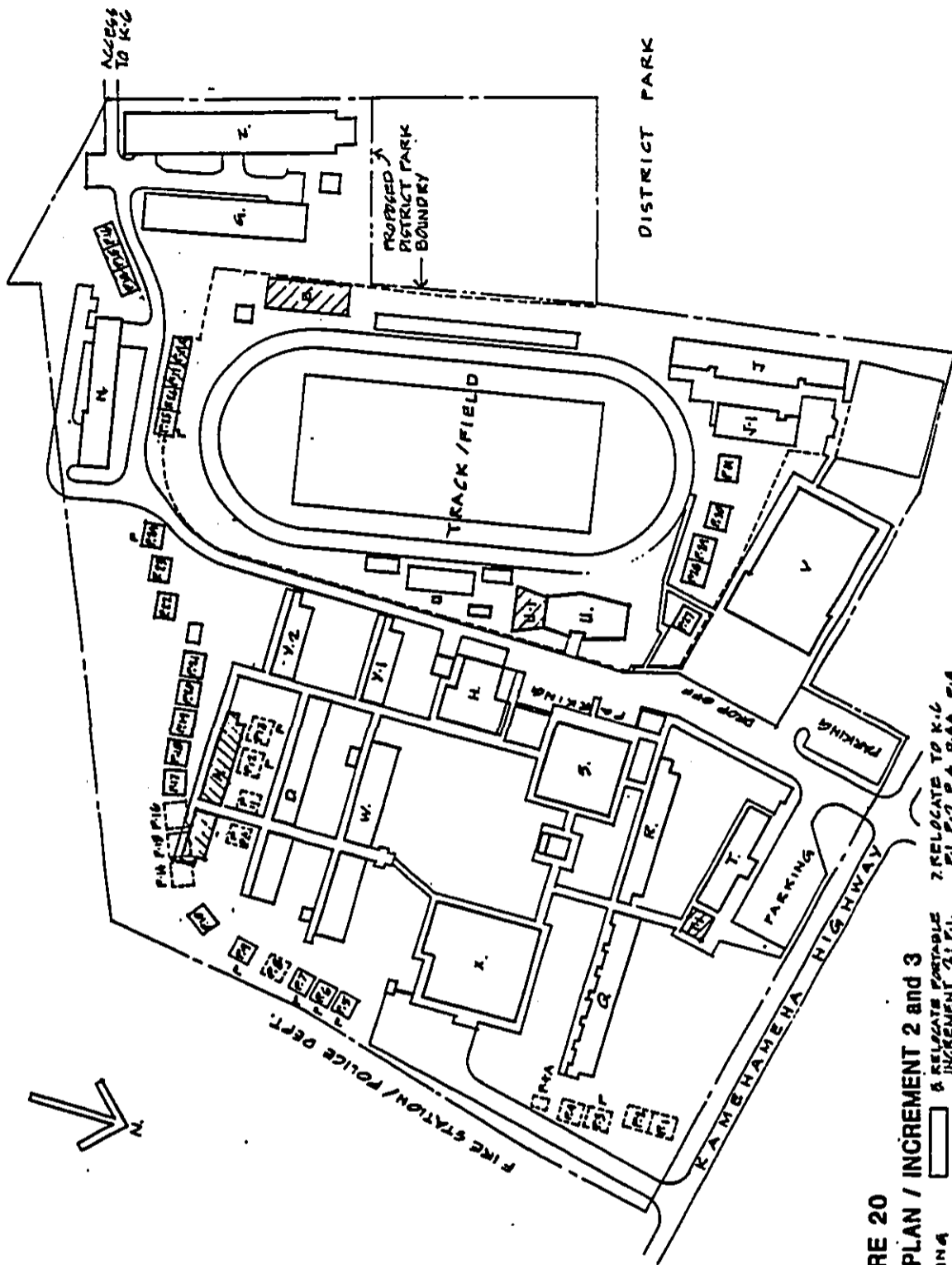
The estimated cost for the land acquisition for the parking lot (mauka) was calculated as follows: approximately 0.43 acre at \$1.00 per square foot. Total cost equals \$19,000.00.

The estimated cost for the land acquisition for the archeological site was calculated as follows: approximately 0.07 acre at \$1.00 per square foot. Total cost equals \$3,050.



**FIGURE 19**  
**SITE PLAN / INCREMENT 1**

- 1/4" = 10'
- 1. EXISTING
  - 2. DEMO/RELOCATE
  - 3. NEW BUILDING
  - 4. PORTABLE CAR
  - 5. ALL GENERS THIS INCREMENT TAG, TYP. PLY WOOD
  - 6. PORTABLE TAG, TYP. PLY WOOD



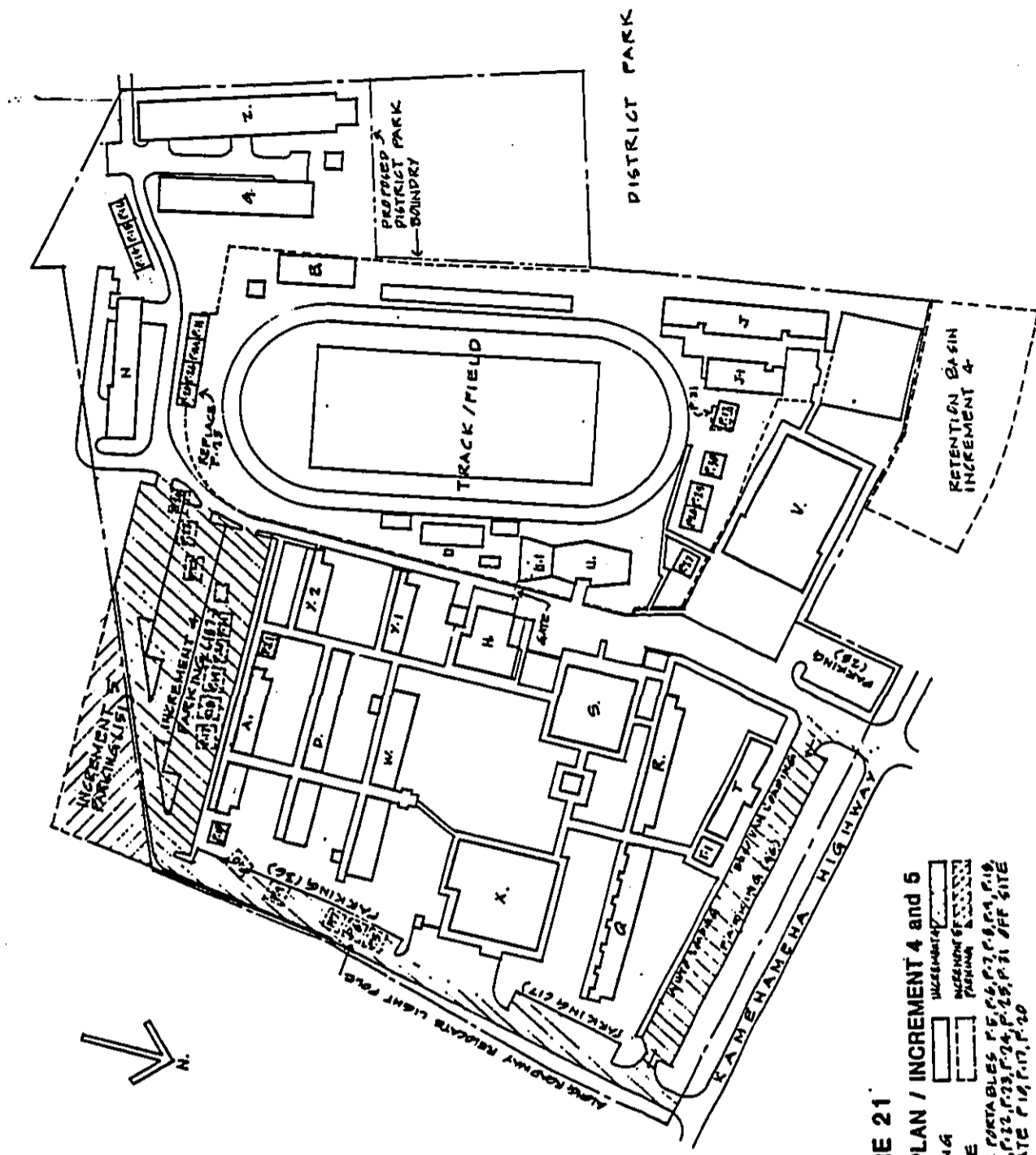
**FIGURE 20**

**SITE PLAN / INCREMENT 2 and 3**

- 1. EXISTING
- 2. REMOVE
- 3. INCREMENT 2
- 4. INCREMENT 3

- 5. RELocate PORTABLE
- 6. INCREMENT 2: P11, P12, P13, P14, P15, P16, P17, P18, P19, P20, P21, P22, P23, P24, P25, P26, P27, P28, P29, P30, P31, P32, P33, P34, P35, P36, P37, P38, P39, P40, P41, P42, P43, P44, P45, P46, P47, P48, P49, P50, P51, P52, P53, P54, P55, P56, P57, P58, P59, P60, P61, P62, P63, P64, P65, P66, P67, P68, P69, P70, P71, P72, P73, P74, P75, P76, P77, P78, P79, P80, P81, P82, P83, P84, P85, P86, P87, P88, P89, P90, P91, P92, P93, P94, P95, P96, P97, P98, P99, P100
- 7. REMOVE OFFSITE
- 8. INCREMENT 2: P12, P13, P14
- 9. RELocate TO K-6
- 10. ALL REQUIRED WATER CONNECTION: P44
- 11. REQUIRE SEWER CONNECTION





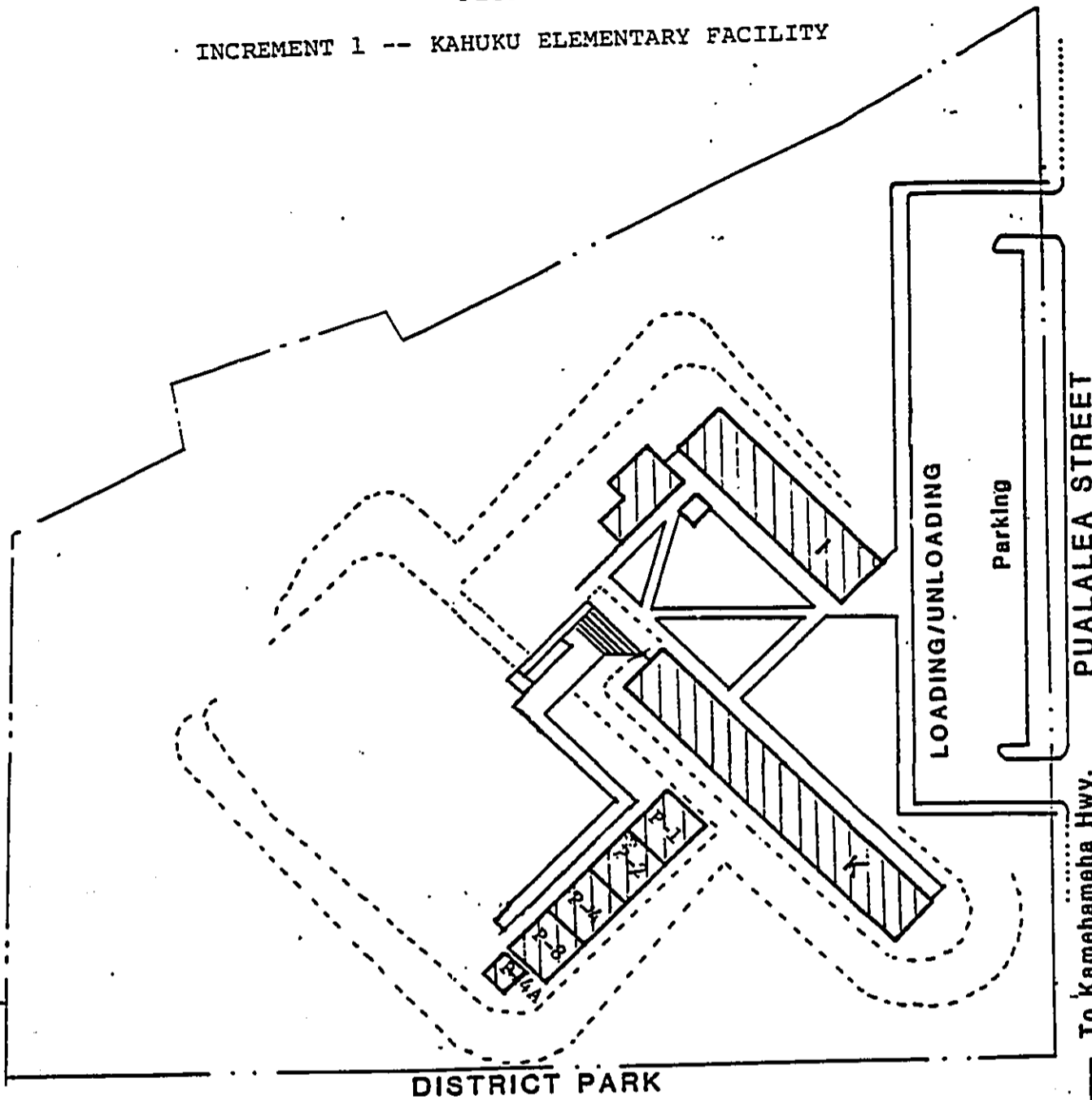
**FIGURE 21**  
**SITE PLAN / INCREMENT 4 and 6**

- EXISTING
- REMOVE
- REMOVE PORTABLES P. 5, P. 6, P. 7, P. 8, P. 9, P. 10, P. 11, P. 12, P. 23, P. 24, P. 25, P. 31 OFF SITE
- RELOCATE P. 14, P. 17, P. 20
- INCREMENT 4
- INCREMENT 6
- PARKING
- RETENTION BASIN

FIGURE 22

INCREMENT 1 -- KAHUKU ELEMENTARY FACILITY

EXISTING CAMPUS



SCALE IN FEET  
0 50 100

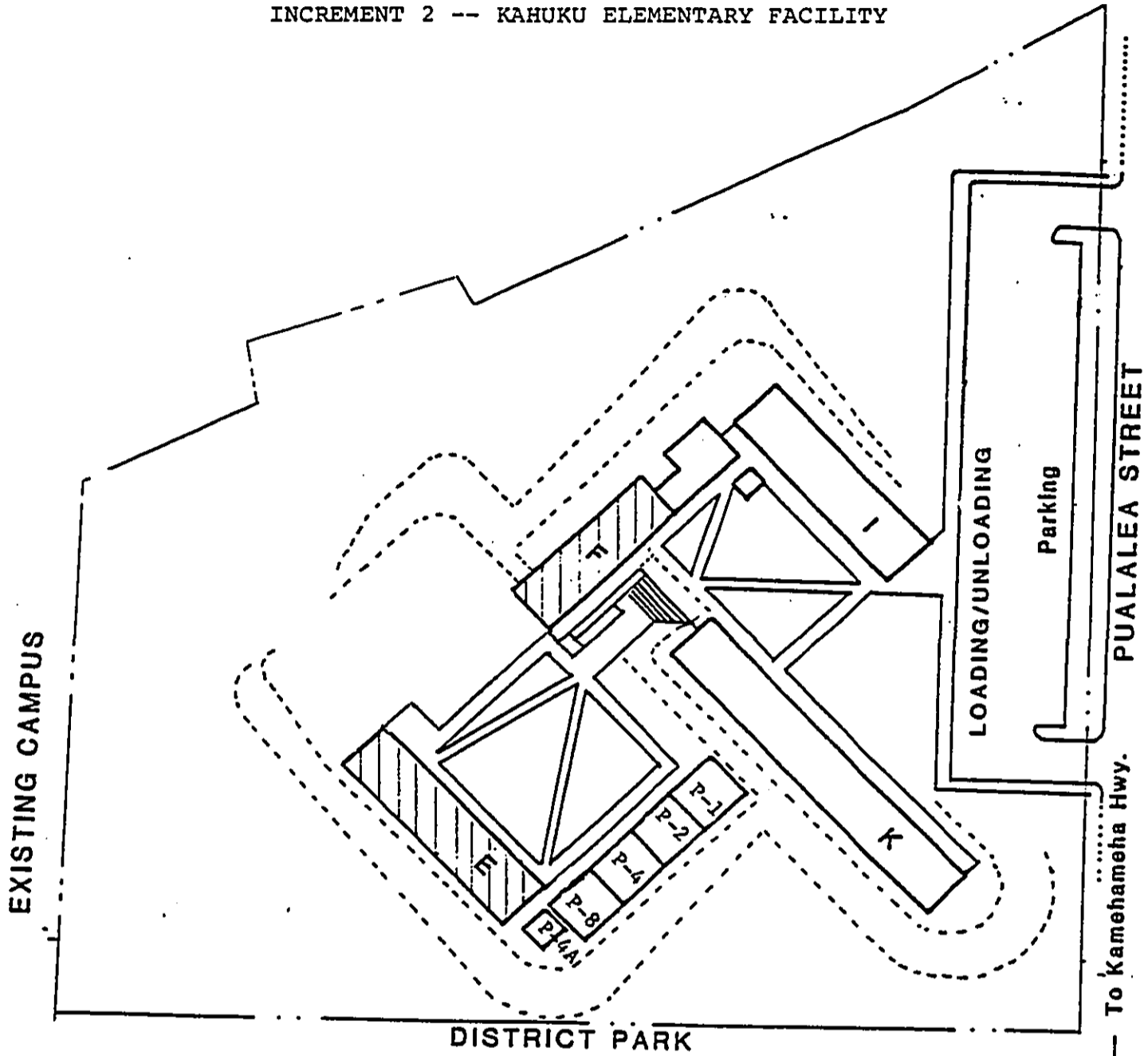
CONSTRUCTION  
THIS INCREMENT



INCREMENT 1

FIGURE 23

INCREMENT 2 -- KAHUKU ELEMENTARY FACILITY



SCALE IN FEET  
0 50 100

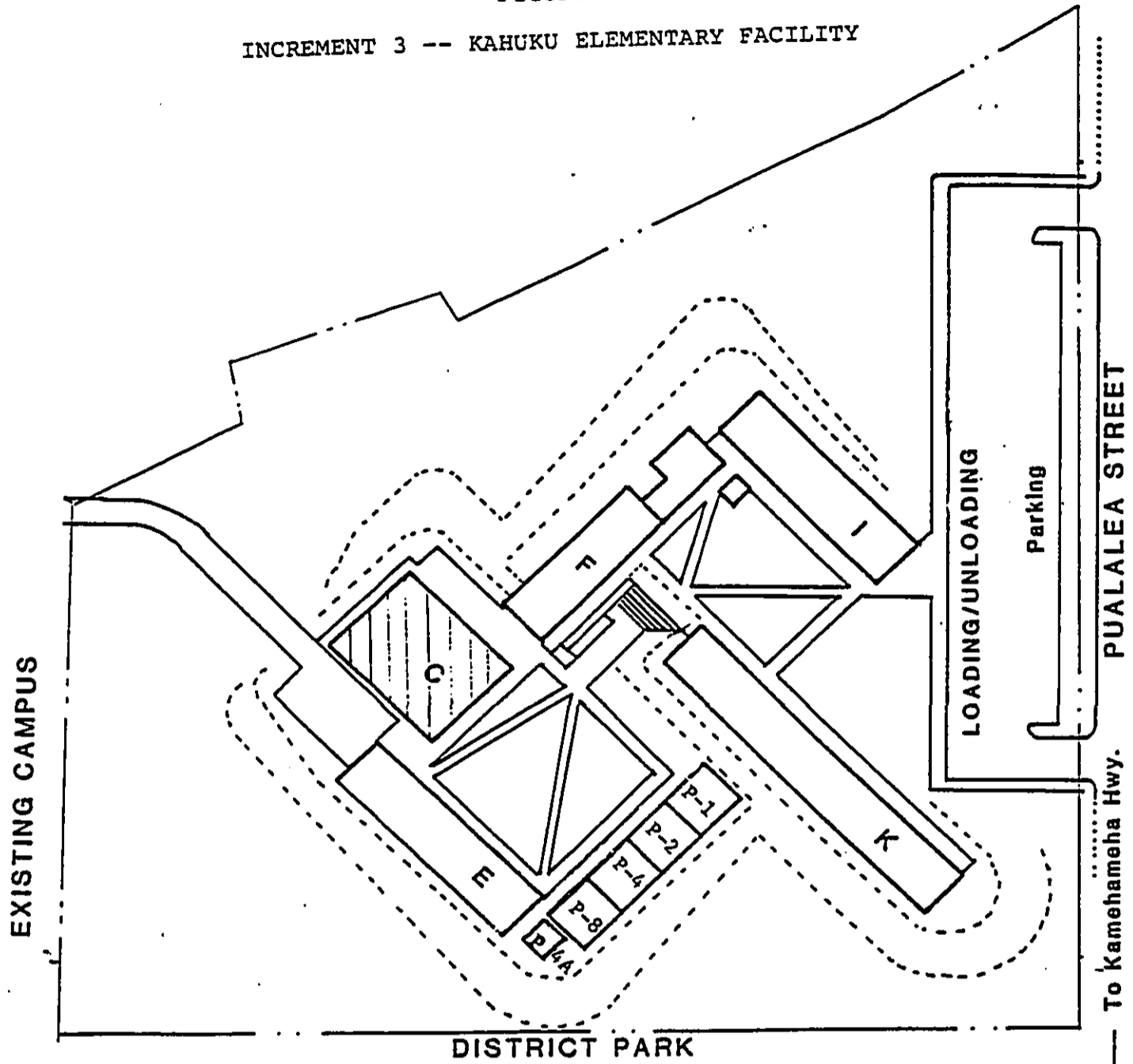
CONSTRUCTION  
THIS INCREMENT



INCREMENT 2

FIGURE 24

INCREMENT 3 -- KAHUKU ELEMENTARY FACILITY



EXISTING CAMPUS

DISTRICT PARK

LOADING/UNLOADING

Parking

PUALALEA STREET

← To Kamehameha Hwy.

SCALE IN FEET  
0 50 100

CONSTRUCTION  
THIS INCREMENT



INCREMENT 3

TABLE 5  
INCREMENTAL COST ESTIMATES

KAHUKU ELEMENTARY FACILITY

INCREMENT 1					
Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
<b>Building I</b>					
Classroom	3	2,700	\$ 63	\$170,100	\$ 8,400
Library	1	1,800	78	140,400	16,400
Administration	1	900	97	87,300	3,100
Special Education	1	810	67	54,270	2,800
Faculty Lounge	1	810	67	54,270	2,400
Toilet	10	1,500	105	157,500	—
Elevator	1	—	80,000	80,000	—
Circulation	—	3,152	—	110,334	—
				\$854,174	\$33,100
		Contingency		24,000	—
		Inspection		31,000	—
		Total		\$910,000	\$34,000
		Regional Cost Factor		91,000	3,400
		Time Factor to 1/1/88		200,200	7,600
		Grand Total		\$1,202,000	\$45,000
		Design		\$84,000	—

TABLE 5 (CONTINUED)

KAHUKU ELEMENTARY FACILITY

INCREMENT 1 (continued)					
Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
Building K					
Classroom	8	7,344	\$ 63	\$462,672	\$20,000
Special Education	2	2,584	70	180,880	6,400
Toilet	8	1,200	105	126,000	—
Walkway	—	600	28	16,800	—
Circulation	—	4,117	35	<u>144,108</u>	—
				\$930,460	\$26,400
		Contingency		26,000	—
		Inspection		<u>35,000</u>	—
		Total		\$992,000	\$27,000
		Regional Cost Factor		99,200	2,700
		Time Factor to 1/1/88		<u>218,400</u>	<u>6,000</u>
		Grand Total		\$1,310,000	\$36,000
		Design		\$95,000	—
Portables and Portable Toilet	5	—	\$20,000	<u>\$100,000</u>	None
				\$100,000	
		Contingency		7,000	
		Inspection		<u>7,000</u>	
		Total		\$114,000	
		Regional Cost Factor		11,400	
		Time Factor to 1/1/88		<u>25,200</u>	
		Grand Total		\$151,000	

TABLE 5 (Continued)

## KAHUKU ELEMENTARY FACILITY

## INCREMENT 1 (continued)

Program Space	Cost
<b>Civil</b>	
General Site Work	\$145,024
Parking	68,252
Building I Site Work	22,540
Building K Site Work	25,415
Portable Building Site Work	11,500
Drainage	81,305
Water	44,045
Sewer	<u>35,938</u>
	\$434,019
Contingency	14,000
Inspection	<u>16,000</u>
Total	\$465,000
Time Factor to 1/1/88	<u>46,400</u>
Grand Total	\$512,000
Design	\$49,000
<b>Electrical</b>	<u>\$279,000</u>
	\$279,000
Contingency	10,000
Inspection	<u>11,000</u>
Total	\$300,000
Time Factor to 1/1/88	<u>30,000</u>
Grand Total	\$330,000
Design	\$35,000

TABLE 6  
INCREMENTAL COST ESTIMATES

KAHUKU ELEMENTARY FACILITY

INCREMENT 2						
Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E	
<b>Building E</b>						
Special Ed., Self-contained	—	1,292	\$70	\$90,440	\$ 900	
Resource Services	—	810	67	54,270	2,800	
Itinerant Services	—	330	63	20,790	3,200	
Circulation	—	657	25	<u>16,416</u>	—	
				\$182,366	\$6,900	
				8,000	—	
				<u>9,000</u>	—	
				Total	\$200,000	\$7,000
				Regional Cost Factor	20,000	700
				Time Factor	<u>54,750</u>	<u>2,000</u>
				Grand Total	\$275,000	\$10,000
				Design	\$31,000	—
<b>Building F</b>						
Classroom	6	5,400	\$63	\$340,200	\$15,000	
Circulation	—	1,998	35	<u>69,930</u>	—	
				\$410,130	\$15,000	
				Contingency	13,000	—
				Inspection	<u>15,000</u>	—
				Total	\$439,000	\$15,000
				Regional Cost Factor	43,900	1,500
				Time Factor	<u>120,750</u>	<u>4,250</u>
				Grand Total	\$604,000	\$21,000
				Design	\$54,000	—



TABLE 6 (continued)

KAHUKU ELEMENTARY FACILITY

INCREMENT 2 (continued)

Program Space	Cost
<b>Civil</b>	
Building E Site Work	\$19,901
Building F Site Work	15,921
Water	7,884
Sewer	<u>7,199</u>
	\$50,905
Contingency	4,000
Inspection	<u>4,000</u>
Total	\$59,000
Time Factor	<u>14,750</u>
Grand Total	\$74,000
Design	\$13,000
<b>Electrical</b>	<u>\$58,000</u>
	\$58,000
Contingency	5,000
Inspection	<u>5,000</u>
Total	\$68,000
Time Factor	<u>17,000</u>
Grand Total	\$85,000
Design	\$13,000

TABLE 7  
INCREMENTAL COST ESTIMATES

KAHUKU ELEMENTARY FACILITY

INCREMENT 3					
Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
<b>Building C</b>					
Service Kitchen		655	\$100	\$ 65,500	\$22,000
Dining		3,506	75	262,950	150
Circulation		1,123	25	<u>28,087</u>	<u>—</u>
				\$356,537	\$22,150
		Contingency		11,000	—
		Inspection		<u>13,000</u>	<u>—</u>
		Total		\$381,000	\$23,000
		Regional Cost Factor		38,100	2,300
		Time Factor		<u>104,750</u>	<u>6,500</u>
		Grand Total		\$524,000	\$32,000
		Design		\$50,000	—
<b>Civil</b>					
Building C Site Work				\$44,791	
Roadway				20,389	
Water				4,232	
Sewer				<u>3,133</u>	
				\$72,545	
		Contingency		6,000	
		Inspection		<u>5,000</u>	
		Total		\$84,000	
		Time Factor		<u>21,000</u>	
		Grand Total		\$105,000	
		Design		\$17,000	
<b>Electrical</b>					
				\$38,000	
		Contingency		3,000	
		Inspection		<u>4,000</u>	
		Total		\$45,000	
		Time Factor		<u>11,250</u>	
		Grand Total		\$57,000	
		Design		\$10,000	

TABLE 8  
INCREMENTAL COST ESTIMATES

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 1  
Building Y-1 and Y-2

The designs for buildings Y-1 and Y-2 are scheduled for completion in May 1986 with construction completion in May 1987. The estimated building cost is \$2,074,000, including site work, with electricity, water, and sewer costs an additional \$67,000, \$120,500, and \$241,900, respectively.

TABLE 9  
INCREMENTAL COST ESTIMATES

INCREMENT 2  
Building A

Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
Classroom	11	10,098	\$ 63	\$636,174	\$47,100
Biology/ Marine Science	1	1,938	94	182,172	4,200
Faculty Center	1	770	67	51,590	2,310
Toilet	12	1,800	105	189,000	-
Elevator	1	-	80,000	80,000	-
Circulation	-	5,404	35	<u>189,148</u>	-
				\$1,328,084	\$53,610
				34,000	4,000
				<u>41,000</u>	<u>4,000</u>
				Total	
				\$1,404,000	\$62,000
				Regional Cost Factor	6,200
				<u>386,000</u>	<u>17,250</u>
				Grand Total	
				\$1,931,000	\$86,000
				Design	-
				\$75,000	-

TABLE 9  
INCREMENTAL COST ESTIMATES

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 2 (continued)  
Relocate 9 Portables

Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
Portables, Portable toilet	9	—	\$20,000	\$180,000	None
				Contingency 8,000	
				Inspection <u>9,000</u>	
				Total \$197,000	
				Regional Cost Factors 19,700	
				Time Factor <u>54,250</u>	
				Grand Total \$271,000	
Civil					
Building A Site Work				\$74,750	
Water				32,919	
Sewer				<u>494,931</u>	
				Contingency \$602,600	
				Inspection 18,000	
				<u>21,000</u>	
				Total \$642,000	
				Time Factor <u>160,500</u>	
				\$803,000	
Electrical					
				Contingency \$60,000	
				Inspection 5,000	
				<u>5,000</u>	
				Total \$70,000	
				Time Factor <u>17,500</u>	
				Grand Total \$88,000	
				Design \$14,000	

TABLE 10  
INCREMENTAL COST ESTIMATES

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 3  
Building U-1

Program Space	No.	Area (sq ft)	Unit Cost/sq. ft	Cost	F & E
Choral Room	1	1,440	70	\$100,800	\$2,500
Circulation	—	378	25	<u>9,450</u>	<u>—</u>
				\$110,250	\$2,500
		Contingency		7,000	—
		Inspection		<u>7,000</u>	<u>—</u>
		Total		\$125,000	\$3,000
		Regional Cost Factor		12,400	250
		Time Factor		<u>34,250</u>	<u>750</u>
		Grand Total		\$172,000	\$4,000
		Design		\$22,000	—
Electrical				\$31,400	
		Contingency		2,000	
		Inspection		<u>3,000</u>	
		Total		\$37,000	
		Time Factor		<u>9,250</u>	
		Grand Total		\$47,000	
		Design		\$8,000	

TABLE 10 (Continued)

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 3 (continued)  
Building T-1

Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
Adult Education	1	1,300	78	\$101,400	None
Circulation	--	351	25	<u>8,775</u>	
				\$110,175	
		Contingency		7,000	
		Inspection		<u>7,000</u>	
		Total		\$125,000	
		Regional Cost Factor		12,400	
		Time Factor		<u>34,250</u>	
		Grand Total		\$172,000	
		Design		\$22,000	
<b>Civil</b>					
Building U-1 Site Work				\$51,750	
Building B Site Work				40,250	
Building T-1 Site				28,750	
Water				42,205	
Sewer				<u>14,260</u>	
				\$177,215	
		Contingency		8,000	
		Inspection		<u>9,000</u>	
		Total		\$195,000	
		Time Factor		<u>48,750</u>	
		Grand Total		\$244,000	
		Design		\$29,000	

TABLE 11  
INCREMENTAL COST ESTIMATES

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 4  
Relocate 13 Portables, Construct Roadways and Parking Lots

Program Space	No.	Area (sq ft)	Unit Cost/sq ft	Cost	F & E
Portables	13	—	\$20,000	<u>\$260,000</u>	None
				\$260,000	
				9,000	
				<u>10,000</u>	
				\$279,000	
				27,900	
				<u>76,750</u>	
				\$384,000	
				\$39,000	
<b>Civil</b>					
Drainage System, Retention Basin				\$846,917	
Roadway & Parking Lot @ Kam Hwy.				262,603	
Roadway & Parking Lot @ Back				<u>277,035</u>	
				\$1,386,555	
				35,000	
				<u>41,000</u>	
				\$1,463,000	
				<u>365,750</u>	
				\$1,829,000	
				\$122,000	
<b>Electrical (includes Regional Cost Factor)</b>					
				\$51,000	
				4,000	
				<u>4,000</u>	
				\$59,000	
				<u>14,750</u>	
				\$74,000	
				\$14,000	

TABLE 12  
INCREMENTAL COST ESTIMATES

KAHUKU HIGH & ELEMENTARY SCHOOL

INCREMENT 5	
Program Space	Cost
<b>Civil</b>	
Remainder of Parking	\$133,110
Contingency	8,000
Inspection	<u>8,000</u>
<b>Total</b>	<b>\$150,000</b>
Time Factor	<u>37,250</u>
<b>Grand Total</b>	<b>\$188,000</b>
Design	\$24,000
<b>Electrical</b>	
Contingency	\$15,000
Inspection	<u>1,000</u>
	<u>2,000</u>
<b>Total</b>	<b>\$18,000</b>
Time Factor	<u>4,500</u>
<b>Grand Total</b>	<b>\$23,000</b>
Design	\$4,000

Notes On Cost Estimates

1. Subtotals and totals are rounded off to the next thousand.
2. The time escalation factor with a date shown, for everything except civil and electrical work, is from 1/1/84 at 5% per year.
3. The time escalation factor with a date shown, for civil and electrical work, is from 1/1/86 at 5% per year.
4. The time escalation factor without a date shown is arbitrarily set at 25%, since the date of initiation of construction is unknown.
5. The "Regional Cost Factor" is the Koolauloa Regional Cost Factor of 10%.
6. The Civil and Electrical estimates already have the Regional Cost Factor included.
7. F & E: Furniture and equipment costs.



### III. DESCRIPTION OF THE ENVIRONMENTAL SETTING

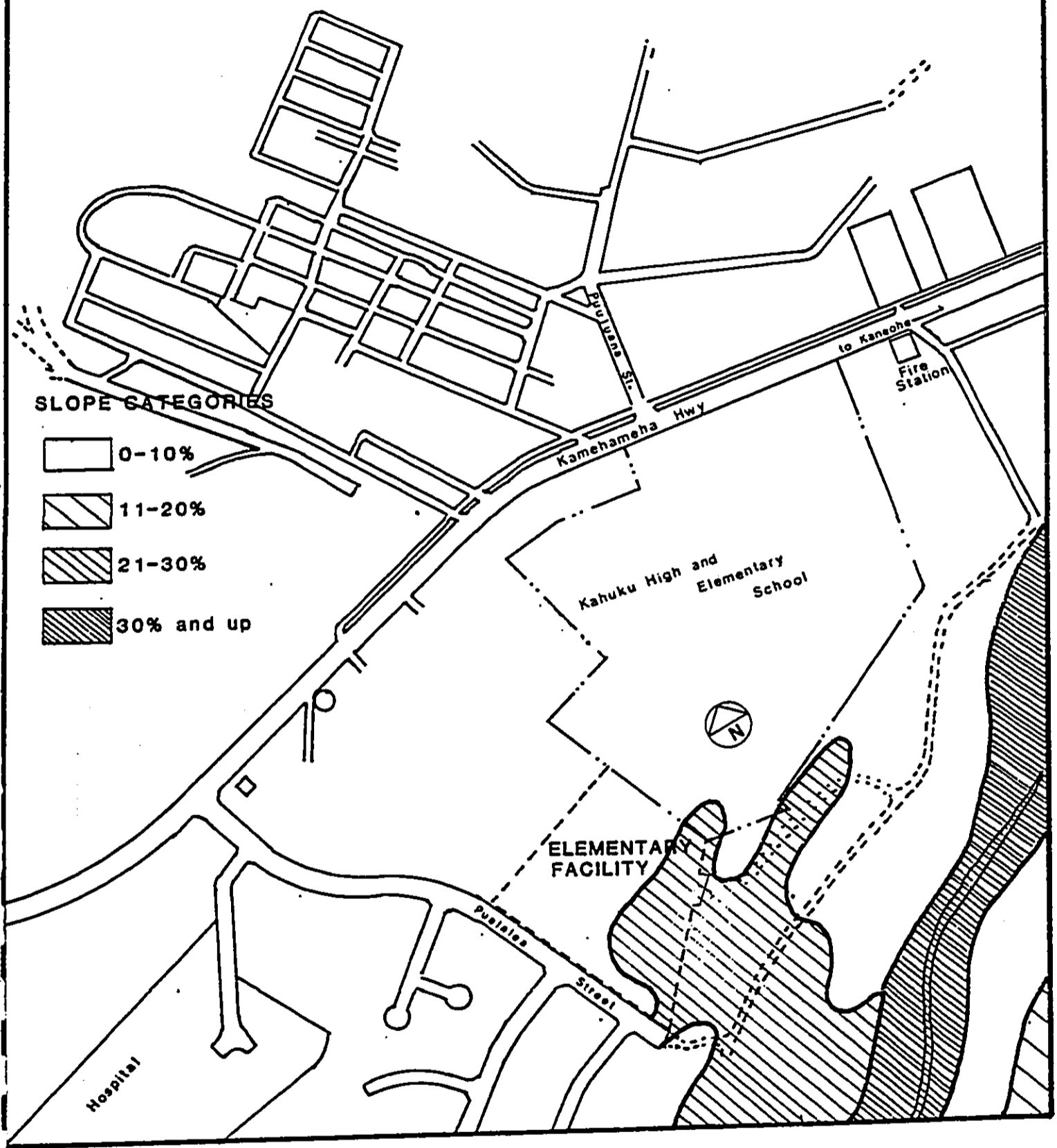
#### A. PHYSICAL SETTING

1. Physiography. The site for the new elementary facility is located on a coastal plain that has slopes that range from less than 10% to areas that have slopes of more than 30%. (See Figure 25). The flatter areas were previously used for sugar cane production and truck crops. The project site rests at the foot of a plateau that extends and rises to the Koolau Summit. Approximately 70% of the site will be useable for development. The remaining 30% contain lands with slopes exceeding 20% and would be fairly costly to develop.

The site of the intermediate and high school lies on grounds that are relatively flat. However, the average elevation is generally lower than the surrounding area to the north. This prevents drainage away from the campus towards the ocean.

2. Geology and Soils. The elementary facility site is composed of Mokuleia clay loam. (See Figure 26) The Mokuleia clay loam is characterized and having a moderate to low shrink swell potential which will have a bearing of building foundations. The substrata is composed of coral. Because most of the site has a gentle slope there is little danger related to severe run-off conditions except during the construction phase.
3. Meteorology. Average annual rainfall in the Kahuku area is less than 40 inches. (See Figure 27). The wet season is usually November to March and the dry season is usually May to September. However, rainfall may vary greatly from year

FIGURE 25. SLOPE ANALYSIS



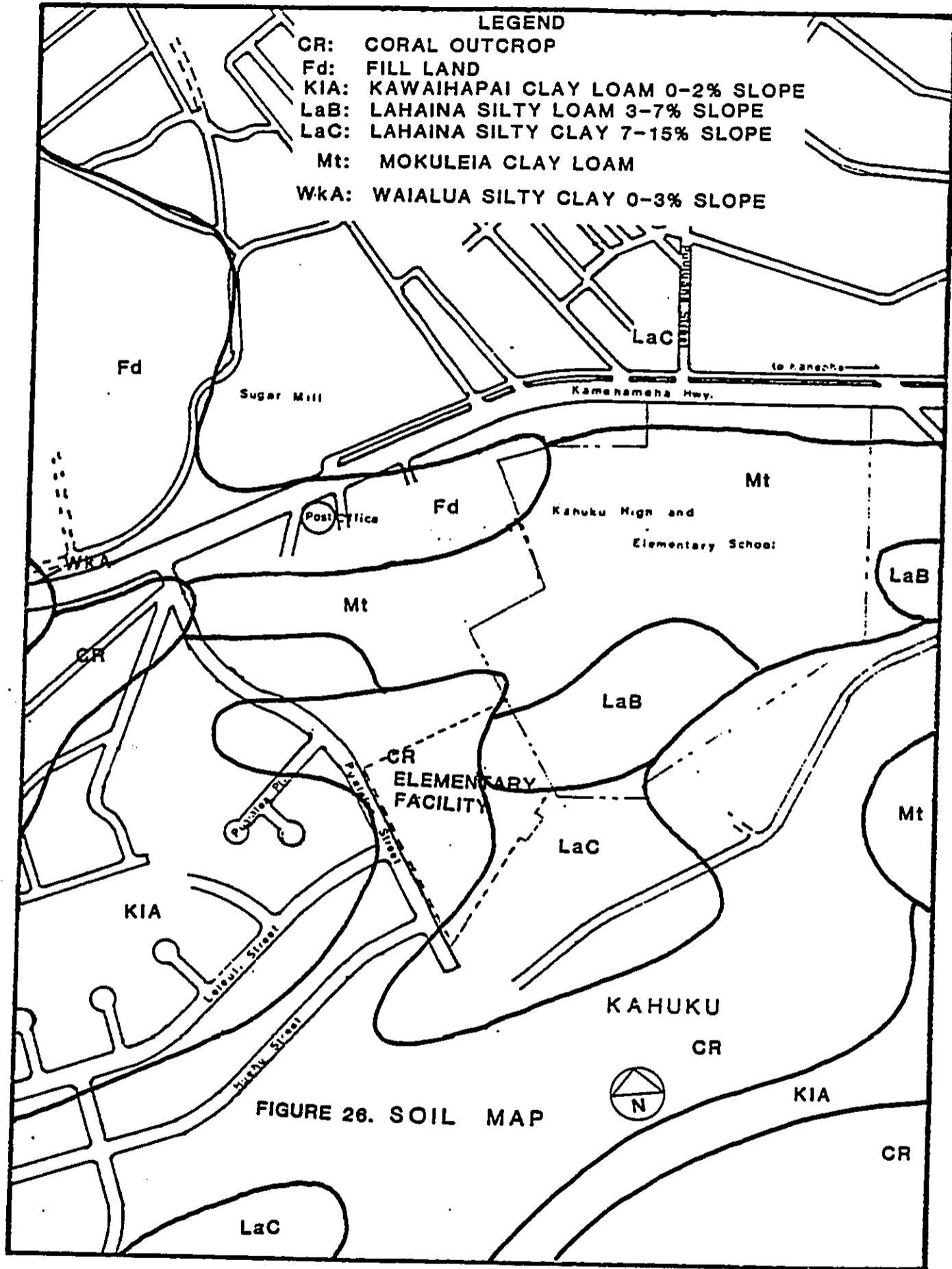
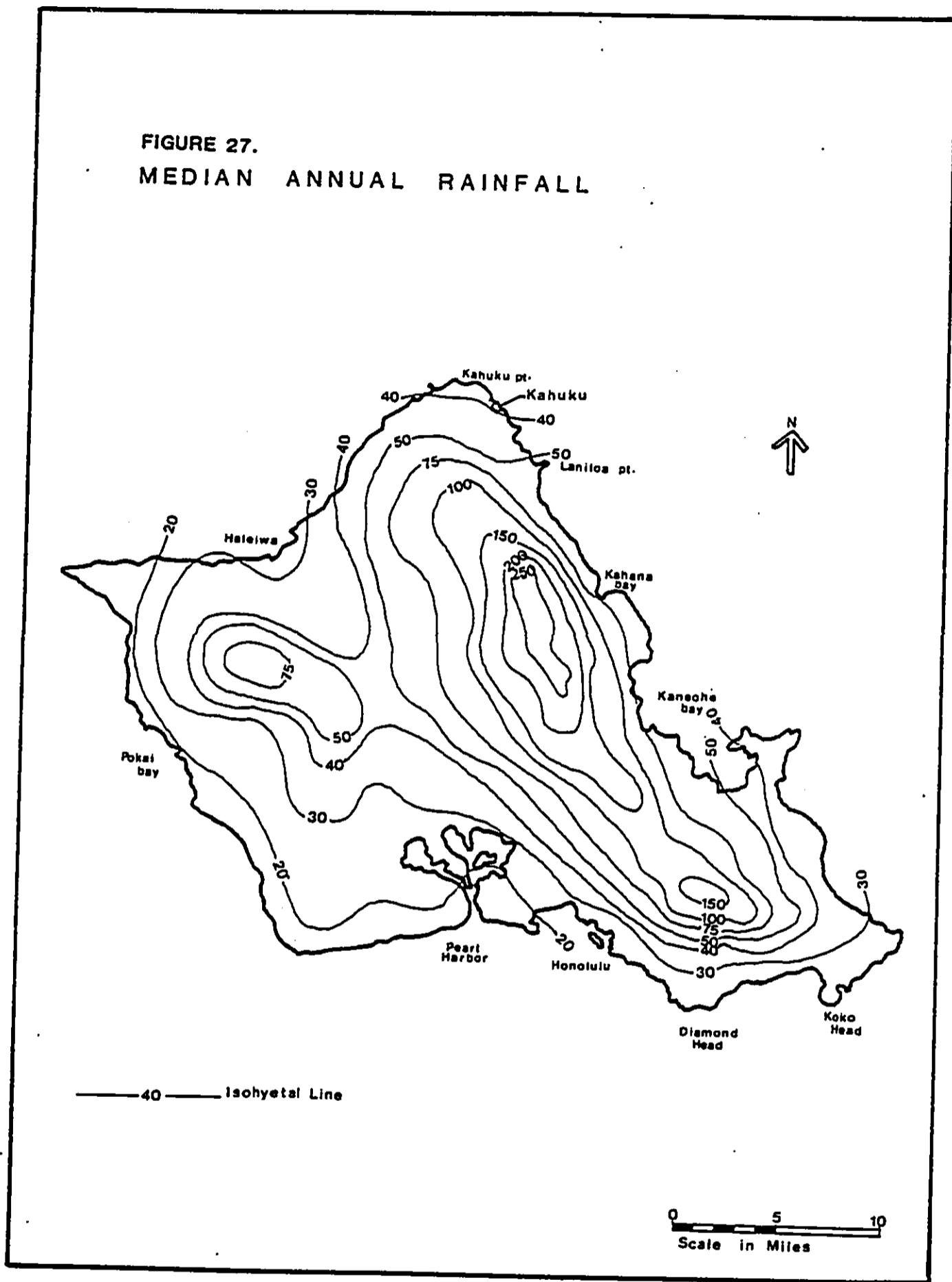


FIGURE 27.  
MEDIAN ANNUAL RAINFALL



to year. The Department of Education has a policy to provide covered playcourts and covered walkways for schools located in areas with a median annual rainfall equal to or greater than 40 inches.

4. Hydrology and Drainage. The school area does not have any surface bodies of water or any flowing streams. Most of the Kahuku area sits above a part of an extensive coastal "caprock" which confines basal ground water.

Urbanization of the Kahuku area has increased the rate at which surface runoff reaches nearshore coastal waters. Much of Kahuku (north of Kamehameha Highway) is still subject to shallow flooding because of its flat topography and inadequate drainage facilities. The resultant ponding of rainwater generally is dissipated through percolation. Because the elementary facility site is above this low area, the risk of flooding is minimal.

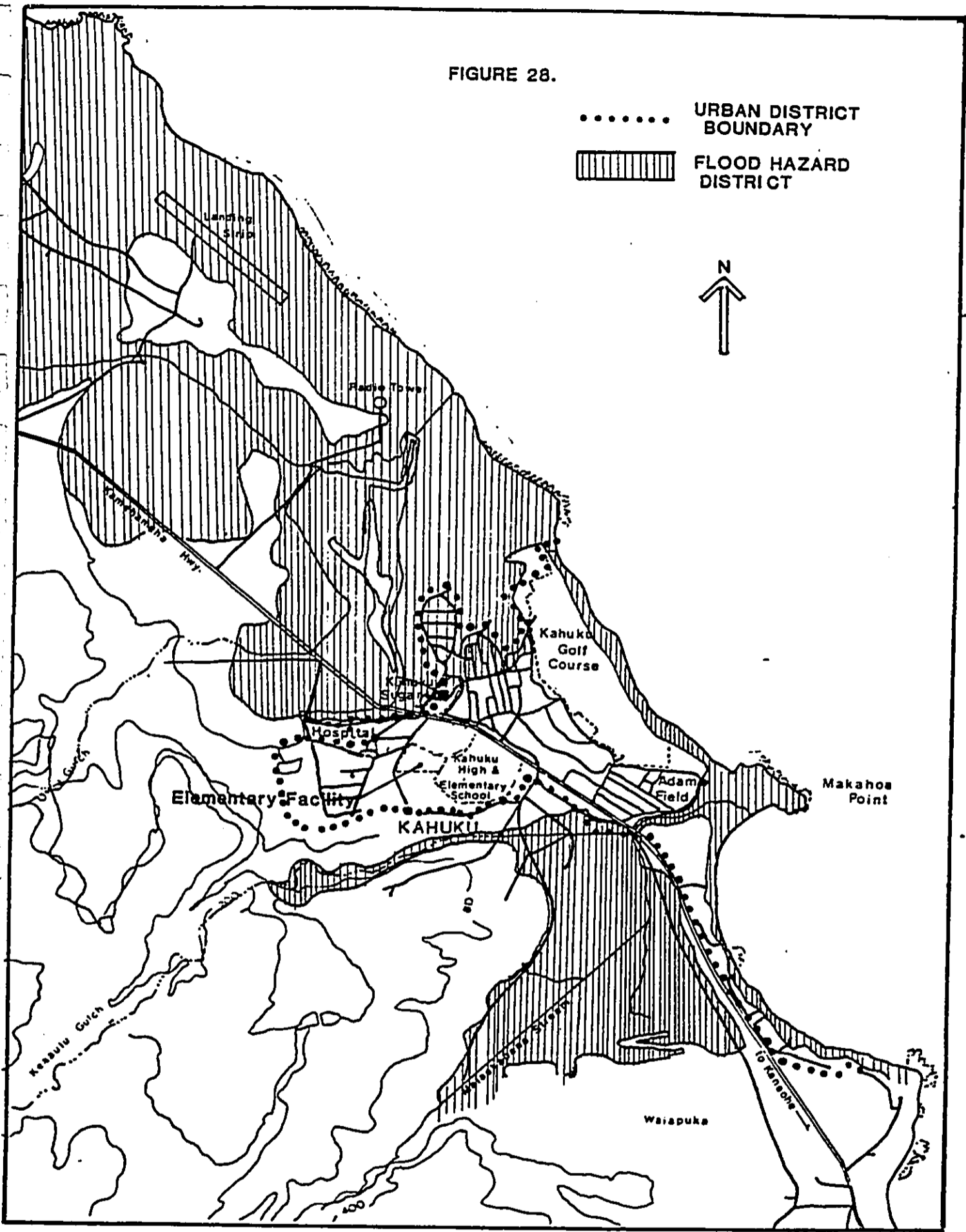
5. Natural Hazards. According to the Civil Defense Tsunami Inundation map for Oahu, most of the school area is outside of projected inundation zone. The area is sufficiently elevated above the 100-year tsunami. The entire shoreline is designated "C-Area of Minimal Flooding" according to the Federal Flood Hazard District Map. See Figure 28.

6. Water Quality. The school area is not located adjacent to any flowing streams. No impact is anticipated to any ocean resources.

8. Biology. The elementary facility site is a highly altered environment. The site was once used for sugar cane production and more recently truck crops. There were no threatened or endangered plant or animal species identified during field investigations. Plant material identified on the site included (by common name):

FIGURE 28.

- ..... URBAN DISTRICT BOUNDARY
- ▨ FLOOD HAZARD DISTRICT



Wire grass  
Beggar's tick  
Bermuda Grass  
Swollen finger grass  
Narrow-leaved plantain  
Pluchea  
Koa haole  
Coconuts

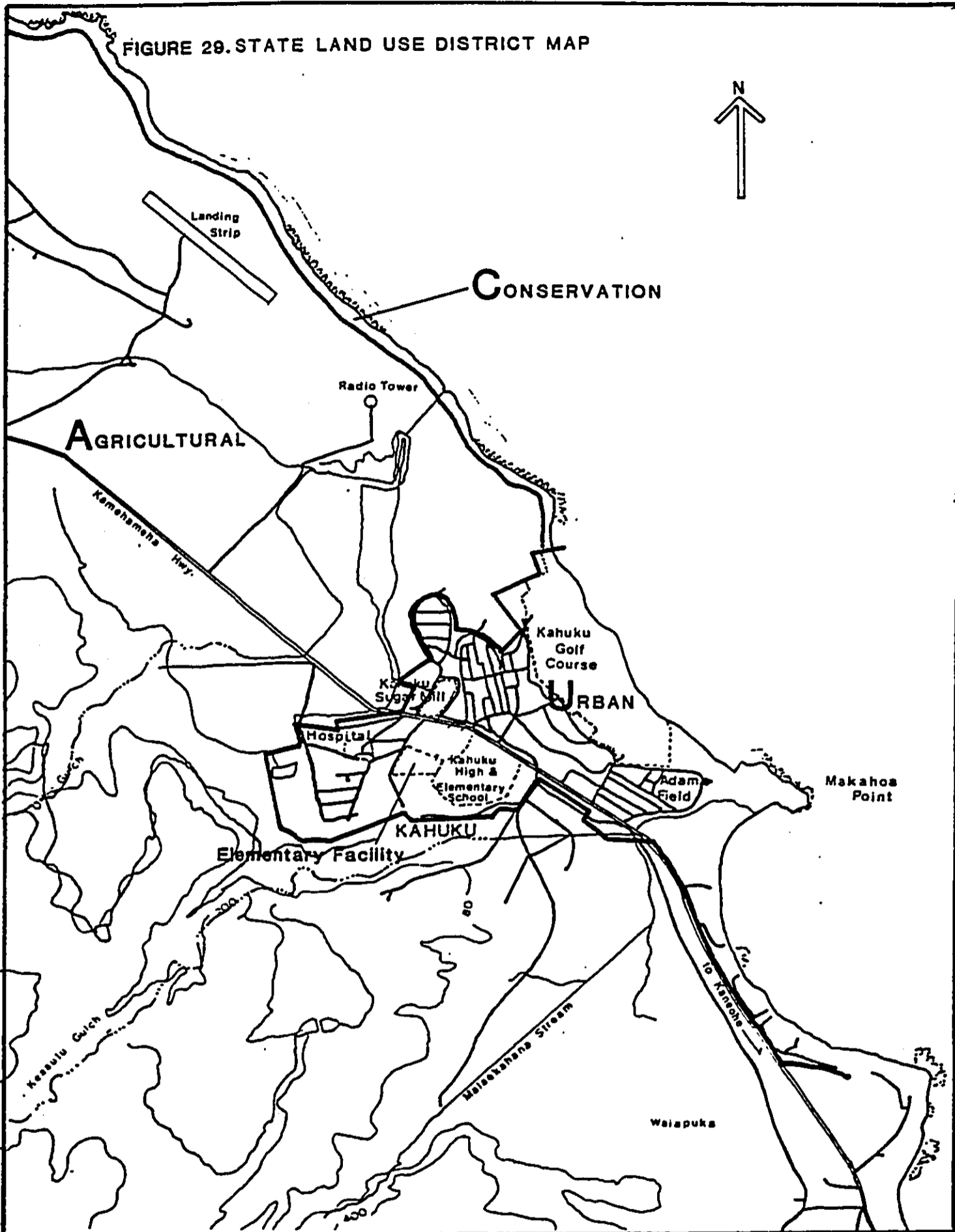
Guava  
Christmas berry  
Scarlet-fruited passion flower  
Creeping rose  
Fugutive sugar cane  
Lantana  
Iron wood trees  
Chinese Banyan

B. SOCIAL AND ECONOMIC SETTING

1. Land Use.

- a. Existing Land Use. The elementary facility site is currently vacant and is covered with plant material, predominately koa haole. There will be no relocation or displacement involved.
- b. State Land Use. The existing high school and elementary school and the proposed elementary facility site are located within the State Urban Land Use District. See Figure 29.
- c. Development Plan. The City and County's Development Plan for Koolauloa (Ord. #83-9, 5-10-83) designates the elementary facility site as Residential. See Figure 30. The existing school site is designated as Public Facility.
- d. Zoning. The City and County's Zoning (Ord. #84-15, 3-1-84) for the elementary facility site is Agriculture (AG-1). See Figure 31. The development of an elementary facility is an allowed use in this zoning district. The existing campus is zoned R-6.
- e. Planned Uses. The area adjacent to the elementary facility site will be developed as a District Park by the City and County of Honolulu.

FIGURE 29. STATE LAND USE DISTRICT MAP





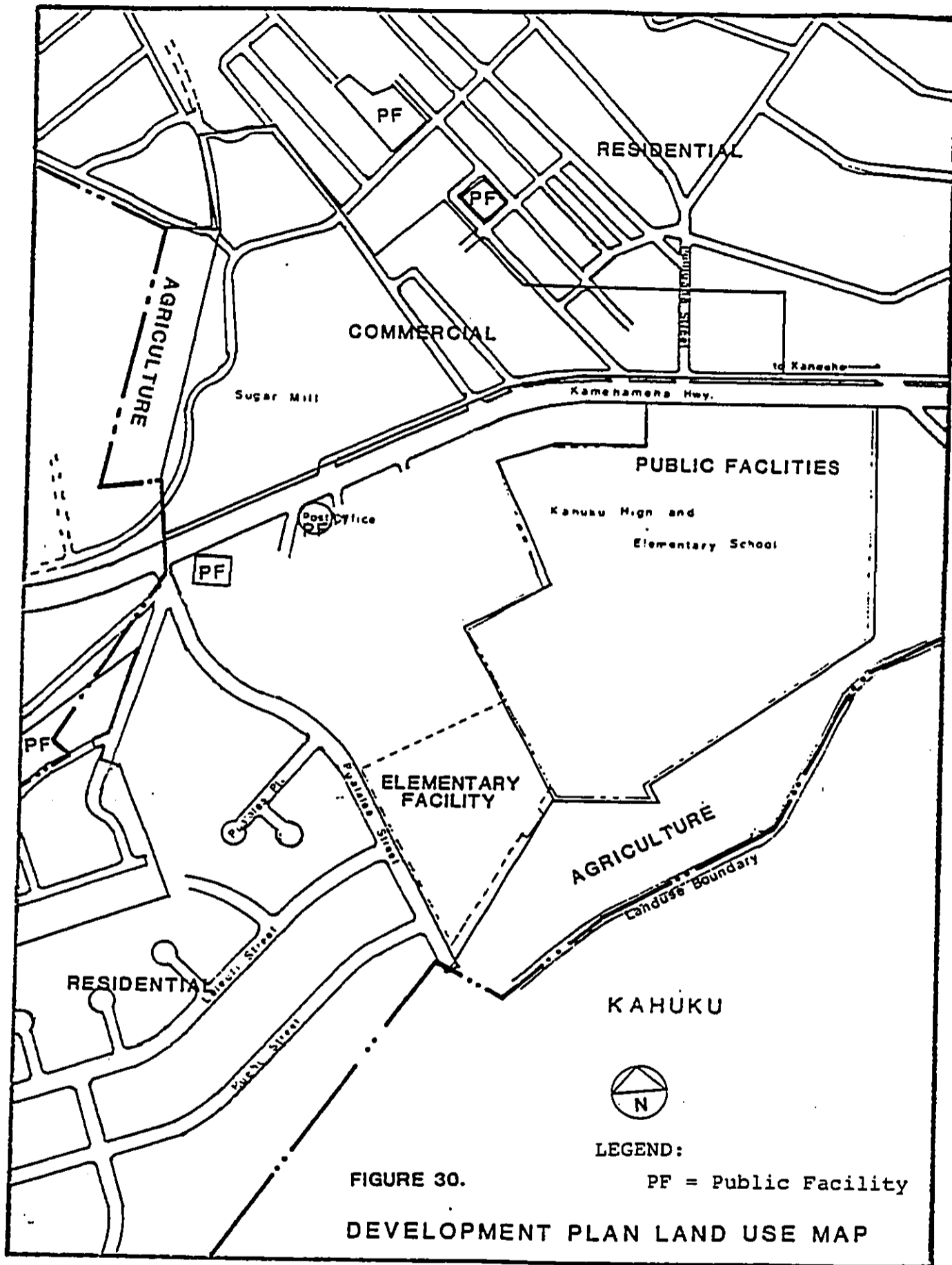


FIGURE 30.

LEGEND:  
PF = Public Facility

DEVELOPMENT PLAN LAND USE MAP

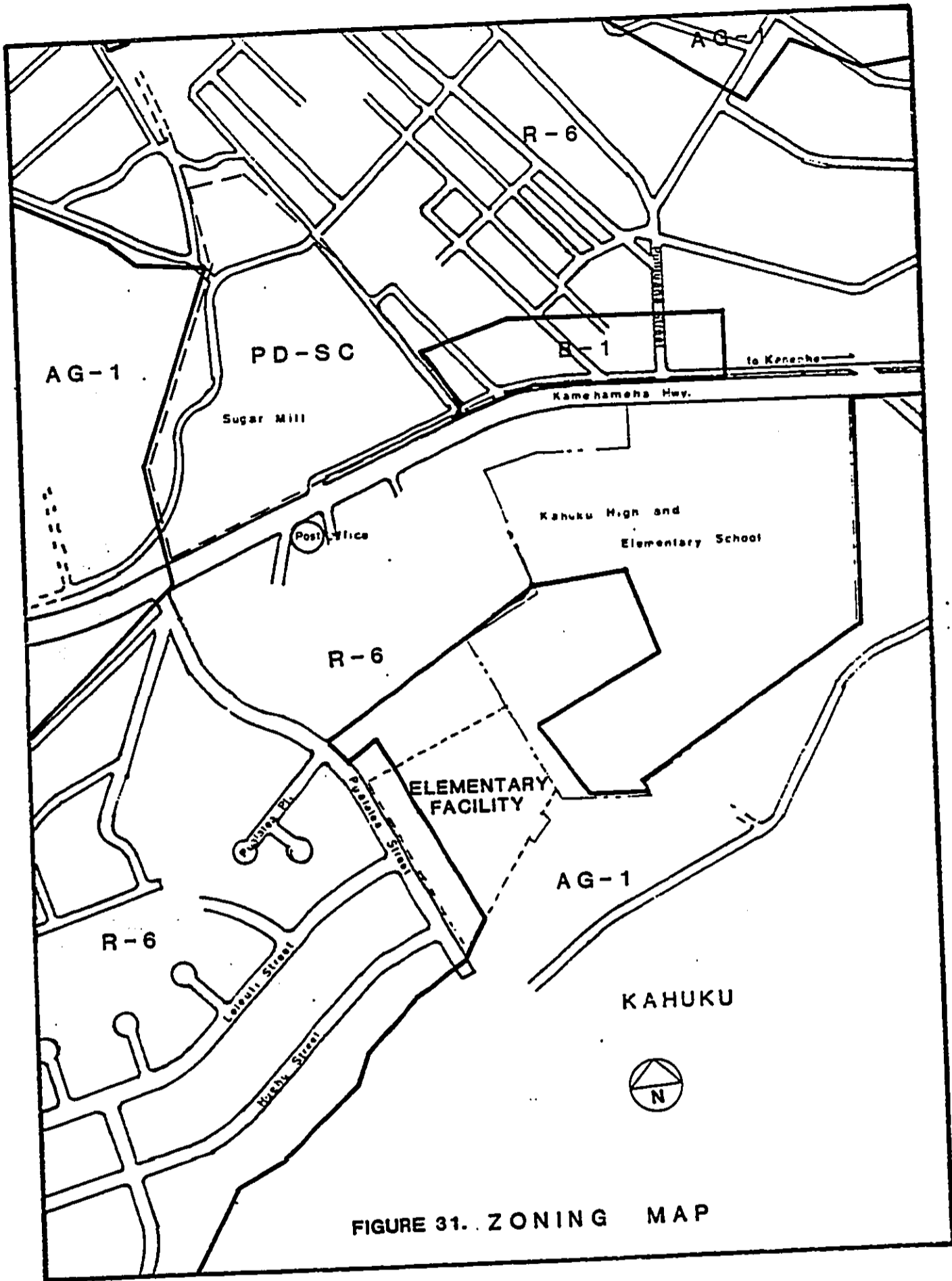


FIGURE 31. ZONING MAP

2. Land Ownership. The elementary facility site is currently owned by the City and County of Honolulu. The parcel will be sold to the State. The purchase will proceed as described on page v of this EIS. No City Council approval is required because the State has eminent domain powers.
3. Historic Sites. There are no historic or cultural resources on the elementary facility site that are registered with the State or National Register of Historic Places. A surface reconnaissance survey was conducted by the Bishop Museum. During their survey, three sites within the elementary facility site were identified as having potential historic significance. The results of the survey is detailed in Appendix B.
4. Open Space and Visual Resources. The school area is located in an urbanized area. The principal visual land mark in the area is the former Kahuku Sugar Mill. Upon completion of the proposed District Park, the elementary and secondary campuses will be adjacent to a major open space/recreational resource. The elementary facility, when completed, will be bounded by the existing Kahuku High and Elementary School campus, the District Park, and the Koolauloa Housing Project and the cliffs to the south of the site.

Significant views from the elementary facility site are to ward the north, which includes the Kahuku Sugar Mill and the coastal plain as it stretches to the shoreline. The proposed elementary facility will not obstruct any of this view. The buildings that are planned will not exceed two stories.
6. Noise. There are three principal sources of noise that affect the project site: traffic, sirens, and aircraft. Of these, aircraft will have the most annoying effect. The noise impact are those created by the Kahuku Police/Fire Station via its helicopter and movements of the fire trucks. The noise impact, while occasional, could have potential consequences.

According to a noise study conducted for the Fire and Police Department, siren sound level at the project site will be between 71.9 dBA and 76.4 dBA (See Figure 32). Helicopter sound levels will vary from 65 dBA to 68 dBA (see Figure 33).

C. PUBLIC FACILITIES AND SERVICES

1. State and County Government Roles and Finance. The elementary facility is planned to be built in three increments and the improvements to the secondary school in five increments as indicated in the Kahuku High and Elementary School Campus Development Plan. State funds will be expended for the construction of the school facilities. The construction will be financed through Capital Improvements Program funds through General Obligation Bonds.
  
2. Transportation System. Major access to the new elementary facility will be via Kamehameha Highway and along Pualalea Street. The area is served by a local school bus system that transports the students within the service area to the school. Those that live in close proximity to the facility will walk or be transported to the school by parents.

Pualalea Street has a 60 feet right-of-way. Pualalea Street does not have any curbs, sidewalks or other features. There are, however, drainage improvements along the street right-of-way.

The City and County Department of Public Works does not have any definite plans for street improvements in the Kahuku area. The City's Department of Transportation Services currently has no active plans for circulation changes in the area.

FIGURE 32. ESTIMATED NOISE LEVEL OF FIRE TRUCK SIREN

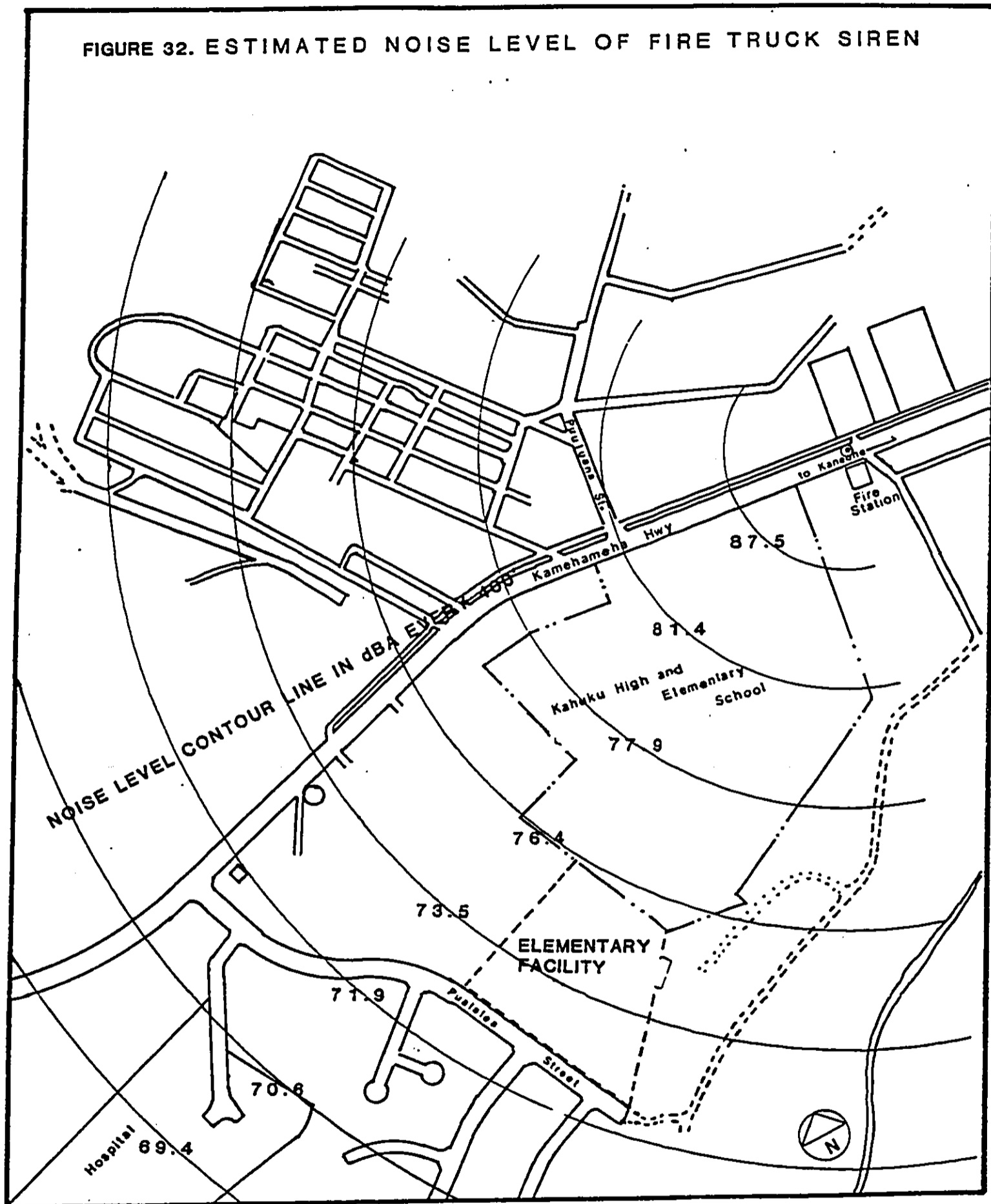
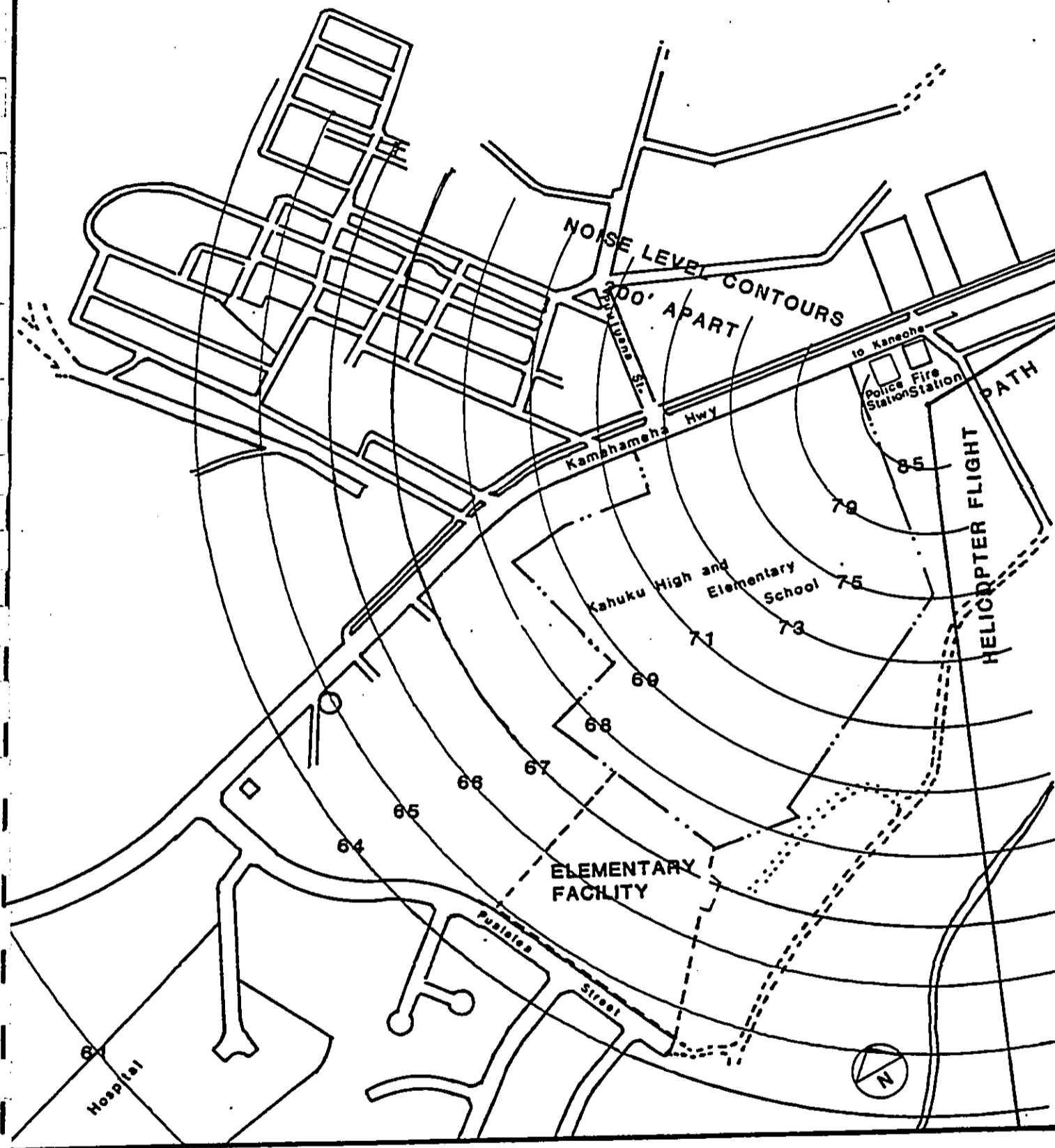


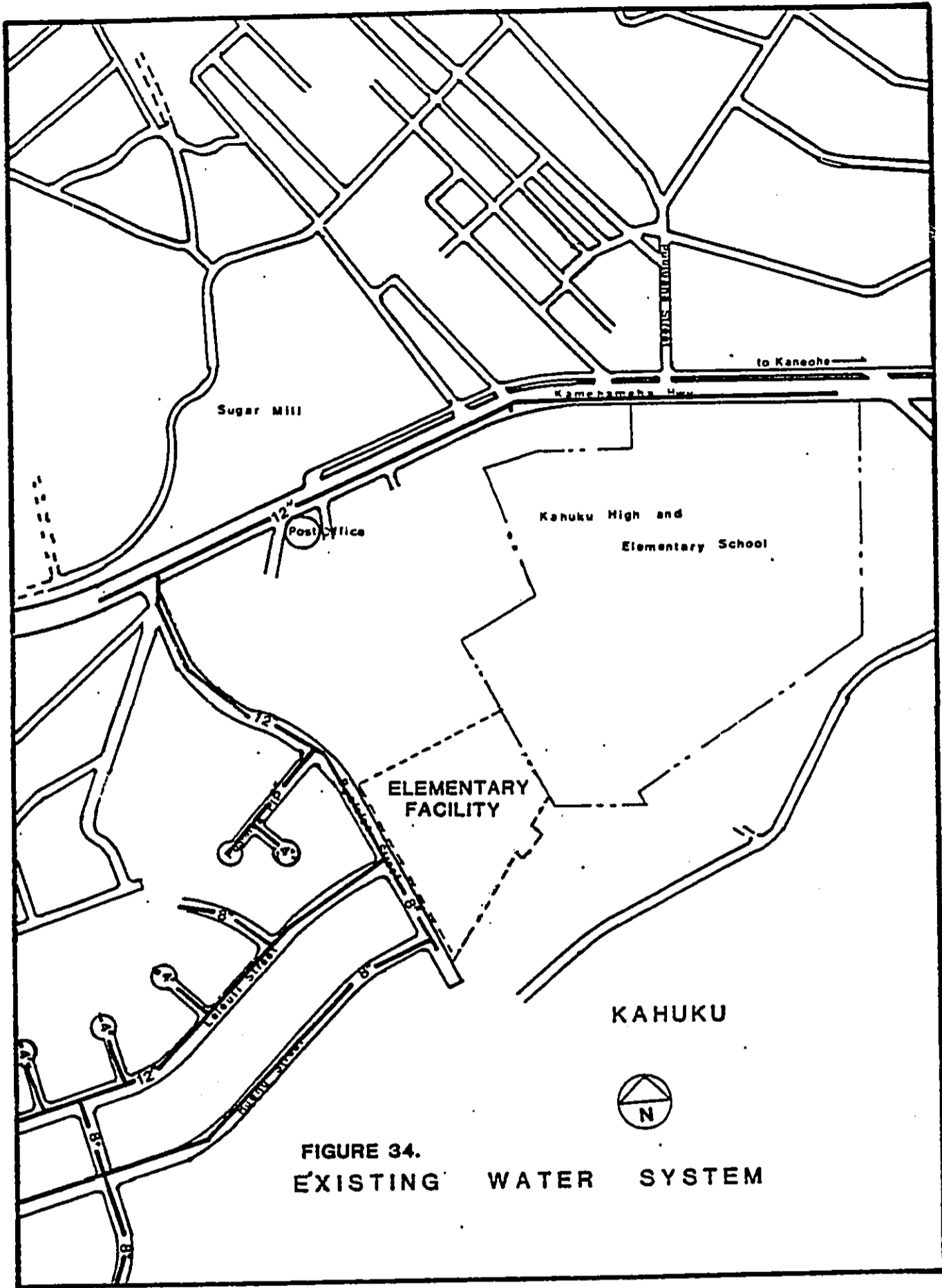
FIGURE 33. TAKE-OFF NOISE LEVELS

HELICOPTER 50' ABOVE GROUND LEVEL



The State Department of Transportation currently does not have any concrete plans for improvements along Kamehameha Highway at the intersection of Pualalea Street and Kamehameha Highway. However, a 20'-0" setback along both sides of the right-of-way should be provided for future expansion.

3. Bus Service. Municipal bus service is currently provided along Kamehameha Highway (Route 52) which is approximately 1/4 mile from the elementary facility site. The bus system in the area has a 30 minute headway. This translates to having a bus pass in from the school every 30 minutes, either heading east or west.
4. Water Supply. The main distribution waterline for the elementary facility site is 8 inches in diameter along Pualalea Street. This waterline increases to 12 inches from Pualalea Place to Kamehameha Highway. See Figure 34.
5. Sewage System. Existing sewer lines to service the elementary facility are located along Pualalea Street and are 10 inches in diameter. See Figure 35. The sewer lines are connected to a sewer treatment plant some 800 yards makai of Kamehameha Highway. Disposal of the sewage effluent is by injection wells.
6. Drainage System. There is a 48-inch diameter drainage trunk line along Pualalea Street which leads to Kamehameha Highway and discharges into a drainage canal. See Figure 36. There are currently no plans to have an area-wide drainage system developed.
7. Solid Waste Collection and Disposal. The City and County of Honolulu Department of Public Works provides solid waste collection and disposal for residences and businesses within the Kahuku area. Private refuse collectors serve some commercial and industrial users in the area. Solid waste is hauled to Kawaihoa for disposal.





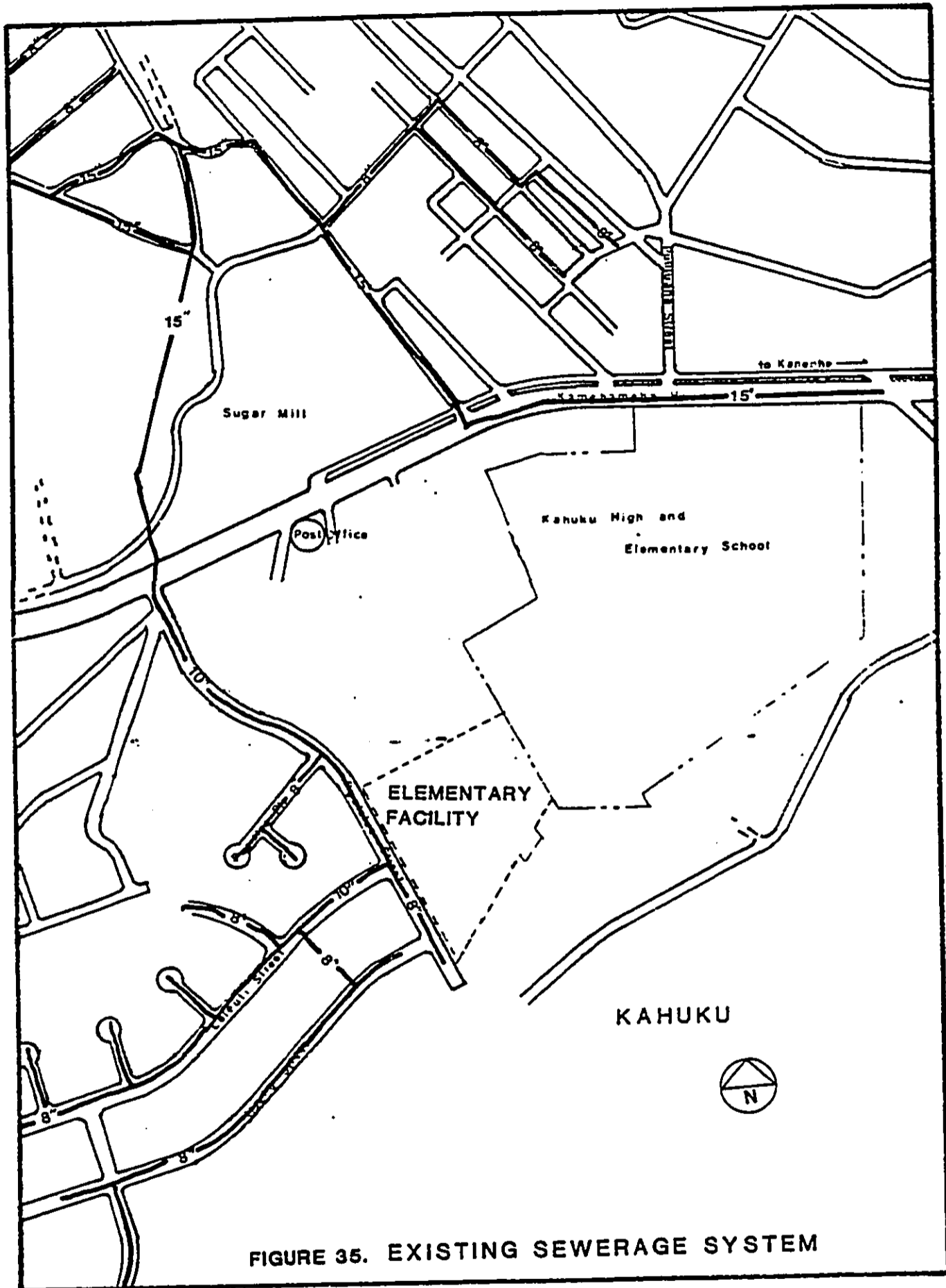


FIGURE 35. EXISTING SEWERAGE SYSTEM

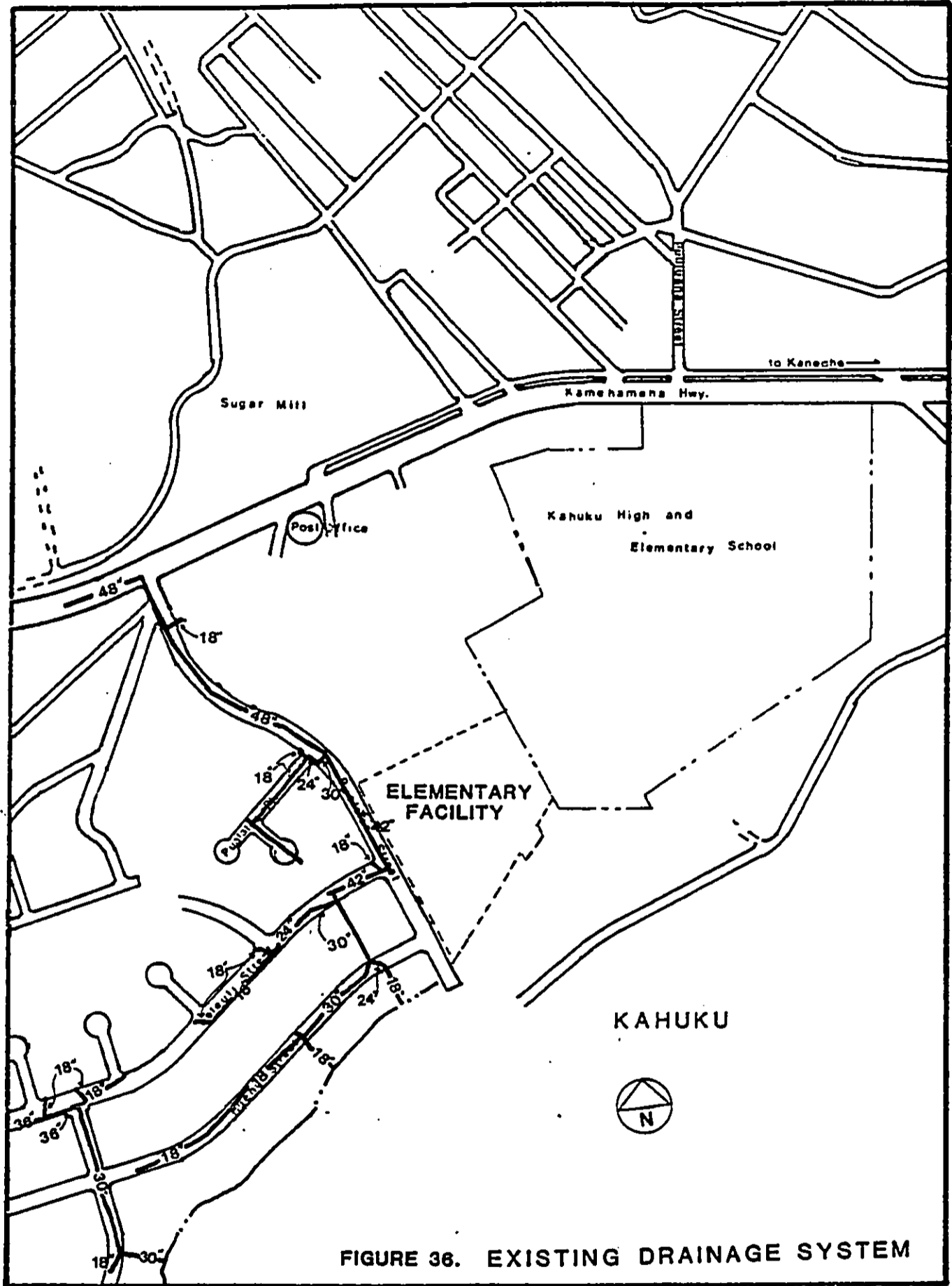


FIGURE 38. EXISTING DRAINAGE SYSTEM

8. Police Service. Kahuku is located within the service area of the Kaneohe District Police Station. New Police facilities have been recently completed at a site adjoining the Kahuku Fire Station on the Kaneohe side of the Kahuku High and Elementary School.
9. Fire Service. The Kahuku Fire Station is located along Kamehameha Highway adjacent to the Kahuku High and Elementary School. The fire station is approximately 1/4 of a mile away from the proposed elementary facility. No additional fire stations are planned for the area.
10. Schools. The Kahuku educational complex which includes the Kahuku Elementary, Intermediate, and the High facilities are the principal educational facilities in the Kahuku area. In the short term, existing school facilities are expected to adequately accommodate District school age population increases. The proposed elementary facility is part of an overall master plan for the Kahuku education complex which calls for the further expansion of the Kahuku Intermediate and High facilities.
11. Electric, Gas, and Telephone Service. The location, size, and age of existing overhead electric lines, utility poles and street light standard location, overhead telephone lines, overhead street light lines, and other facilities and appurtenances are currently adequate to meet projected future demand. These facilities will need to be upgraded as demand changes. There are no gas lines in the area.

#### IV. SUMMARY OF PROBABLE IMPACTS AND MITIGATION MEASURES

There are a number of elements that have environmental effects. The potential impacts resulting from the proposed actions are summarized below.

##### A. LAND USE

###### Elementary Facility

The change in land use will be the most significant impact to the environment at the elementary facility site. As noted in section III, the proposed site for the elementary facility is currently vacant and is covered with plant material. With the development of the elementary facility the land will be cleared and graded for the new structures. The change in land use will not cause any dislocation.

Short term impacts will mostly be associated with construction activity. Current laws and ordinances associated with construction activity should be adequate to mitigate any adverse impacts.

Long term impact of the development of the site will be beneficial to the community. The new facility will alleviate the conflicts associated with having the elementary students located with secondary students. The location of the new facility will also provide a safer environment for the school children as it relates to minimizing traffic hazards.

###### Intermediate and High Facilities

Minimal land conversion is planned for the intermediate and high facilities. No impacts are anticipated in the purchase and use of two small parcels to be acquired for parking and a retention basin.

B. TRAFFIC CIRCULATION

With the relocation of the elementary facility, there will be an increase in traffic on Pualalea Street and at the intersection of Pualalea Street and Kamehameha Highway. However, analysis shows this does not require an expansion of storage lanes along Kamehameha Highway to handle peak hour traffic. Present traffic movement in this vicinity is as follows:

Screening Point:	Kii Bridge	
Total Daily Account	<u>Kaneohe Bound</u>	<u>Turtle Bay Bound</u>
Count Taken (1985)	3080	3379
Morning Peak Hr 0700-0800	120	150
All Time Peak Hr 1100-1200	253	441

The elementary student design enrollment is 450. Therefore, estimated student drop off shall be not more than 90 for this period, assuming 1/5 of students may ride with parents. In addition, staff and visitors may account for 40 additional cars. Elementary students do not use any buses. If half of the 130 cars approach from the east, approximately 65 cars will make a left turn into Pualalea Street.

Present traffic pattern indicates a tourist traffic pattern which does not peak until 11:00 a.m. The present road has two lanes (24 ft. total width) with shoulders. A 20-ft. right-of-way setback on both sides of the existing roadway is necessary to allow for future road expansion.

B. TRAFFIC CIRCULATION

Present traffic movement in this vicinity is as follows:

Screening Point: Kii Bridge	<u>Kaneohe Bound</u>	<u>Turtle Bay Bound</u>	<u>Total</u>
24-Hour Total Count			
Taken (Feb. 3-4 1986)	2930	2697	5627
Morning School Rush Hr (0700-0800)	159	114	273
Morning Peak Hr (1100-1200)	215	242	457
Afternoon Peak Hr (0215-0315)	259	299	558

The present traffic pattern indicates a tourist and a tourist industry employee related traffic pattern.

With the relocation of the elementary facility, there will be an increase in traffic on Pualalea Street and at the intersection of Pualalea Street and Kamehameha Highway. However, analysis shows this does not require an expansion of the existing storage lane along Kamehameha Highway to handle school rush hour traffic.

The elementary student design enrollment is 450. Therefore, estimated student drop off shall be not more than 90 for this period, assuming 1/5 of students may ride with parents. In addition, staff and visitors may account for 40 additional cars. Elementary students do not use any buses. If half of the 130 cars approach from the east, approximately 65 cars will make a left turn into Pualalea Street. This will not require an expansion of the storage lane.

The present Kamehameha Highway has two lanes (24 ft. total width) with shoulders. A 20-ft. right-of-way setback on both sides of the existing roadway is necessary to allow for future road expansion.

C. NOISE

The impact of noise created by the Fire Station siren and the take-off and landings of Police and Fire helicopters appear to be minimal because the noise interference is occasional. Noise generated by school children during school hours may affect some of the residences in the Koolauloa Housing Project. The noise impacts, however, cannot be mitigated.

D. AIR QUALITY

Impacts to air quality will be generally associated with construction activity. Current laws and ordinances which govern construction activity are adequate to mitigate any adverse impacts. There are no long term impacts to air quality.

E. WATER QUALITY

Impacts to water quality will be generally associated with construction activity. Current laws and ordinances which govern construction activity are adequate to mitigate any adverse impacts.

There are no long term impacts to water quality anticipated. The principal impact to water quality is the increase in storm water discharge via the existing drainage system.

#### F. SOCIAL IMPACTS

The development of a new Elementary facility will improve the social environment of the elementary students. The facility's location adjoining the district park will also provide additional recreational opportunities for the elementary students. The new location will also improve traffic safety because the elementary facility will not longer be located along a major thoroughfare.

#### G. IMPACTS WHICH CANNOT BE AVOIDED

Short-term impacts which cannot be avoided are those primarily related to construction activity. Mitigative measures will be imposed during construction, however, they will not eliminate all impacts related to noise, dust, traffic congestion, and air pollution.

Long-term impacts associated with the project will have both beneficial and negative impacts which cannot be avoided. Negative impacts include the conversion of potential agricultural use to school use. There will be increased traffic along Pualalea Street that may affect residents that must use this street.

The long-term benefit derived from the development of the new elementary facility will be the creation of an educational facility specifically intended for elementary students and programmed for the increased student enrollment.



## V. UNRESOLVED ISSUES

There are no unresolved issues identified at this time.

## VI. RELATIONSHIP BETWEEN SHORT TERM USES AND LONG TERM GOALS

The short-term effect on man's environment during construction of the elementary facility and improvement at the intermediate and high facilities will be offset by the long-term value gained by enhancing the educational environment for the staff and students at both the intermediate and high school and the elementary facilities.

## VII. COMMITMENT OF RESOURCES

The construction of new and improvements to existing facilities will commit, irreversibly and irretrievably, labor and material resources, as well as monetary resources required for governmental administration of the project.

Some vegetation and immobile organisms will be irretrievably lost, but no economically important flora or fauna will be affected, and the overall effect on the environment of the area will be negligible.

VIII. AGENCIES AND ORGANIZATIONS TO BE CONSULTED FOR THE EIS

A. U.S. GOVERNMENT  
Department of the Army -- U.S. Corps of Engineers  
U.S. Department of Agriculture -- Soil Conservation Service  
Department of the Interior -- Fish and Wildlife Service

B. STATE OF HAWAII  
Department of Accounting and General Services  
Department of Education  
Department of Health  
Department of Land and Natural Resources  
Department of Transportation  
Office of Environmental Quality Control  
University of Hawaii -- Environmental Center  
State Senator Gerald Hagino  
State Representative Joseph Leong  
Department of Agriculture

C. CITY AND COUNTY OF HONOLULU  
Board of Water Supply  
Building Department  
Department of General Planning  
Department of Land Utilization  
Department of Parks and Recreation  
Department of Public Works  
Department of Housing and Community Development  
Department of Transportation Services  
Office of the Managing Director  
Police Department  
Fire Department  
Councilman Randall Iwase

D. ORGANIZATIONS  
Hawaiian Electric Company  
Hawaiian Telephone Company  
Life of the Land  
Sierra Club  
Koolauloa Neighborhood Board  
James Campbell Estate  
Kahuku Housing Corporation  
Kahuku Community Association  
Kahuku Elementary School - PTA  
Kahuku High School - PTA  
Kahuku Village Association

## IX. REFERENCES

1. Draft Kahuku High and Elementary School Campus Development Plan, State of Hawaii, Department of Accounting and General Services, March, 1986.
2. Environmental Impact Statement, Kahuku Ambulance, Fire and Police Station. City and County of Honolulu, Building Department. February, 1977.
3. Draft Environmental Impact Statement for Kahuku Elementary School -- Site Selection. State of Hawaii, Department of Accounting and General Services. 1979 (unpublished).
4. Archaeological Reconnaissance Study for Proposed Proposed Extension, Kahuku Elementary School. B.P. Bishop Museum. August, 1979.

APPENDIX A  
KAHUKU HIGH SCHOOL - MASTER PLAN

GENERAL

Since no topographic surveys for the High School campus were authorized for this study, the existing utility system maps were compiled from data found in the construction drawings for the individual buildings. A cursory site inspection was then made to verify the location of all visible utility structures. However, due to incomplete or conflicting data, coverage in some areas are uncertain, and caution should be exercised in the use of data shown.

The Utility Master Plans in this report should be used as a guide to aid the designer in his assessment of the overall needs of the school for the respective site utility under consideration. With more detailed information, such as current topographic surveys, the utility systems shown can be refined and adjusted to meet actual field conditions.

SANITARY SEWER SYSTEM

Existing Conditions Since most of the buildings in the school were constructed prior to the completion of the sewer main along Kamehameha Highway in 1978, cesspools are presently the primary means of disposal for sewage effluent. Buildings constructed after 1978 also rely on ground disposal, since they were constructed in remote areas of the campus with no on-campus mains to connect to.

Proposed Improvements Development of an on-campus sewer system is necessary to collect and convey sewage effluent to the City's sewer system. An inventory of the school's facilities was made, and the number of fixture units tallied in order that the capacity requirements could be determined.

The proposed system should conform to the Sewer Design Standards of the City and County of Honolulu, particularly with regard to minimum velocities.

Two sewer laterals were provided by the City to serve the school. (An 8" line at the northeast corner of the school parcel and a 10" line at the northwest corner, westerly of the main driveway entrance). The placement of these two connection points lends itself well to the continuation of on-site mains to serve the campus.

Two sewer mains were developed onsite. Sewerline "A" serving the new Building "A", Special Classrooms, Kitchen and Kindergarten buildings follows along the easterly boundary of the campus. Sewerline "B" which follows the central driveway around the football field collects effluent from the Industrial Education, Garage, Portable Toilets, future Building "Y", Special Education, Music, Library, Locker Rooms, Gymnasium and Administration buildings.

The future Building "B" can also be served by Sewerline "B". However, when establishing the finish grade of the new

building, considerations should be given to the sewage disposal requirements if connection is to be made directly to the manhole near the Garage. In order to maintain minimum slope and fall, the finish floor elevation of the building should be set at approximately 14.50 MSL, (which is 6 feet above the field level). If, however, the new building is established lower than 14.50, the aforementioned connection cannot be made, and a lateral for the building will have to extend across the field to a sewer invert at a lower elevation.

Pumping will be required at the PE Classrooms and Locker-Shower buildings as these buildings appear to be too low to be served by the new sewer system. An alternative to pumping would be to install a gravity system directly to the City sewer across private lands fronting Kam Highway. Since these parcels have already been designated for acquisition for parking area/retention basin purposes for the school and Community Park, this alternate appears feasible subject, of course, to the timing of the acquisition.

#### WATER AND FIRE PROTECTION SYSTEMS

Existing Conditions Water service is provided each building through a 4" meter connection to the Board of Water Supply main along Kamehameha Highway and through a metered connection to the Kahuku Plantation water system along the southerly boundary of the campus near the Agriculture

Building. A separate fire protection system runs along the central driveway through the school with hydrants located in the area of the Gymnasium, Special Education building, Shop and Agriculture building. A hydrant is also located in the area of the Kitchen/Dining Room.

Proposed Improvements The existing water system appears to be adequate for the school's present and future needs. Service to the new Buildings "A", "Y" and "B" can be provided by extending the water system to the new facilities.

There appears to be a cross-connection problem in the water service to the Gymnasium, Music building, and Boys' and Girls' P.E. classrooms. Laterals for these buildings are connected to the football field's irrigation system. The existing irrigation system should be separated from the potable system with an approved backflow preventer and a separate water system developed to serve these buildings.

Fire protection for the campus was evaluated for coverage of buildings outside the central core. Because the four existing hydrants are inadequate to provide protection for the entire campus, three additional hydrants will be required to coverage for the outlying buildings in accordance with the DAGS Water Systems Standards for Fire Protection in Public Schools. New hydrants will be installed near the Locker-Shower buildings by making a new connection to the existing fire flow line in the area of the

Music building; near the Special classrooms by providing a loop connecting the ends of the present system adjacent to Shop 6 and the Kitchen/Dining Room; and near the Industrial Arts building by extending the existing fire flow line. The hydrant at the Industrial Arts building will also provide overlapping coverage to the new Elementary School site.

#### DRAINAGE SYSTEM

The school's drainage system relies primarily on directing stormwater runoff to drywells for ground disposal. Since total reliance on ground disposal of stormwater runoff is at best questionable engineering practice, a review of the surrounding area for a drainage outlet reveals that there is none which can be developed economically.

Using the City's aerial topography and tracing the general lay of the land, the natural flow pattern for runoff from the school would traverse northerly through Kahuku Camp to a parking area northeasterly of the Kahuku Golf Course. The elevation of this sump will permit overland flow but is too high and too far to be used as an outlet for an underground storm drain system. The existing drainageway which crosses Kam Highway approximately 1700 l.f. westerly of the school and the Malaekahana Street 2050 l.f. to the east are also hydraulically inaccessible.

Thus development of an offsite drainage system could be done only at substantial cost and would probably include an ocean outfall.

With the lack of a viable drainage outlet, a more substantial review of a system dependent on drywell disposal was necessary. Ground disposal is directly correlated to the quantity and quality of the runoff and the general permeability of the soil substrate. A review of the soil profile is necessary, if ground discharge is to be continued to be the primary means of disposal. According to the SCS Soil Survey, the soils are of the Hokuiea clay loam (Mt) series. In a representative profile, the surface layer is very dark grayish-brown clay loam about 16 inches thick. The next layer, 34 to 48 inches thick, is composed of single grain sand and loamy sand. Permeability is moderate in the surface layer and rapid in the subsoil. Runoff is slow and the erosion hazard is no more than slight.

With the highly permeable subsoil, it appears that drywells could still be used as the primary means of disposal if the quality and quantity of runoff can be controlled effectively. Although no surmounting studies have been made to determine drywell capacities, drywells are used frequently in the County of Hawaii where 10 cfs per drywell is the generally accepted capacity. However, because of the expected siltation and anticipated decrease in capacity over

the service life of a drywell for this project, a design capacity of 5 cfs was used.

The disruption of campus activities and the substantial cost involved in the construction of the proposed onsite drainage improvements may be too great an undertaking to provide a feasible solution to the school's drainage problems. However, the Master Drainage Plan represents an ultimate system, with initial construction of portions of the system to alleviate present drainage problems by directing flow to drywells for interim disposal. When the entire system is complete, offsite disposal will be effected by interconnecting the drywells and inlets and conveying flow to an offsite outlet.

A review of the effect of incoming offsite flows would have on the school's drainage system was also made. Significant flow has previously been directed toward the school's westerly boundary near the football field. With the development of the Koolauloa Housing Project, much of the tributary area which contributed flow has been diverted away from the school. The remaining area between the housing project and the school encompasses lands which will be developed by the City's Department of Parks and Recreation at the first increment of a community park. Under the proposed park development plan, an interceptor swale will direct all runoff toward Kam Highway near the northwest corner of the

school. Thus with the completion of the first increment park improvements, virtually all of the offsite flow along the westerly boundary will be directed away from the football field. However, concentration of all offsite runoff to the natural sump near the northeasterly corner of the school could cause potential flooding of the P.E. Classrooms and Locker-Shower Rooms. Initially the parcel between the Gymnasium and Kam Highway was to have been acquired by the City and developed as a joint use parking area for the school and park. However, responsibility for the acquisition and development of these lands has reverted to the State.

In view of the following, 1) the lack of a feasible drainage outlet, 2) the City directing all of the park runoff to this area with potential flooding of the P.E. Building, 3) the need to develop a gravity sewer line across the parcel to Kam Highway, it appears that the lands should be acquired by the State but, rather than for the development of a parking area, used instead for the creation of a retention/disposal basin. The planned parking stalls could be developed elsewhere on campus although at a greater distance from the park. The City has been directed by their Public Works Department to develop a positive drainage outlet with the second increment of park construction.

The Flood Insurance Rate Maps establishes that the school is not subject to stormwater inundation. Further, the drawing

At the time of this study, all building construction was complete except for buildings "A", "B", "Y1", "Y2" and "T1".

Outlining drainage problems provided by the school confirms that standing water problems on the campus are generally localized and may be attributed to poor grading and/or lack of drainage inlets.

The proposed Drainage Master Plan represents an overall system which will intercept and dispose offsite and onsite flow based on a 10-year return storm. The system utilizes a combination of grated inlets and drywells interconnected to distribute and balance excess flows to ground disposal points. Any remaining flows will be conveyed to a proposed retention basin (parcel to be acquired by the State). With the construction of the second phase of the community park, a positive drainage outlet will be provided. (Information from Department of Parks and Recreation). In the interim, the retention basin will serve as the primary outlet for runoff from the school and community park.

#### ADDITIONAL CONSIDERATIONS

Special consideration should be given to the placement of utilities within the central driveway adjacent to the Track since this narrow corridor will be congested with four separate utilities. In addition to the existing water and fireflow mains, new sewer and storm drain systems are planned. The gravity systems should have precedence, and realignment of the existing water systems may be necessary to avoid conflicts.



## KAHUKU ELEMENTARY SCHOOL - MASTER PLAN

### GRADING

The new Kahuku Elementary School will be situated on a vacant parcel of land fronting Pualalea Street on the westerly side of the High School campus. The existing slopes range from 161 to 74 in the southwesterly direction with elevations ranging from 56 to 20 feet NSL. A modified earth balance will be obtained by site preparation and grading to moderate grade changes to satisfy the functional requirements for handicapped access on the campus. Two levels will be created centering around 37 and 43 feet NSL.

The main access to the school will be from Pualalea Street through a parking/loading area, with a secondary access from the high school provided by extending the driveway near the Industrial Arts building onto the new elementary school site. (See Plan).

### SEWER IMPROVEMENTS

An 8-inch service main will connect to the existing City sewer through an existing manhole along Pualalea Street, run centrally through the campus, and branch to provide service for each building. (See Plan).

### WATER IMPROVEMENTS

Domestic water service will be provided through a 4-inch metered connection to an existing 8-inch main along Pualalea Street. (See Plan).

No onsite fire protection system will be provided for the new campus because adequate coverage can be provided by an existing fire hydrant along Pualalea Street and a proposed hydrant near the Industrial Arts building of the Kahuku High School campus (See Kahuku High School Master Plan).

### DRAINAGE IMPROVEMENTS

Grading will be established to direct flow away from the new buildings into drainage swales which will convey flow to the new drainage inlets. Runoff will be collected in stormwater inlets and conveyed by an underground drainage system to outlet in the City's existing 42-inch storm main along Pualalea Street. (See Plan).

ARCHAEOLOGICAL RECONNAISSANCE SURVEY OF  
PROPOSED EXTENSION, KAHUKU ELEMENTARY SCHOOL  
KAHUKU, O'AHU

by  
Rose Schilt  
M.A., Anthropology

Prepared for  
Department of Accounting and General Services  
State of Hawaii

August 1979

Department of Anthropology  
Bernice P. Bishop Museum

## INTRODUCTION

Pursuant to a request by Rikio Nishioka, State Public Works Engineer, the Department of Anthropology, Bernice P. Bishop Museum, proposed and conducted an archaeological reconnaissance survey of a 4-acre area designated for the construction of an addition to Kahuku Elementary School, Keana ahupua'a, O'ahu. This survey, carried out by Toni Han and the author on August 1, and 5, 1979, was intended to determine the presence/absence of archaeological and historical sites in the project area.

## LOCATION AND ENVIRONMENT

The 4-acre tract (Fig. 1) is bounded as follows: on the W by the Ko'olau-Loa Housing Project, presently under construction; on the N by vegetable gardens; on the E by the Kahuku School compound; and on the S by the base of a bluffline of beach limestone/reef formation. Formerly planted in sugarcane, the area is now characterized by a rather dense cover of koa-haole (Leucaena glauca), except for a small garden located at the SE corner of the tract and adjacent to the school compound (Fig. 2). A dirt road, oriented SW to NE, diagonally bisects the project area and runs in the direction of the gradual seaward slope. Although this road did not appear on the field map provided by the contractor, we have approximated its location of Figure 2 for the purposes of locational reference and future relocation of the archaeological sites.

The exposed bluff presents visible evidence of geological stratigraphy representative of glacioeustatic process that continue as late as 600,000 B.P. (Stearns 1978:9). The lowest visible stratum in the bluffs is beach limestone of the Kahuku Pt. 55-ft shoreline type, which is overlain by strata of streamlaid conglomerate, massive reef, and lithified dune formations (Stearns 1978: 19-20). In general terms, this bluff resulted from Pleistocene fluctuations in both sea level and island elevations. A sizeable outcrop of the beach limestone occurs within the project area, providing the context for a small rock shelter recorded during our survey. This outcrop interrupts the otherwise gently sloping topography of the area.

Soils in the survey area of the Kaena-Wailua association, which indicates a level-to-gentle slope with soils of varying drainage characteristics occurring on coastal plains and talus slopes (Foote et al. 1972:6). According to maps provided by Foote et al., the western portion of the survey area is of the Kawaihapai series, while the eastern portion is of the Mokuleia series. Both of these types are well-drained soils, the former having been formed in alluvium derived from basic igneous rock in humid uplands, and the latter in recent alluvium deposited over coral sand (Foote et al. 1972: 63, 95). Both soil types are typically used for cultivation of truck crops, sugarcane, and pasture.

## DOCUMENTS SEARCH

Prior to conducting the fieldwork, we examined existing Museum files to determine whether any known sites might be present in or adjacent to the project area. This search revealed that the two sites, 50-Oa-F5-2 and F5-3,

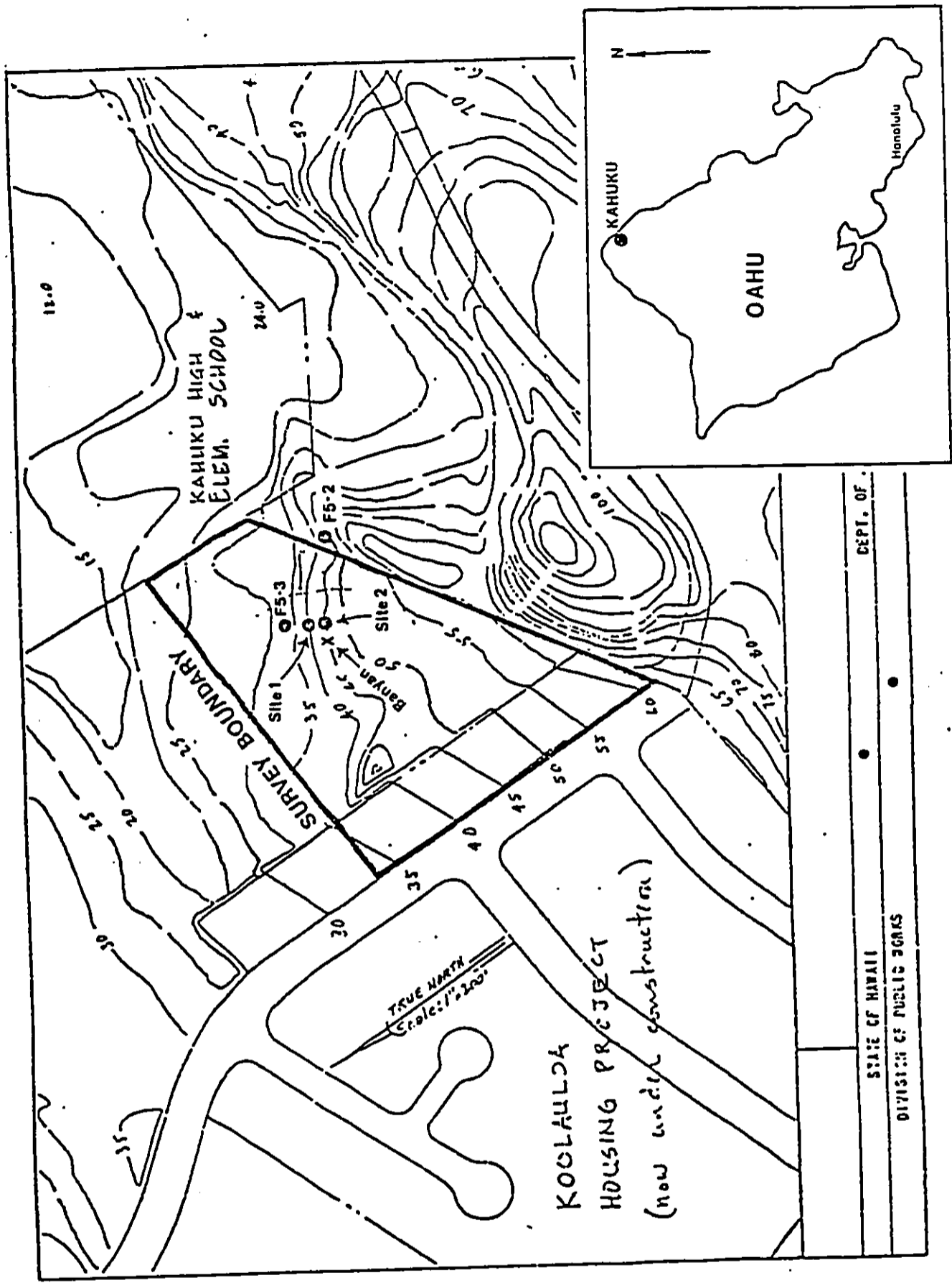
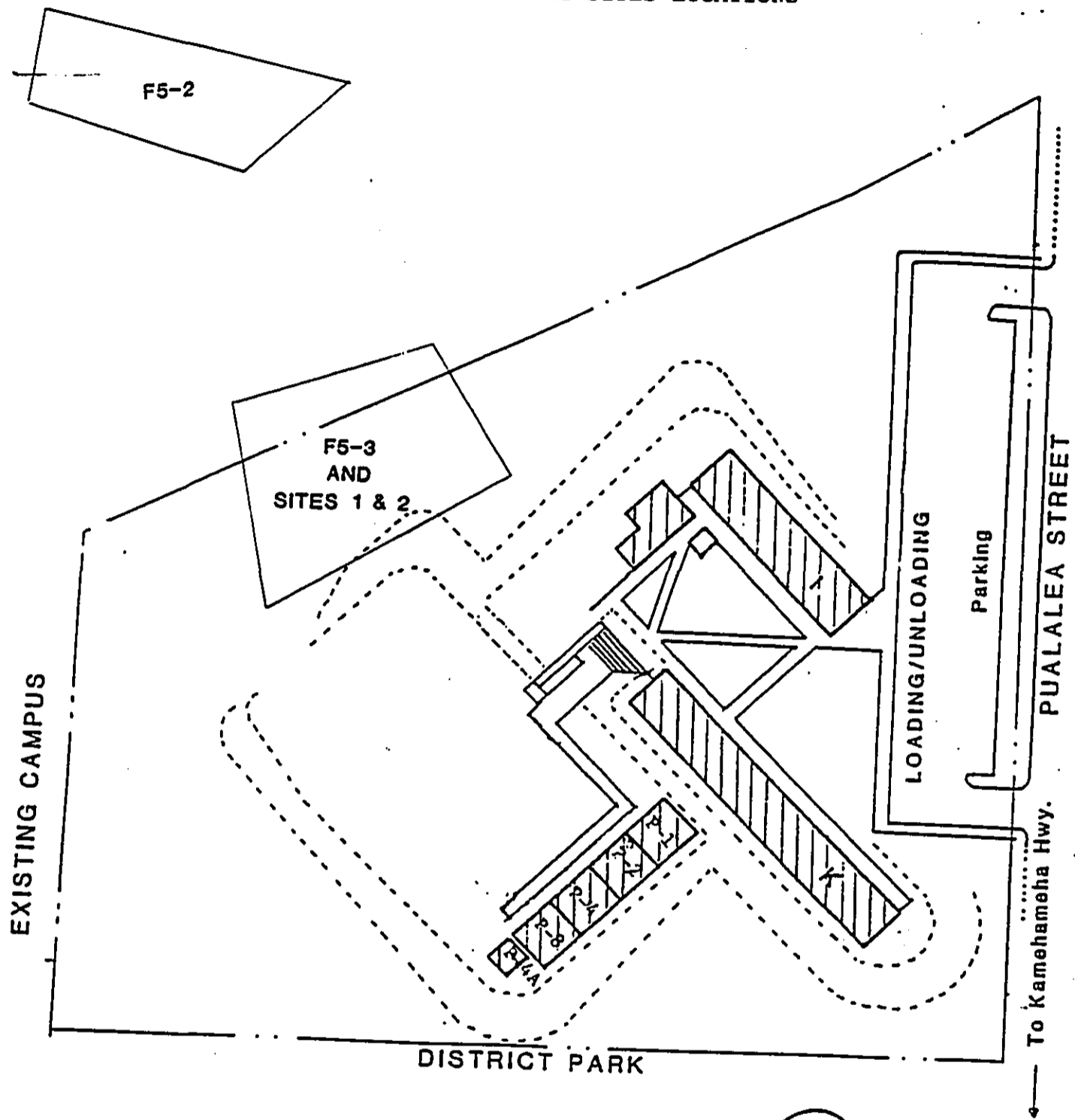


Fig. 1. MAPS SHOWING LOCATION OF SURVEY AREA, KAHUKU, O'AHU.

FIGURE 1a  
ACTUAL ARCHEOLOGICAL SITES LOCATIONS



**INCREMENT 1  
CONSTRUCTION**



NOTE: FIG. 1 OF APPENDIX B ORIGINATES FROM "EYEBALL" LOCATIONS OF ARCHEOLOGICAL SITES BY BISHOP MUSEUM IN 1979. FIG. 1a ORIGINATES FROM NOVEMBER 1986 SURVEY BY REGISTERED LAND SURVEYOR OF SITES FLAGGED OUT BY BISHOP MUSEUM IN NOVEMBER 1986.

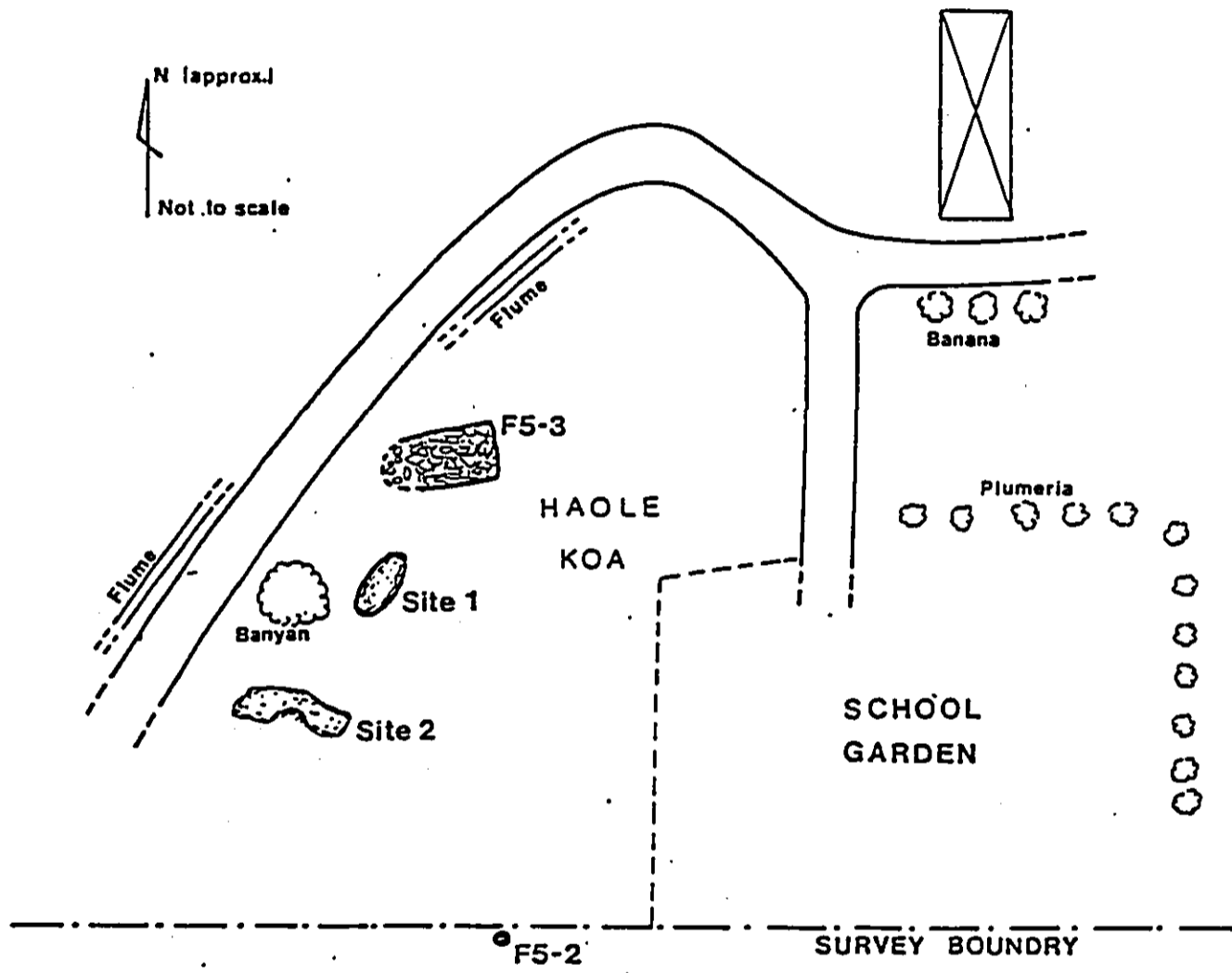


Fig. 2. SKETCH MAP OF SURVEY AREA, SHOWING LOCATIONS OF ARCHAEOLOGICAL SITES.

appeared to be located in areas of potential impact. These sites were initially recorded by McAllister (1933), and the generalized nature of his descriptions of the site locations was considered adequate at the time of his survey. Recorded information about these two sites is presented below.

In January 1979, William Barrera, Jr., reported the results of the archaeological survey and testing conducted in the nearby area of the Ko'olauloa Housing Project for the Oahu Construction Company (Barrere Ms.). Although his investigations revealed no remains worthy of scientific study, his report will be cited subsequently for comparative purposes.

#### FIELD METHODS

Two persons accomplished the archaeological reconnaissance by means of a walk-through survey consisting of W to E parallel transects at approximately 30-ft intervals. Walking at a leisurely pace, the surveyors inspected the ground surface for significant artifacts and for the presence of above surface cultural features. Vegetation, both living and decaying, masks the ground surface over most of the project area.

The locations of significant and potential sites were plotted on the base map of the project area (Fig. 1) and also on a sketch map of the area (Fig. 2). Sketches of the sites found within the project area were drawn, and 35-mm black-and-white photographs of archaeological features were taken where feasible.

#### SURVEY RESULTS

Four potentially significant areas that may be impacted by proposed development were distinguished within the project area. Discussions of these four areas, below, include (1) previous research, (2) survey findings, and (3) recommendations.

No portable artifacts were recovered from the surface during the survey. According to a local informant, Lester Sousa, who teaches Hawaiiana at the school, a few fishhooks have been found during cultivation of the school garden (fig. 2). He also reports that children have found a dozen or more 'ulu maika (disk-like gaming stones) in the project area.

The priority of our reconnaissance survey was to determine the presence or absence of historically significant sites in the project area. A walk-through survey is the initial selective procedure by which archaeologists assess the potential historic value of specific and general locations. Thus, the question of whether significant sites are present or absent may not always be definitively answered by this phase of work. Determinations on the basis of surface evidence alone may be complicated by several factors, including heavy groundcover, alleged surface finds in the area, and natural erosional and weathering processes, which may bury cultural remains from earlier periods. The readers should bear these factors in mind when evaluating the recommendation presented in the following discussions.

SITE 50-0A-F5-2 KEANA ROCK SHELTER

Previous Research

This is Site 270 in McAllister's survey (1933:155), said to be located "near the mountain side of the public school, Kahuku." McAllister quotes a legend about the shelter:

In former times this cave was the home where lived a mother and her two sons. One day, having occasion to journey to a distance, she left them with this injunction: "If during my absence you hear the sound of thunder, keep still, make no disturbance, don't utter a word. If you do it will be your death!" During her absence there spang up a violent storm of thunder and lightning, and the young lads made an outcry of alarm. Thereupon a thunderbolt struck them dead, turning their bodies into stone. Two pillar-shaped stones standing at the mouth of the cave are pointed out in confirmation of the truth of the legend (Emerson, N.B., Pele and Hiiaka, Honolulu, 1925, p. 233). McAllister further notes that "the rocks stands out prominently; one is much larger than the other and can easily be seen from the schools grounds" (p. 155).

Field Findings

We relocated this shelter (Fig. 2). The two prominent rocks at the opening are still present, and appear to be natural formations. The shelter also appears to be a natural formation intruding into the limestone beach rock of the bluff discussed earlier. This stratum is characterized by many layers of deposits, giving it an appearance somewhat like layered pastry. Pieces of depositional layers forming the interior of the shelter appear to be in a continual process of breaking away from the parent stratum and falling to the shelter floor. Freshly exposed areas of the shelter interior are evident by their lighter, pale-orange color, while weathered surface appear a mottle gray.

It is more than probable that any evidence of prehistoric activity, either on the shelter floor or on the slope gracing the shelter's open front, would be obscured by the accumulation over the years of the fallen rock debris. However, Bob Connolly (pers. comm.), who assisted with the original Ko'olauloa Housing Project survey, states the evidence of human burials has been observed in the past just below the two prominent rocks. Alleged artifact finds in the garden area may not be related to possible prehistoric use of the shelter.

The shelter itself lies outside of the project area boundary; however, potential subsurface remains in the adjacent slope and garden areas may be affected by development. It was a common practice of most prehistoric peoples occupying rock shelters to throw away their garbage outside the entrance to the shelter. The slope is thus a potential site of midden deposit, especially considering the alleged artifact finds from the nearby garden, and also the alleged burial materials.



### Recommendation

We recommend that any portions of the slope and adjacent garden areas that may be directly or indirectly affected by proposed development be tested for archaeological remains. On the slope, a test trench should be placed at a right angle to the shelter opening and proceeding down the slope. In the garden area, 15 systematically placed test pits, 50 by 50 cm, would be sufficient to detect the presence of a midden deposit. These could be placed so as to have no adverse effect on the garden plants.

### SITE 50-OA-F5-3 PLATFORM

#### Previous Research

Site 269 was located by McAllister (1933:154) near the mountain side of the Kahuku mill in Keana on an elevation near the Keana Rock Shelter. McAllister provides this description:

A rectangular platform measuring 16.5 by 10 feet with the long side facing due north. The sea side is from 3.5 to 4 feet high, and the mountain side averages around 3 feet. It is a solid mass of flat coral slabs. Around the base the stones are standing on ends to a height of about 1.5 feet. Above this the stones are placed horizontally, one on top of the other. This platform has been there for many years. The exposed surfaces of the stones are weathered and old-looking. Mrs. Barker remembers that around 1900 it was considered an old Hawaiian alter. Jerry Fisher, who drew my attention to the site, says that it is known as a heiau among Europeans. None of the Hawaiians who drove about with me to point out places of interest mentioned this site. It is unlike any Hawaiian platform that I have seen, as it is exceptionally high and has a combination of stones placed vertically and horizontally. Stones are usually either placed vertically, joining what is called an unu, or horizontally, forming a fishing shrine (ko'a). If it were closer to the sea, there would be little hesitation in saying that it was probably a fisherman's alter. It is at least three-quarters of a mile from the shore in a direct line. (McAllister 1933:155).

#### Field Findings

This platform was relocated (Figs. 1 and 2), photographed (fig. 3 and 4), and sketched (Fig. 5). Measurements recorded by McAllister for this feature (16.5 by 10 ft) agree approximately with ours, as do his observations that the long side faces due N and that basal construction is composed of vertically and horizontally oriented stones. The dimensions of the platform by our measurements are a length of 17 ft. (c. 5.2 meters) and a width varying from 9 to 10.5 ft (c. 2.7 to 3.2 meters). McAllister notes the height of the platform on the makai side to be 3.5 to 4 ft (c. 1.0 to 1.2 meters), while our measurement at that side is c. 3 ft (c. .9 meter). Fluctuations in general measurements of the platform are to be expected because of the variable surface produced by the beach limestone cobbles of which the platform is constructed, and because of the uneven articulation of the

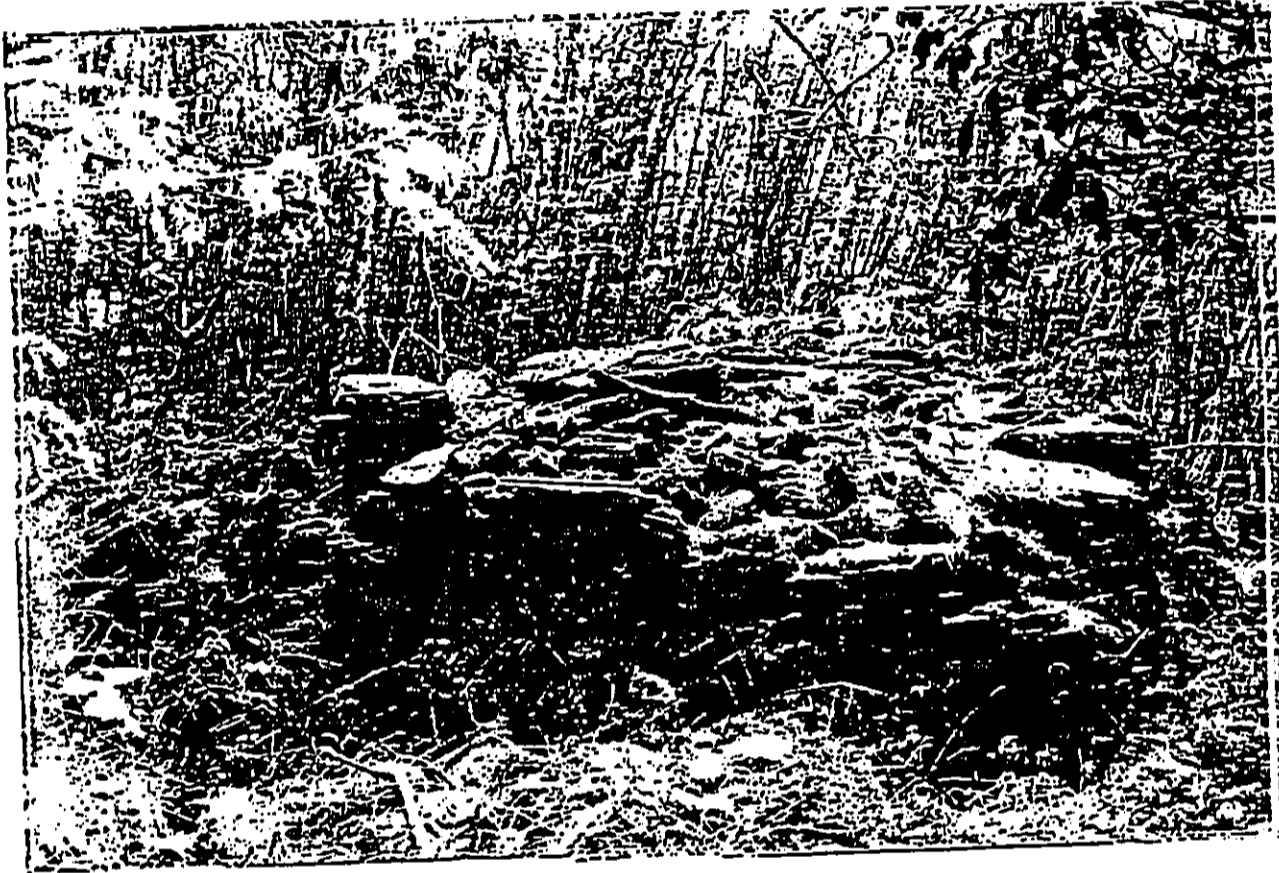


Fig. 3. EAST FACE OF PLATFORM, F5-3.



Fig. 4. PARTIAL VIEW OF NORTH FACE OF PLATFORM, F5-3.

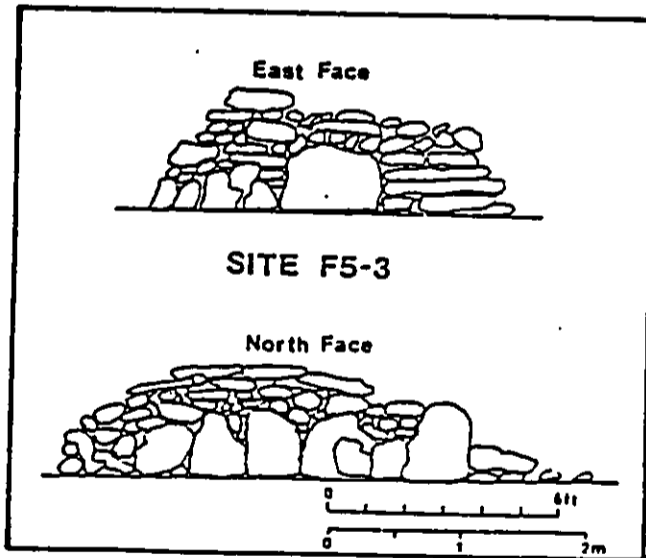


Fig. 5. SKETCHES OF EAST AND NORTH FACES, SITE F5-3.

platform with the ground surface. The stones for the platform were probably procured from either the nearby bluff or from the large outcrop that is the context of nearby rock shelter, SW of the platform. One unique stone at the western edge of the platform surface is of smooth, white coral.

It is possible that disturbance of the platform occurred in the time between McAllister's visit and ours. Such postulated disturbance might account for the discrepancies in measurements made by the two surveys. The W end of the structure, the side nearest the road, appears to have suffered the most extensive disturbance or displacement of stones. That some of this has occurred recently can be inferred from the freshly exposed, light-orange color of several stones on the W end. The undersides of undisturbed, weathered stones on top of the platform are similarly light in color.

Barrere (Ms.) dismantled and tested several small mounds of beach limestone rocks in the Ko'olauloa Housing Project area, but none were found to be significant. These mounds did not exhibit the appearance of selected and carefully placed stones, as does the platform that concerns us here.

Stone platforms in Hawai'i vary in size, material and manner of construction, and function. Cleghorn (Ms.: 3, 8-16) reported a somewhat smaller platform from Site 50-Ma-310-1 on Maui. Beneath this platform was a historic burial. Cozier (1971:9-12, 14-16) reported a stepped platform on Hawai'i at Site 50-Ha-D4-27, which dates from the seventeenth century at the latest. He provided alternative interpretations of this platform's function--as a planting heiau, a religious heiau, or an observation post for agricultural or marine activities (1971:28-29). Of particular interest is Cozier's discussion of the frequent occurrence of coral in the context of religious structures. Chapman (1970-78) also noted that the Hawaiian word for coral, ko'a, also means fishing grounds or fishing shrine, and discussed the presence of coral on or in fishing shrines. The single piece of white coral on Site F5-3 may be a clue to the possible religious function of the site.

Sinoto (Ms.:12, 18, 22) reported several mound structures from the Barbers Point area on O'ahu. These exhibit structural characteristics that are similar to Site F5-3 and are also made of beach limestone (termed coral-line in Sinoto's report). These mounds are generally smaller in area and height than the Site F5-3 platform, and none have yet been tested.

At this time, we cannot with certainty determine the original function of this platform. The single piece of white coral on its upper surface may provide a clue to a possible religious function and may complement the ethnographic tradition of the site as an old Hawaiian altar (see McAllister's description, p.7). Further archaeological investigation might produce evidence on the basis of which the function of this site could be elaborated.

#### Recommendation

On the basis of the ethnographic and comparative archaeological data, this platform may have served as a religious function. Given the nature of the proposed development as an educational complex, and considering the current emphasis in archaeological preservation, we offer the following alternative recommendations in order of priority:

(1) Since archaeological investigation essentially destroys in situ evidence, we suggested that the platform be preserved intact and allowed to remain undisturbed. This might be accomplished by planning construction around the platform area, perhaps allowing it to occupy a respected location in a courtyard among the classrooms. If this alternative were chosen, we would suggest the construction of a low fence to discourage vandalism. This fence should be at least 3 meters from all sides of the platform to allow for a buffer zone of protection for the site. Implementation of this alternative would require archaeological testing of the area where the fence would be installed.

(2) If preservation through protection could not be accommodated within the development plans, the option of preservation through reconstruction should be considered, if archaeological findings warranted the effort. Prior to commencement of any construction activities the platform should be carefully recorded and dismantled. In addition, areas immediately below and adjacent to the structure should be tested. The reconstruction could be accomplished, possibly with the assistance of some of Mr. Sousa's students of Hawaiian history and other interested members of the Kahuku school community, on a convenient site within the school compound. The option of reconstruction might be particularly valuable to the school community, even if it could not be accomplished on the original site of the platform.

(3) The least preferable option would be to salvage and document the archaeological information in the site, with no effort toward reconstruction. While this procedure is irrevocably destructive, it would be adequate to serve the purpose of science.

#### POSSIBLE SITE 1

##### Previous Research

None

##### Field Findings

A very low, roughly rectangular earth-and-cobble mound, about 3.6 meters long and 1.8 meters wide, varies in height from a few inches at the edges to about .3 meter in the central area. This feature is located approximately 20 meters S of the W end of the platform (Site F5-3) (Fig. 2), and is obscured by grass and a few koa-haole trees. This feature is very typical of pre-historic Hawaiian features, and may simply have been created by previous clearing activities associated with sugarcane cultivation.

##### Recommendations

This mound should be reexamined during the next phase of archaeological investigations. While it may be a twentieth century origin, a test trench is needed to elucidate its origin and significance, if any. This trench would measure c. .5 by 3 meters to obtain a N-S cross section of the feature.

## POSSIBLE SITE 2

### Previous Research

None

### Field Findings

Approximately 9 meters SW of possible site 1 is a large outcrop of a beach limestone formation matching the appearance of the Kahuku Point 55-ft shoreline formation in the bluff mauka of the project area. A small rock shelter in the S side of this outcrop faces S, toward the bluff (Figs. 6, 7, and 8). A rock overhang projects about 1 meter out over the shelter opening, which is 1.5 meters high at its highest point and 2.1 meters wide at floor level. The horizontal depth of the shelter is about 1.5 meters at floor level, not including the 1-meter overhang. Several large rocks at the opening of the shelter have recently been used as makeshift seats, judging from the boards that have been positioned over their upper surfaces. The shelter appears to be used intermittently for recreational purpose.

We found no significant artifacts on the shelter floor or on the ground in front of it. However, as noted in the discussion of the Keana Rock Shelter (Site F5-2), such surface finds are unlikely because of the continual accumulation of rock debris falling from the shelter interior and because of the heavy groundcover in general.

Barrera (Ms.) tested a similar but smaller feature (Feature D of Site 1427) in the Ko'olauloa Housing Project; he found no remains of significance.

### Recommendations

Although we encountered no surface evidence of prehistoric use of this small rock shelter, the depositional processes would most certainly have buried such evidence if it exists. This is sufficient reason to warrant a limited testing of the shelter floor, if the site will be impacted by construction. This recommendation is justifiable in view of existing evidence for prehistoric use of other shelters in the Hawaiian Islands.

If archaeological evidence were revealed to document use of the shelter for habitation or other cultural functions, we would most likely recommend several options, generally following the pattern set forth for Site F5-3. If archaeologically significant, this site would also be an excellent feature to incorporate into the plans for the proposed school addition. Without archaeological testing, however, it would be premature to further explore here what the precise recommendations might be.

### SUMMARY

Our investigations have revealed a complex of potential and confirmed archaeological sites that may or may not be related in terms of cultural affiliation.

If this project area is selected as the school site, and assuming that the proposed construction would alter each of the four areas of potential or



Fig. 6. POSSIBLE SITE 2, ROCK SHELTER.

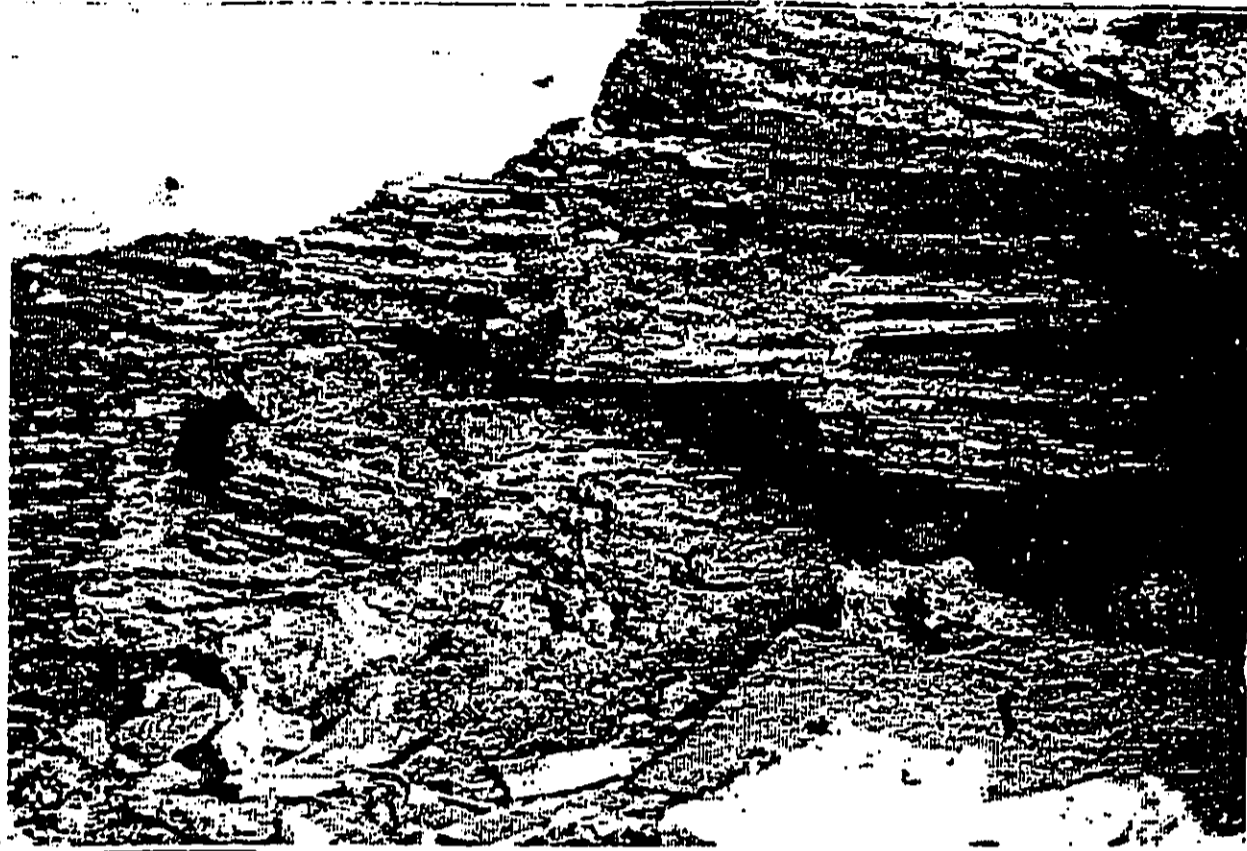


Fig. 7. INTERIOR VIEW, POSSIBLE SITE 2, ROCK SHELTER.

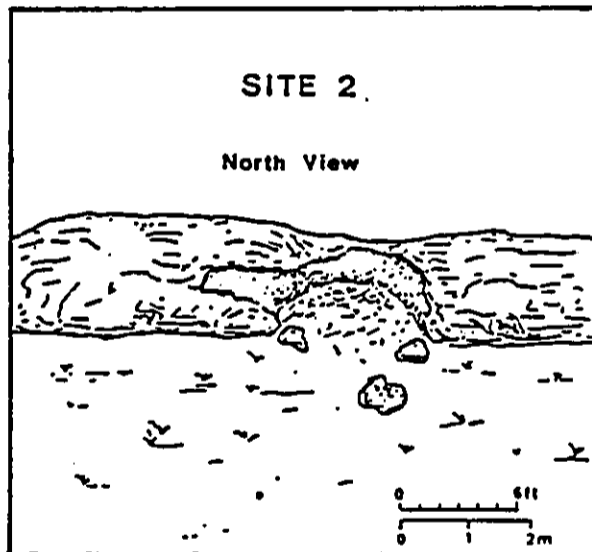


Fig. 8. SKETCH OF POSSIBLE SITE 2.



confirmed archaeological significance, recommendations for further archaeological work are summarized as follows:

Site Oa-F5-2, Keana Rock Shelter: Shelter itself is outside the project boundary. Testing required in slope in front of shelter and in adjacent garden area.

Site Oa-F5-3, Platform: Three options, in order of priority:

- (1) Preservation of the site by not disturbing it. Archaeological testing needed only in area of fence to be built around a buffer zone surrounding the platform.
- (2) Archaeological salvage of the site by complete excavation of the platform and testing of area immediately around it. Reconstruction of the platform in another area of the school compound.
- (3) Archaeological salvage only.

Possible Site 1 and 2: Limited testing required.

Previous sugarcane cultivation activities have undoubtedly disturbed most surface archaeological remains that may exist in this area. However, such activities may not have totally obliterated potential subsurface remains. Therefore, in addition to the above specific recommendations, we propose the general recommendation that an archaeologist be present during the initial topography-altering phase of construction.

We wish to emphasize that these sites compose a potentially rich resource for the Kahuku Elementary and High School community. A unique opportunity exists here for the expansion of the school compound to proceed hand-in-hand with the development of significant cultural resources to the mutual benefit of education and science. The preservation and on-going interpretation of local sites can engender a first-hand appreciation of Hawaiian history and local environments among young people in the formative years of their lives. For example, third and fourth graders could benefit from open-air classes held in the context of authentic archaeological sites. The possibilities for other kinds of educational activities focused around sites are limited only by one's creative imagination.

REFERENCES CITED

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## APPENDIX C

### Master Plan - Electrical

#### Existing Conditions

##### 1. Power

There are four electrical services provided to the campus. Power pole #143 located adjacent to the main entrance on Kamehameha Highway provides two of these services. One service, at 11,500 volts, is routed underground through a series of electrical handholes to a transformer owned by HECO and on to an electrical equipment room, switchroom #17, in a building adjacent to the Community Library. This service, for the library building only, is distributed at 120/208 volts to air conditioning equipment and various panels in the library.

Another service, also from pole #143 at 11,500 volts and via a series of electrical handholes, is routed to a main electrical switchroom adjacent to the music building. Power is supplied at 480 volts three-phase from a HECO owned transformer in this building and a main switchboard to various distribution centers around the campus where it is reduced to 120 volts single-phase utilization voltage.

The main electrical switchroom also contains the electrical meters for this service, a Simplex fire alarm control panel, a Simplex program generator for the clock and bell system, a telephone cabinet, and several lightning contractors for the track and field lights.

A third service, at 120/208 volts three-phase, is provided from a power pole behind Building N to Building N and, through HHG #13, to Building G. This service will be eliminated in Increment #3 so that the clock and bell system will work in Building N and Building G.

A fourth service, at 120/240 volts single-phase, is provided from a pole behind P-9 to the building. This service will be eliminated in Increment #4 when these classrooms are removed.

With few exceptions, the existing electrical equipment is in good condition. There is, however, considerable evidence of rusting on the main disconnect switch for the library A/C condensing unit and on distribution center #2.

Many of the concrete handhole covers are broken into several pieces and should be replaced.

2. Fire Alarm

The fire alarm system consists of a Simplex control panel in the main switchroom and a series of manual pull stations and alarm bells throughout the campus. Wiring between all locations is underground via a series of handholes and pull boxes, usually as part of a group of power and telephone handholes. Extra conduit space and empty conduits have been provided in most locations for future expansion.

3. Telephone

Most of major electrical equipment rooms also contain a telephone junction box. Some of the major circuits are underground, but there is still a considerable amount of overhead telephone wiring. This should be routed underground in future renovation work.

4. Master Clock/Program Bell System

The master clock and program bell control unit in the main switchroom regulates the clocks and bells throughout the campus by sending signal over the power wiring. All buildings connected to the main switchboard have this capability. Future incremental additions of buildings to this electrical service will add this feature to those buildings.

5. Television

A TV junction box exists in the kitchen electrical equipment room, but there is no master CCTV system. This can be accommodated in future work using the existing telephone underground ductwork and handhole system.

6. P.A. System

There is no campus P.A. system. Wiring can be easily accommodated in the future using the existing and future telephone ductwork and handhole system.

## Electrical Incremental Plans

### Increment #1

Disconnect electrical and telephon services to buildings S9, P-25, P-26. Reconnect services to relocated P-25 and P-26 as indicated on drawings. Provide new service from DC-3 to new building Y-1 and Y-2 per drawings. Provide signal and comm circuits to these new buildings from HHG#6. Provide signal and comm circuits to P-25 and P-26 from HHG#17.

### Increment #2

Disconnect electrical and other services from P-11 to P-17 for removal and relocations of these buildings. Provide new service to the relocated as shown on drawings. Provide new service to new building A as shown on drawings. Extend signal and comm circuits from HHG#11 to building A.

### Increment #3

Remove service from pole behind Building N. Tap those feeder conductors to existing service in HHG#12. Provide new service from HHG#20 to new Building B, G, and N.

Provide two 20 amp circuit from existing panel 2A in Building T to lights and outlets in new Building T1. Extend signal and comm circuits from Building T to Building T1.

### Increment #4

Disconnect power from P-9 and arrange for HECO to discontinue and remove electrical service (meter #346160). Disconnect and remove wiring back to source panels from P-5 - P-8, P-10. Make arrangements to relocate power pole adjacent to P-6.

Disconnect power to P-22 - P-24. These buildings to be removed from site. Provide lighting for new parking areas.

### Increment #5

Provide lighting for new parking area.

APPENDIX D

EIS CONSULTATION PHASE COMMENTS AND RESPONSES

<u>ADDRESSEE</u>	<u>DATE</u>	<u>DAGS Response</u>
<u>State Legislators</u>		
o State Senator Gerald Hagino	None	N.A.
o State Senator Charles Toguchi	None	N.A.
o State Rep. Joseph Leong	None	N.A.
<u>City Council</u>		
o Councilperson Randall Iwase	None	N.A.
<u>Federal Agencies</u>		
o Corps of Engineers	5/12/86	Not Req'd
o Dept. of the Interior Fish & Wildlife Services	6/5/86	7/1/86
<u>State Agencies</u>		
o Office of Environmental Quality Control	6/4/86	Not Req'd
o Dept. of Agriculture	6/6/86	Not Req'd
o Dept. of Education	5/19/86	Not Req'd
o Dept. of Health	6/12/86	6/20/86
o Dept. of Land & Natural Resources	None	N.A.
o Dept. of Transportation	6/9/86	7/10/86
o UH Environmental Center	None	N.A.
<u>City &amp; County Agencies</u>		
o Board of Water Supply	6/4/86	Not Req'd
o Building Department	5/28/86	Not Req'd
o Fire Department	5/23/86	Not Req'd
o Dept. of General Planning	5/27/86	6/27/86
o Dept. of Housing & Community Development	5/23/86	5/30/86
o Dept. of Land Utilization	6/9/86	7/01/86
o Managing Director	None	N.A.
o Dept. of Parks & Public Recreation	None	N.A.
o Police Dept.	None	N.A.
o Dept. of Public Works	5/19/86	7/10/86
o Dept. of Transportation Services	5/27/86	7/08/86

<u>ADDRESSEE</u>	<u>DATE</u>	<u>DAGS Response</u>
<u>Private Organizations</u>		
o Campbell Estate	5/16/86	6/26/86
o Hawaiian Electric	6/05/86	Not Req'd
o Life of the Land	None	N.A.
o Sierra Club, Hawaii Chapter	None	N.A.
o Hawaiian Telephone	5/23/86	Not Req'd
<u>Public Organizations</u>		
o Kahuku Community Association	5/22/86	6/26/86
o Kahuku Elementary School PTA	None	N.A.
o Kahuku High School PTA	None	N.A.
o Kahuku Housing Corporation	None	N.A.
o Kahuku Village Association	None	N.A.
o Koolauloa Neighborhood Board No.28	None	N.A.



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
77 BATTERY WALKWAY BLDG

May 15, 1986

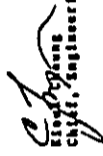
Mr. Nideo Murakami, Director  
Department of Accounting and General Services  
P.O. Box 119  
Honolulu, Hawaii 96810

Dear Mr. Murakami:

Thank you for the opportunity to review and comment on the Kahuku High and Elementary School Master Plan GIS Consultation Phase, Kahuku, Oahu, Hawaii. The following comments are offered:

- a. A Department of the Army permit is not required.
- b. The flood hazards have been addressed on pages 33 and 34. The project is located in Zone C, area of minimal flooding.

Sincerely,

  
King P. Young  
Chief, Engineering Division





United States Department of the Interior

FISH AND WILDLIFE SERVICE  
110 ALA MOANA BOULEVARD  
P. O. BOX 1115  
HONOLULU, HAWAII 96810

ES  
Room 6307  
JUN 4 1986

Mr. Midao Murakami, Comptroller  
State Department of Accounting  
and General Services  
P.O. Box 115  
Honolulu, Hawaii 96810

Re: Kahuku High and Elementary School Master Plan  
EIS Consultation Phase

Dear Mr. Murakami:

We have reviewed the referenced material and recommend that the  
Draft Environmental Impact Statement discuss impacts of site  
stormwater runoff and drainage on the nearby James N. Campbell  
National Wildlife Refuge.

We appreciate this opportunity to comment.

Sincerely yours,

*Ernest Kosaka*

Ernest Kosaka  
Project Leader  
Office of Environmental Services

cc: NMFS - WFFO  
BDFW  
EDAR  
EPA, San Francisco



Save Energy and You Save America!

JUL 1 1986

Mr. Ernest Kosaka, Project Leader  
Office of Environmental Services  
Fish and Wildlife Service  
U.S. Department of the Interior  
P. O. Box 50167  
Honolulu, Hawaii 96850

Dear Mr. Kosaka:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

Thank you for your letter of June 4, 1986 relating to  
the subject project. We offer the following responses  
regarding the impact of the elementary school's storm runoff  
on the James N. Campbell National Refuge:

1. The existing City and County drainage system was  
designed to accommodate approximately 50% of the  
elementary school's runoff.
2. The other portion of the elementary school's  
runoff will be disposed of by dry wells and a  
retention basin which will be on a parcel to be  
acquired from Campbell Estate. This flow should  
not have any adverse impact on the Wildlife  
Refuge.

If you have any questions, please have your staff  
contact Mr. Gedric Takamoto of the Planning Branch at  
568-5160.

Very truly yours,

*T. Tomiyama*

TEUARE TOMIYAMA  
State Public Works Engineer

CT:jas



LETTER OF TRANSMITTAL

LETTER OF TRANSMITTAL  
DATE: 6/3/86  
PAGE: 1

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
645 South King Street, #113  
Honolulu, Hawaii, 96810

June 3, 1986

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

Dear Mr. Murakami:

Subject: Kahuku High and Elementary School Master Plan  
Preparation Notice.

We have reviewed your environmental assessment for the  
Kahuku High and Elementary School Master Plan and have no  
comments at the present time. Thank you for consulting us  
regarding this project.

Sincerely,

Letitia S. Uyehara  
Director

GEORGE B. ARNTSON  
GOVERNOR



JACK K. SUWA  
CHAIRMAN, BOARD OF AGRICULTURE  
DELAINE S. PETERSON  
SECRETARY TO THE COMMISSIONER

State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1125 Kalia Drive  
Honolulu, Hawaii 96813-2112  
June 5, 1986

Manoa, Hawaii  
P. O. Box 21119  
Honolulu, Hawaii 96822-0119

Mr. Hideo Murakami  
June 5, 1986  
Page -2-

The proposed project will not adversely affect the agricultural resources of the area nor the plans, programs, and activities of the Department of Agriculture.

**MEMORANDUM**

To: Mr. Hideo Murakami  
State Comptroller  
Department of Accounting and General Services

Subject: Kahuku High and Elementary School Master Plan  
Environmental Impact Statement (EIS) Consultation Phase; TRM; 3-6-86; 11, por. 12 and 19  
Kahuku, Oahu; 5 acres

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

cc: OZQC

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

Our comments pertain to the proposed expansion site to the south and west of the existing school facilities.

According to our records, we submitted comments to you on an EIS for the Kahuku Elementary School Site Selection on January 16, 1980. Among the alternative sites proposed for the elementary school was a 3-acre site which appears to be the same area as the subject site. This site avoided existing agricultural activities and received our recommendation as being the most suitable alternative.

According to the Soil Map (EIS, Figure 17, page 31), the subject site is principally composed of coral outcrop (C2) which has little agricultural utility. The remainder of the site is composed of medium silty clay (L2B, L2C) with 3 to 13 percent slopes which is used for sugarcane, truck crops, pasture and pineapple. The soil capability classifications for L2B and L2C are 1E and 1E2, respectively (soils with moderate to severe erosion hazard if cultivated and not protected).

Small portions of the subject site appear to be classified "Prime" and "Other Important" according to the Agricultural Lands of Importance to the State of Hawaii (ALISH) system.

The subject site has Land Study Bureau Overall Productivity Ratings of E241 and E215. By this method of classification, the subject area has good productivity potential for most agricultural uses.

MADE & PRINTED IN HAWAII



STATE OF HAWAII  
DEPARTMENT OF EDUCATION

OFFICE OF THE SUPERINTENDENT

May 14, 1966

MEMO TO: Honorable Hideo Murakami, State Comptroller  
Honorable Accounting & General Services  
FROM: Francis W. Matsumoto, Superintendent  
Department of Education  
SUBJECT: Kahuku High, Intermediate, and Elementary School  
Environmental Impact Statement

We concur with the April, 1966 Environmental Impact Statement as presented.

FWM:HD:J

cc F. Honda, DES  
K. Takata, Winward Dist.

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 2009  
HONOLULU, HAWAII 96820

June 5, 1986

**MEMORANDUM**

To: The Honorable Mideo Murakami, State Comptroller  
Department of Accounting & General Services

From: Director of Health

Subject: Kahuku High and Elementary School Master Plan EIS Consultation Phase

Thank you for allowing us to comment on the subject environmental impact statement consultation phase document. We provide the following noise comments:

1. The Environmental Impact Statement addresses probable noise impacts on classroom activities from fire station sirens and fire helicopters taking off and landing. Also included are comments regarding noise generated by school children affecting residences in the Koolauloa Housing Project. These concerns must be addressed in the final EIS.
2. Activities associated with the construction phase must comply with the provisions of Title 11, Administrative Rules Chapter 43, Community Noise Control for Oahu.
  - a. The contractor must obtain a noise permit if the noise levels from the construction activities are expected to exceed the allowable levels of the regulations.
  - b. Construction equipment and on-site vehicles requiring an exhaust of gas or air must be equipped with mufflers.
  - c. The contractor must comply with the conditional use of the permit as specified in the regulations and conditions issued with the permit.
3. Traffic noise from heavy vehicles travelling to and from the construction site must be minimized near existing residential areas and must comply with the provisions of Title 11, Administrative Rules Chapter 42, Vehicular Noise Control for Oahu.

*Leslie S. Matsubara*  
LESLIE S. MATSUBARA



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
P. O. BOX 2009  
HONOLULU, HAWAII 96820

JUN 20 1986

Honorable Leslie S. Matsubara  
Director  
Department of Health  
State of Hawaii  
Honolulu, Hawaii

Dear Mr. Matsubara:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

Thank you for your June 5, 1986 comments. Our responses to your comments are as follows:

1. The noise impact from fire station sirens and flying helicopters on the school, and the impact of school noise on the Koolauloa Housing Project will be addressed in the EIS.
2. The EIS will be revised to indicate that activities during construction must comply with Title 11, Administrative Rules, Chapter 43, Community Noise Control for Oahu.
3. The EIS will be revised to indicate that traffic noise from heavy vehicles travelling to and from the site must comply with Title 11, Chapter 42, Vehicular Noise Control for Oahu.

Should there be any questions, please have your staff contact Mr. Gedric Takamoto of the Public Works Division at 548-5160.

Very truly yours,  
*Gedric Takamoto*  
GEDRIC TAKAMOTO  
State Comptroller

STATE OF HAWAII  
 DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
 OFFICE OF THE COMPTROLLER

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF THE DIRECTOR

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF THE DIRECTOR

STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 OFFICE OF THE DIRECTOR

JUN 10 1986

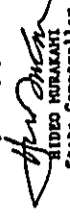
Honorable Wayne Yamasaki, Director  
 Department of Transportation  
 State of Hawaii  
 Honolulu, Hawaii

Dear Mr. Yamasaki:  
 Subject: Kahuku High and Elementary School  
 EIS Consultation Phase

Thank you for your comments of June 5, 1986 relating to the subject project. We provide the following responses:

1. Traffic Study - We will be meeting with your department to discuss the requested traffic study when the first increment design for the school is initiated.
2. Long Range Plans - It is our understanding that the DOT has no current written policies, reports, or completed plans on highway improvements in this area.
- 3a. Pedestrian Facilities - We concur that adequate pedestrian facilities should be provided on Kamehameha Highway. However, we feel they should be provided by another government agency since pedestrian facilities within the State and County roadway right-of-way are not the DOT's responsibility.
- 3b. Coordination - All work within the State Highway E.O.W. will be coordinated with the State Highway Division.

Should you have any questions, please have your staff contact Mr. Cedric Takamoto of the Planning Branch at extension 3460.

Very truly yours,  
  
 AIDEO MURAKAMI  
 State Comptroller

MEMORANDUM  
 TO: The Honorable Aideo Murakami, State Comptroller  
 Department of Accounting and General Services

FROM: Director of Transportation  
 SUBJECT: KAHUKU HIGH AND ELEMENTARY SCHOOL MASTER PLAN  
 EIS CONSULTATION PHASE

We have the following comments on the subject EIS Consultation Phase report.

In combination with other developments in the area, the possible effect of Kamehameha Highway intersection may become overloaded and necessitate improvements. The report recognizes improvements such as channelization, storage lanes, and signalization may be required. We therefore request that further traffic studies of this intersection be conducted and submitted to us for review. All improvements identified should be made part of the project.

The last paragraph under item 2 on page 43 is an incorrect statement. The State DOT has long range plans to improve this area and recommends a minimum 20' setback from the right-of-way lines on both sides of Kamehameha Highway.

We also feel adequate pedestrian facilities should be provided on Kamehameha Highway. In addition, all setbacks along Kamehameha Highway, access requirements, and work required within the State highway right-of-way must be coordinated with our Highways Division for review and approval.

Please contact us again should you have any questions.

  
 Wayne Yamasaki

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
SOUTH BERTHMAN STREET  
HONOLULU, HAWAII 96810



May 23, 1986

FRANK F. ASH, Mayor  
ERNEST A. BARTER, Chairman  
WALTER J. ADLER, Vice Chairman  
DONALD S. COHN  
ROBERT M. HARRIS  
RUSSELL S. SMITH, JR.  
WAYNE J. TAMURA  
KAZU HAYASHIDA  
Manager and Chief Engineer

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

Dear Mr. Murakami:

Subject: Your Letter of May 7, 1986, on the Kahuku High and  
Elementary School Water Plan EIS Consultation Phase

We are still reviewing the text of your environmental document  
and will be sending you our reply by June 15, 1986.

If you have any questions, please contact Lawrence Whang at  
527-6138.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer

BOARD OF WATER SUPPLY  
CITY AND COUNTY OF HONOLULU  
SOUTH BERTHMAN STREET  
HONOLULU, HAWAII 96810



June 2, 1986

FRANK F. ASH, Mayor  
ERNEST A. BARTER, Chairman  
WALTER J. ADLER, Vice Chairman  
DONALD S. COHN  
ROBERT M. HARRIS  
RUSSELL S. SMITH, JR.  
WAYNE J. TAMURA  
KAZU HAYASHIDA  
Manager and Chief Engineer

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

Dear Mr. Murakami:

Subject: Your Letter of May 7, 1986 on the Kahuku High,  
Intermediate, and elementary school Water Plan  
Environmental Impact Statement Consultation Phase

Thank you for allowing us to review the environmental document  
for the proposed elementary school and proposed improvements to  
the Kahuku High and Intermediate school.

A separate lateral and meter will be required for the new  
elementary school. The installation should be coordinated with  
our Customer Service Division.

If you have any questions, please contact Lawrence Whang at  
527-6138.

Very truly yours,

KAZU HAYASHIDA  
Manager and Chief Engineer





FIREFIGHTERS  
CITY AND COUNTY OF HONOLULU  
1907  
HONOLULU, HAWAII



FRANK E. JACOBSON  
FIRE CHIEF

FRANK E. JACOBSON  
FIRE CHIEF

May 21, 1966

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

Attention: Cedric Takamoto

Dear Mr. Murakami:

Subject: Kahala High And Elementary School  
Master Plan EIS Consultation Phase

We have reviewed the EIS for the above subject and make the following comments:

1. Secondary fire department service is provided by the Sunset Beach and Hauula Fire Stations.
2. Future plans include a fire station housing five on duty personnel manning an engine fire apparatus in the Kawela Bay area. Actual construction of this facility is contingent on amount of proposed resort development.
3. New construction shall meet provisions of existing fire and Building Codes.

Thank you for the opportunity to comment on the proposed development plan. Should you have any questions, please contact Battalion Chief Kenneth Word of our Administrative Services Bureau at 943-3838.

Very truly yours,

  
FRANK E. JACOBSON  
Fire Chief

FEJ:KWI:lm

DEPARTMENT OF GENERAL PLANNING  
CITY AND COUNTY OF HONOLULU  
400 SOUTH KING STREET  
HONOLULU, HAWAII 96813



Honorable Hideo Murakami  
May 22, 1986  
Page 2

APR 22 1986  
HONOLULU, HAWAII

JB/DGP 5/86-8660

May 22, 1986

Honorable Hideo Murakami, Comptroller  
Department of Accounting and  
General Services  
State of Hawaii  
1151 Punchbowl Street  
Honolulu, Hawaii 96813

Attention: Mr. Teuane Tomiaga  
Dear Mr. Murakami:

New Kaburu Elementary School Facility  
GIS Consultation Phase  
YOUR LETTER DATED MAY 7, 1986--REF. NO. 191172-A

We have the following comments for your consideration.

1. Implementation of the proposed elementary school facility on approximately 6.1 acres of land adjoining the existing Kaburu high/elementary school complex is generally in accord with the Development Plan, public facilities (DP/PP) Map for the Koolauloa District, and the functions of the DP/PP Maps is to provide information on future public and private public facility improvements.

The PP Map shows both an elementary school site and a park site in the general vicinity of the proposed project--site undetermined, within 6 years. Accordingly, this conformity to the DP/PP should be indicated on page 35 (l.c.) of the dGIS.

2. Page 28 of the document which states:

"The improvements planned for the Kaburu Intermediate and High facilities do NOT conflict with any State or County land use plans or policies. (emphasis ours.)"

"The land use proposed for the elementary facilities site is consistent with both State and County land use plans." (Underlining added.)

is not totally accurate.

Under the adopted Development Plan (DP) Land Use Map for Koolauloa, the proposed development site is designated for Residential use. Because the existing residential zoning permits schools as a principal use and the proposed use is indicated on the Public Facilities Map, the development of the school may proceed. When construction of the school begins, the Residential use designation on the Development Plan (DP) Land Use Map should be amended to reflect the new Public Facilities use. At the same time the DP/PP Map would be amended to delete the informational symbol.

Page 31 (V.) of the dGIS thus should be modified to indicate that the redesignation of the land use of the site from Residential to Public Facility use is an appropriate future procedure.

We will initiate a DP amendment upon receipt of an application from the State. This should be submitted after the State has begun construction of the proposed school.

If you have any questions on having to amend the DP Land Use Map, you may call Keith Kurahashi of my staff at 537-6051.

Properties involved in this project are identified by Tax Map Key 5-8-06: 11 and 5-8-06: 131 through 146, inclusive. This information should be included in the dGIS. The PP Map shows 2 proposed park sites in the general vicinity (see 1 above.) It is our understanding that the property was originally acquired by the City for a park site. The GIS should discuss how park needs will be met.

Honorable Hideo Murakami  
May 22, 1986  
Page 3

4. It is our understanding that both the State DOR and the City Department of Parks and Recreation have completed their negotiations on the sale/transfer of the lands needed for the elementary school facility which includes 18 lots that were originally a part of the Koshuue Housing development. Details of the sale/transfer should be discussed in the GIS.

We also understand that City Council has not yet given its approval on selling the City-owned property to the State. Page 51 (V.) of the dGIS therefore should be corrected to additionally indicate that Council's approval will be required.

5. No mention is made in the dGIS as to the size and capacity of the retention basin which is being proposed in the vicinity of the gymnasium complex and fronting Kanabasha Highway.

Although drywells scattered throughout the campus provide the primary source of disposing or handling stormwater runoff, an under-designed retention basin could pose some problems, especially during periods of unusually intensive rain storms. Because there is no outlet to dispose of any overflow from the retention basin, there could be "ponding" and "flooding" along this stretch of Kanabasha Highway. This could be hazardous to motorists.

Proper landscaping along the perimeter of the retention basin facing the Highway with low shrubbery and/or plants to minimize any adverse visual effects from the roadway would seem appropriate.

6. The dGIS also makes no mention as to how the drywells will be maintained. Without proper maintenance of these drywells, potential problems of directing surface runoff onto the school campus could be aggravated.

Has the State considered the alternative of developing an injection well at a suitable site on the campus?

7. Page 37 of the report should be corrected to indicate that the proposed development site is designated for Residential use under the adopted DP for the area, and not as "Elementary Facility" as presently depicted in Figure 21.

Honorable Hideo Murakami  
May 22, 1986  
Page 4

8. A September 12, 1985 publication by the State Department of Education, showed Kabuku Elementary School with a student enrollment totalling 370 attending Grades 1-6 in the Fall of 1985.

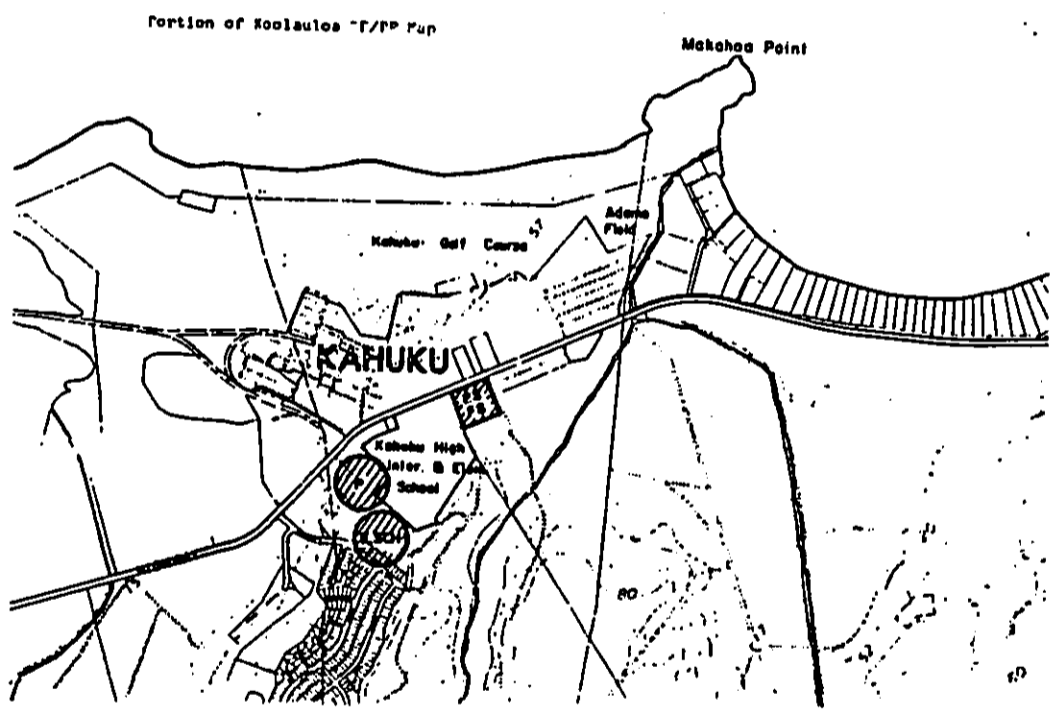
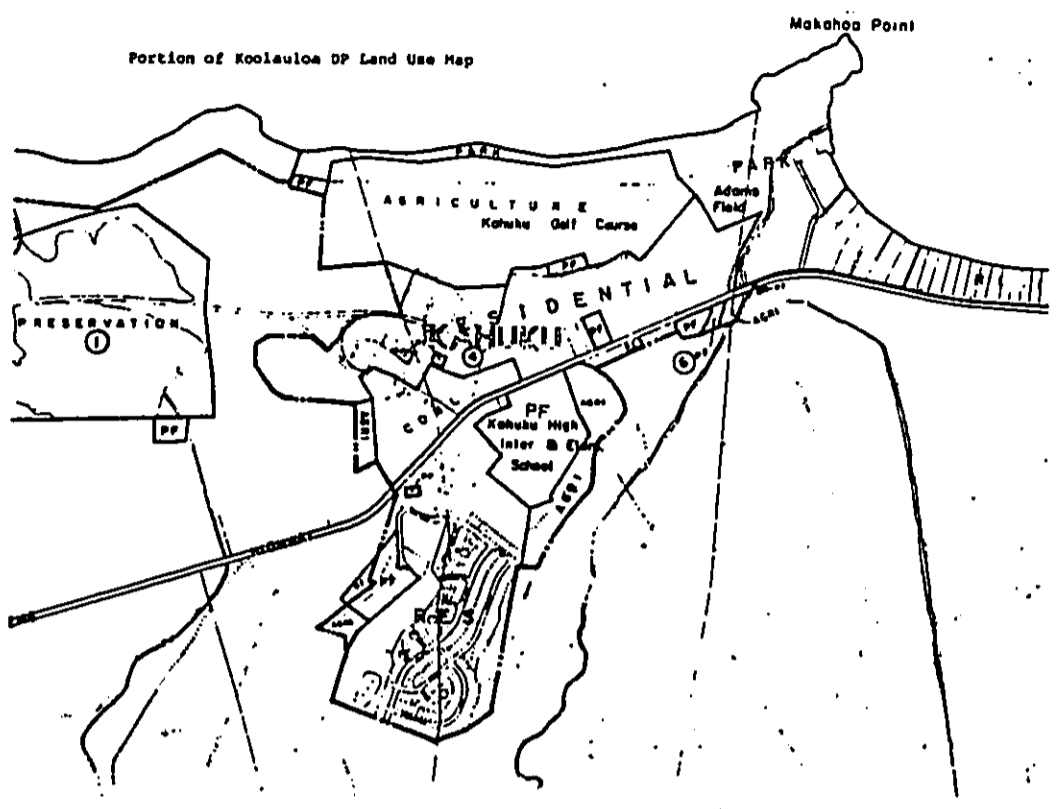
What percentage or number of these students registered in Grades 1-6 are expected to: Walk to and from school, use the school or municipal buses, or be taken to school via automobile?

If a sizeable or appreciable number of the youngsters are transported to school by car, some monitoring of the traffic flow at Paalala Street and the parking lot, especially when the new facility is first put into use, may be appropriate.

Sincerely,

*Donald A. Clegg*  
DONALD A. CLEGG  
Chief Planning Officer

cc: DEPC



Park have been worked out with the County Department of Parks and Recreation to the benefit of the school and park.

4. The City and County Department of Housing and Community Development, in preliminary discussions with the Department of Education, has agreed to sell the school site to the State. However, the actual acquisition will be processed formally by the County Department of Finance and the State Department of Land and Natural Resources. The draft EIS will be revised to indicate that the City Council's approval will be requested for the preliminary agreement.
- 5a. Retention Basin - The retention basin will be approximately one (1) acre in area and of sufficient depth to service the 30-year flood.
- 5b. Flooding - Because the low areas on campus are 1 - 2 feet below the road, the retention basin and campus would have to be flooded before Kamehameha Highway will be affected.
- 5c. Landscaping - The use of landscaping or berwing to minimize any adverse visual effects of the basin from Kamehameha Highway will be considered during the design of the basin.
- 6a. Drywell Maintenance - Drywells receive no regular maintenance but can be cleaned out periodically as required. After a period of time, performance may diminish to the point where a new drywell must be constructed. However, the use of drywells at the school has been utilized with satisfactory results for a sufficiently long period to constitute a workable system. Injection wells require a more sophisticated and costlier system to construct and operate because the runoff would need to be filtered before injection to keep from damaging the pumps or plugging the wells.
7. Figure 21 - The EIS will be revised to indicate that the DP has to be revised from residential to elementary facility use.
8. Elementary Student Transportation - Very few elementary students are bused since over 90% of them live within 1 mile of the school. Use of cars appears to be low. However, if car use increases to a significant degree, some monitoring

JUN 27 536

Mr. Donald A. Clegg  
Chief, Planning Officer  
Department of Central Planning  
City and County of Honolulu  
Honolulu Municipal Building  
Honolulu, Hawaii

Dear Mr. Clegg:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

Thank you for your May 22, 1986 comments on the subject document. Our responses to your comments are as follows:

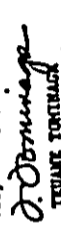
1. City and County DP/PP Map - The conformity of the Proposed facility to the DP/PP Maps will be noted in the EIS.
2. City and County DP/UD Maps - The EIS will be revised to indicate:
  - a. The proposed elementary school site is designated for residential use but the zoning permits its use for a school
  - b. The redesignation of the land use from Residential to Public Facility use is an appropriate future procedure
  - c. A DP amendment will be initiated after the proposed school site is approved by the Governor
- 3a. Tax Map Key - Tax map keys for the properties involved will be identified in the draft EIS.
- 3b. Park Needs - The proposed Kahuku District Park will be located adjacent to the school. Boundary adjustments between the school and the District

Honorable Donald A. Clegg                      Lecr. No. (2)1710.6  
Page 3

of the traffic flow at the parking lot off  
Punalua Street could be done.

Should there be any questions, please have your staff  
contact Mr. Cedric Takamoto of the Planning Branch at  
548-3460.

Very truly yours,

  
TERENCE TOMIMACHI  
State Public Works Engineer

CT:jes

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
CITY AND COUNTY OF HONOLULU



May 22, 1986

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

Dear Mr. Murakami:

Subject: Environmental Impact Statement for the Kahuku High,  
Intermediate and Elementary Schools  
Thank you for the opportunity to review/comment on the draft EIS report  
for the proposed school facilities in Kahuku, Oahu.

As you are aware, the City's Development Plan for Kohala designates  
the proposed elementary facility site as residential and the zoning  
Ordinance for the proposed site is R-1.5. The Development Plan  
Development Plan is required to re-designate it to public facilities use  
(Ordinance No. 81-9, dated May 10, 1983). However, the development of  
an elementary facility is permitted in an R-6 residential zone.

For your information, the Kohala housing project is located adjacent  
to the proposed school facilities. The project is a planned 300-lot  
residential subdivision including a district park closely adjacent to the  
Kahuku school campus. The project is currently under construction and  
distributed throughout the school grounds. The development of a new  
school facility will not only improve the social environment of the  
students but also would improve traffic safety because the facility will  
no longer be located along a major highway.

We will retain the EIS report for our records.

Sincerely,  
  
ALVIN K. H. PANG

MAY 30 1986

Mr. Alvin K. H. Pang, Director  
Department of Housing and  
Community Development  
City and County of Honolulu  
Honolulu, Hawaii

Dear Mr. Pang:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

Thank you for your May 22, 1986 comments on the subject  
document.

We will initiate a development plan amendment for a change  
from residential to public use after funds for acquisition of the  
site are released.

Should there be any questions, please have your staff  
contact Mr. Cedric Takamoto of the Planning Branch at 348-3460.

Very truly yours,

TERUAKI TOMIMAGA  
State Public Works Engineer

GT:jac

DEPARTMENT OF LAND UTILIZATION  
CITY AND COUNTY OF HONOLULU  
100 SOUTH KING STREET  
HONOLULU, HAWAII 96813



June 6, 1985

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

Kahuku High, Intermediate and Elementary School  
Environmental Impact Statement Consultation Phase

The Department of Land Utilization (DLU) has reviewed the subject document and has the following comments to offer:

1. The tax map keys of the proposed expansion site as well as those of the three alternate sites should be given at the beginning. The first and only reference to tax map keys is given on Page 29 for the proposed site. Additionally, the area of the proposed expansion should be given as well.
2. The archaeological reconnaissance survey of the project site conducted by the Bishop Museum made recommendations for further archaeological work on the four sites (not three as stated on Page 30) (identified as being of potential or confirmed archaeological significance. Will these recommendations be acted upon and if so, which option has been selected for Site 02-25-37
3. The tax map keys and areas of the parcels to be purchased from Campbell Estate for the retention basin and parking should be stated. Further, these parcels should be consolidated with Tax Map Key 5-6-6-3, the parcel on which the existing school

Mr. Mideo Murakami, State Comptroller  
Page 2

is situated. This is particularly important in the case of the parcel to be used for parking, since parking is not allowed as a principal use. If the parcel is not consolidated, parking could not be permitted.

4. The size and the capacity of the proposed retention basin should be discussed. The likelihood of overflow and provisions for dealing with it should be addressed as well.

Thank you for this opportunity to comment. We look forward to reviewing the Draft EIS.

Very truly yours,

*Jonatha Chase*  
JOHN A. WHALEN  
Director of Land Utilization

JRW:sl  
02108



Mr. John Whalen  
Page 2

Ltr. No. (P)1721.6

Should you have any questions please contact Mr. Cedric Takamoto of the Planning Branch at 348-3460.

Very truly yours,

*D. Dominguez*

TEUANE TORIBUAGA  
State Public Works Engineer

CT:jss

JUL 1 1986

Mr. John Whalen, Director  
Department of Land Utilization  
City and County of Honolulu  
650 South King Street  
Honolulu, Hawaii 96813

Dear Mr. Whalen:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

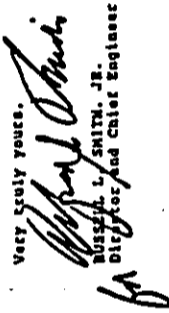
Thank you for your comments of June 6, 1986 relating to the subject project. We offer the following responses:

1. Tax Map Keys and Areas: Identification of the alternate sites, by tax map key, will be included at the front of the EIS. The area of the proposed expansion will also be given.
2. Archaeological Sites: Reference is made for only those sites because the fourth, site P3-2, is located outside of the project area. One of the three recommendations made by the State Historic Sites Section of the Department of Land and Natural Resources for the archaeological sites will be selected during the design phase.
3. Consolidation: The tax map keys and areas of the parcels to be purchased from Campbell Estate for the retention basin and parking will be given. These parcels will be consolidated with the existing school parcel.
4. The retention basin is designed to handle excess flow from the dry site. The retention basin will be approximately 1 acre in size and of sufficient depth to service the 50-year flood.

May 7, 1958, regarding the subject project. Our comments are as follows:

1. Existing sewerage facilities are available and adequate to serve the new elementary school facility.
2. The 42-inch drain shown on Pualalea Street (Figures 10 and 17) was not designed to drain the school area. A drainage report should be submitted to the Drainage Section, Division of Engineering, for review and approval.

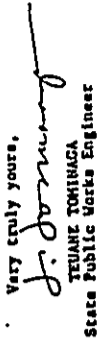
Very truly yours,

  
RUSSELL L. SMITH, JR.  
Director and Chief Engineer

2. Drainage. It is our understanding that the Koolauloa Housing Project drainage system was designed to accommodate about 8.2 cfs from residences originally planned for the site. The runoff from the school exceeding this quantity will be accommodated by a new drainage system. A drainage report will be prepared during the first increment design of the school.

If you have any questions, please have your staff contact Mr. Cedric Takamoto of the Planning Branch at 549-3660.

Very truly yours,

  
TEUANE TOMIHAGA  
State Public Works Engineer

CT:jes

DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**  
 HONOLULU MUNICIPAL BUILDING  
 215 SOUTH KING STREET  
 HONOLULU, HAWAII 96813



78-2431  
 PL 1-0331

May 20, 1986

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

Dear Mr. Murakami:

Subject: Kahuku High and Elementary School Master Plan  
EIS Consultation Phase

This is in response to your letter of May 7, 1986.

We have reviewed your consultation phase document and recommend that a traffic study be conducted for the project. The study should address the traffic impact of the project on the affected roadways and the necessary improvements needed to mitigate this impact.

We appreciate this opportunity to review and comment on the project.

Sincerely,

*John E. Hirtzen*  
 JOHN E. HIRTZEN



STATE OF HAWAII  
 DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
 DIVISION OF PUBLIC WORKS  
 100 SOUTH KING STREET  
 HONOLULU, HAWAII 96813

JUL 8 1986

Mr. John E. Hirtzen, Director  
 Department of Transportation Services  
 City and County of Honolulu  
 638 South King Street  
 Honolulu, Hawaii 96813

Dear Mr. Hirtzen:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

Thank you for your May 20, 1986 comments relating to the subject project.

We will be discussing the school's development plan and the traffic study with the State Department of Transportation to determine the need for any mitigative measures that would be required along Kamehameha Highway fronting the High School and at the intersection of Pualea Street and Kamehameha Highway.

If you have any questions, please have your staff contact Mr. Cedric Takemoto of the Planning Branch at 348-5460.

Very truly yours,

*Tejane Tomihaga*  
 TEJANE TOMIHAGA  
 State Public Works Engineer

CT:jes

THE ESTATE OF JAMES CAMPBELL

May 16, 1986

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

Dear Mr. Murakami:

Kahuku High and Elementary Schools Master Plans  
EIS Consultation Phase

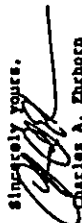
Thank you for allowing us to comment during the consultation phase of the Kahuku High, Intermediate, and Elementary School Environmental Impact Statement (EIS). We support this project and feel it will have a very beneficial impact upon Kahuku village. Particular comments upon the consultation reports are as follows:

1. Acquisition of parcels from Campbell Estate: The EIS identifies two parcels bordering the mauka and makai boundaries of Kahuku High school, respectively. The makai parcel is identified as a future retention basin site. The EIS report should recognize that the area is now occupied by residences. The boundaries of both parcels still remain to be finalized.

2. Water and sewage capacities: Page 43 of the EIS refers to the water and sewage systems. Information should address the actual demand for and availability of water as well as the sewage treatment plant's capacity to accommodate the proposed changes to the school sites.

Again, thank you for giving us this opportunity to comment during your consultation phase of the Kahuku school EIS. Should you have any questions, please feel free to call me.

Sincerely yours,

  
Charles A. Ehrborn  
Administrator, Residential/  
Resort Properties

9c:11371

W 541, 529 Fort Street Mall, Honolulu, Hawaii 96813-1201 (808) 536-1961

JUN 26 1986

Mr. Charles A. Ehrborn  
Administrator  
Residential/Resort Properties  
The Estate of James Campbell  
828 Fort Street Mall, Suite 300  
Honolulu, Hawaii 96813

Dear Mr. Ehrborn:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

In response to your letter of May 14, 1986 relating to the subject project, we provide the following comments:

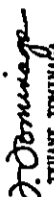
1a. The presence of two residences on the site of the proposed retention basin will be noted in the EIS. The residents will be provided relocation assistance according to Chapter 111, Hawaii Revised Statutes.

1b. The metes and bounds of both parcels to be acquired will be finalized when the land is acquired.

2. The City and County Department of Public Works has indicated that the existing sewer system can accommodate the school flows and the Board of Water Supply has indicated that water will be available for the school.

Thank you for your interest in this project. If you have any questions, please contact Mr. Cedric Takamoto of the Planning Branch at 548-5460.

Very truly yours,

  
TIQUARE TOMIMAGA  
State Public Works Engineer

CT:jes

HAWAIIAN ELECTRIC COMPANY, INC. PO BOX 2750 - HONOLULU HI 96810  
DW 2-1



General Manager Ph.D. P.E.  
Hawaiian Electric Company  
1900 King Street

June 3, 1966

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

Dear Mr. Murakami:

Subject: HECO Comments on Kahala High and Elementary School  
Master Plan EIS Consultation Phase

Electrical services can be provided to the proposed complex from existing HECO facilities. The concerns of the HECO Distribution Engineering Department appear to be adequately addressed in Section III, C-11 to be found on Page 47.

Sincerely,

*Bessie Mungler*

Enclosure

A Hawaiian Electric Industries Company

HAWAIIAN TELEPHONE  
EIS

May 20, 1984

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

Dear Sir:

Kahala High & Elementary School Master Plan  
EIS Consultation Phase

We have reviewed the Kahala High and Elementary School Master Plan EIS Consultation Phase. Telephone service will be provided to meet the demand of the Kahala High and Elementary School Master Plan.

Thank you for the opportunity to review the EIS.

Sincerely,



F. Leung  
Civil Engineering &  
Construction Manager

**Kahuku Community Association**

General Delivery,  
P. O. Box 238, 739  
Kahuku, Hawaii 96731

May 20, 1986

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

Dear Mr. Murakami:

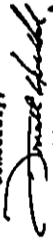
We have reviewed the Environmental Impact Statement prepared by M. Neji Planning and Research, Inc., for the Kahuku High Intermediate and Elementary School and would like to offer the following:

The EIS should address the present capacity of the existing City and County Sewer Treatment Plant and what effect the additional Sewer Treatment Plant and what capacity. The Kahuku Village Association would have on its capacity. The Kahuku Village Association is presently in the process of converting the existing village property into a 215-unit fee simple lot. The existing sewer was sized to accommodate approximately 80 houses within the village and there is concern that connecting the school sewage may diminish this capacity.

Should you need further details about the above please get in touch with Mr. John Prinscio, Jr., of the Kahuku Housing Corporation. His telephone number is 393-5589.

Thank you for the opportunity to comment.

Sincerely,



Donald Huribut  
President

DH:ap

JUN 26 1986

Mr. Donald Huribut  
President  
Kahuku Community Association  
P. O. Box 739  
Kahuku, Hawaii 96731

Dear Mr. Huribut:

Subject: Kahuku High and Elementary School  
EIS Consultation Phase

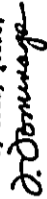
Thank you for your letter of May 20, 1986 relating to the subject project.

Discussions with the City and County Department of Public Works has indicated that the existing sewer system can accommodate the school flows. The school's construction will reduce the unused capacity of the existing sewerage treatment plant. Questions regarding the capacity should be referred to the City and County Department of Public Works, Wastewater Management Division.

If the school is not connected to the City and County sewage system, the use of cesspools will probably be continued.

If you have any questions, please contact Mr. Cedric Takamoto of the Planning Branch at 568-5660

Very truly yours,



TEUANE TOMIHAGA  
State Public Works Engineer

CR:jas

APPENDIX E

EIS PUBLIC REVIEW PHASE COMMENTS AND RESPONSES

<u>ADDRESSEE</u>	<u>DATE OF LETTER</u>	<u>DAGS RESPONSE</u>
<u>State Legislators</u>		
State Senator Gerald Hagino	None	N.A.
State Senator Charles Toguchi	None	N.A.
State Representative Joseph Leong	None	N.A.
<u>City Council</u>		
Councilperson Randall Iwase	None	N.A.
<u>Federal Agencies</u>		
Department of Agriculture	11/20/86	Not Req'd
Department of the Army	11/03/86	Not Req'd
Corps of Engineers	None	N.A.
Department of the Interior	10/29/86	Not Req'd
Fish and Wildlife Service	10/30/86	Not Req'd
Department of the Navy		
<u>State Agencies</u>		
Office of Environmental Quality Control	11/19/86	Not Req'd
Department of Agriculture	11/06/86	Not Req'd
Department of Defense	10/29/86	Not Req'd
Department of Education	10/28/86	Not Req'd
Department of Health	11/05/86	Not Req'd
Department of Land and Natural Resources	None	N.A.
Department of Planning and Economic Development	11/24/86	12/04/86
Department of Transportation	11/10/86	Not Req'd
UH Water Resources Center	10/28/86	Not Req'd
UH Environmental Center	11/24/86	Not Req'd*



City and County of Honolulu Agencies

Board of Water Supply	11/20/86	Not Req'd
Building Department	11/03/86	Not Req'd
Fire Department	11/24/86	Not Req'd
Department of General Planning	11/06/86	11/17/86
Department of Housing and Community Development	11/03/86	Not Req'd
Department of Land Utilization	None	N.A.
Department of Parks and Public Recreation	None	N.A.
Police Department	10/27/86	Not Req'd
Department of Public Works	10/28/86	Not Req'd
Department of Transportation Services	11/14/86	11/24/86

Private Organizations

Campbell Estate	None	N.A.
Hawaiian Electric	11/12/86	Not Req'd
Life of the Land	None	N.A.
Sierra Club, Hawaii Chapter	None	N.A.
Hawaiian Telephone	None	N.A.

Public Organizations

	11/17/86	12/05/86
Kahuku Community Association	None	N.A.
Kahuku Elementary School PTA	None	N.A.
Kahuku Housing Corporation	None	N.A.
Kahuku Village Association	None	N.A.
Koolauloa Neighborhood Board No. 28	None	N.A.

\* Letter from UH Environmental Center and DAGS' response are not included in this Appendix as Environmental Center's letter was received by OEQC after the November 24, 1986 deadline.

cc: C. Takamoto

UNITED STATES  
DEPARTMENT OF  
AGRICULTURE

SOIL  
CONSERVATION  
SERVICE

P. O. BOX 50004  
HONOLULU, HAWAII  
96850

November 20, 1986



DEPARTMENT OF THE ARMY  
U. S. ARMY ENGINEER DISTRICT, HONOLULU  
BUILDING 333  
FT. SHAWNEE, HAWAII 96848

REPLY TO  
ATTENTION OF:  
November 3, 1986  
Planning Branch

Ms. Letitia M. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, Room 104  
Honolulu, HI 96813

Dear Ms. Uyehara:

Subject: Kahuku High, Intermediate, and Elementary School, Kahuku, Oahu  
Campus Development Plan

We reviewed the environmental impact statement, Public Review Phase, for the  
subject project and have no comments to make.

Thank you for the opportunity to review the document.

Sincerely,

RICHARD M. DUNCAN  
State Conservationist

cc:  
Mr. Cedric Takamoto  
Planning Branch  
Division of Public Works  
Department of Accounting & General Services  
P.O. Box 119  
Honolulu, HI 96810

Mr. Cedric Takamoto  
Planning Branch  
Division of Public Works  
Department of Accounting  
and General Services  
P.O. Box 119  
Honolulu, Hawaii 96810

Dear Mr. Takamoto,

Thank you for the opportunity to review and comment  
on the EIS for Kahuku High, Intermediate, and Elementary  
School, Kahuku, Oahu, Hawaii. The following comments are  
offered:

- a. A Department of the Army permit is not required.
- b. Flood hazards have been addressed on page 52 of  
the report covering the environmental setting. As  
previously stated, the project is located in Zone C, area  
of minimal flooding.

Sincerely,

Kisuk Cheung  
Chief, Engineering Division

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



**United States Department of the Interior**  
**FISH AND WILDLIFE SERVICE**

100 ALA MOANA BOULEVARD  
 P. O. BOX 50187  
 HONOLULU, HAWAII 96813

MAIL ROOM  
 ROOM 6307  
 OCT 29 1986



**DEPARTMENT OF THE NAVY**  
 COMMANDER  
 NAVAL BASE PEARL HARBOR  
 BUILDING 100  
 PEARL HARBOR HAWAII 96822

MEMPHIS 10  
 51010  
 N.Y. 0128/0527

Ms. Letitia M. Uyehara, Director  
 Office of Environmental Quality Control  
 465 South King Street, #104  
 Honolulu, Hawaii 96813

Re: Environmental Impact Statement, Kahuku High, Intermediate,  
 and Elementary School

Dear Ms. Uyehara:

Due to current manpower and budget restrictions, the Office of Environmental Services cannot review fish and wildlife concerns associated with the referenced action at this time.

In accordance with the Fish and Wildlife Coordination Act, the Service may review future actions related to this proposal should administrative constraints be alleviated or if adverse impacts to significant fish and wildlife resources are identified. Please continue to keep this office apprised of the project's status.

15

Sincerely yours,

*Ernest Kosaka*

Ernest Kosaka  
 Project Leader  
 Office of Environmental Services

cc: NMFS - WPPD  
 DLNR  
 EPA, San Francisco  
 W.C. Takamoto, Ping Br. Dept. of ASGS

Ms. Letitia M. Uyehara, Director  
 Office of Environmental Quality Control  
 465 South King Street, Room #104  
 Honolulu, Hawaii 96813

Dear Ms. Uyehara:

ENVIRONMENTAL IMPACT STATEMENT (EIS)  
 KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL

The EIS for the Kahuku High, Intermediate and Elementary School has been reviewed and we have no comments. Since we have no further use for the EIS, the EIS is being returned.

Thank you for the opportunity to review the EIS.

Sincerely,

*W.C. Takamoto*

Enclosure  
 Mr. Cedric Takamoto  
 Planning Branch  
 Division of Public Works  
 Department of Accounting & General Services  
 P. O. Box 119  
 Honolulu, Hawaii 96810



Save Energy and You Save America!

GEORGE R. ARIYOSHI  
GOVERNOR



STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
400 SOUTH KING STREET, ROOM 104  
HONOLULU, HAWAII 96813

LETITIA M. UYEHARA  
DIRECTOR  
TELEPHONE NO.  
548-1811

GEORGE R. ARIYOSHI  
GOVERNOR



JACK K. SUMA  
CHAIRPERSON, BOARD OF AGRICULTURE  
SUZANNE D. PETERSON  
DEPUTY TO THE CHAIRPERSON

State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1428 So. King Street  
Honolulu, Hawaii 96814-2512

November 6, 1986

MEMORANDUM

To: Ms. Letitia M. Uyehara, Director  
Office of Environmental Quality Control

Subject: Environmental Impact Statement (EIS) for Kahuku High,  
Intermediate and Elementary School  
Department of Accounting and General Services  
THK: 5-6-06: por. 11, 19  
5-6-09: por. 134, 135, 136 Kahuku, Oahu  
Area: approximately 5 acres

10

Mr. Cedric Takamoto  
Planning Branch  
Division of Public Works  
Department of Accounting and  
General Services  
P.O. Box 119  
Honolulu, Hawaii 96810

November 19, 1986

Dear Mr. Takamoto:

Subject: Environmental Impact Statement for Kahuku High,  
Intermediate, and Elementary School

We have reviewed this EIS and have no comments. We do not  
anticipate any significant environmental effects resulting  
from this project.

Sincerely,

*Letitia M. Uyehara*  
Letitia M. Uyehara  
Director

The Department of Agriculture has reviewed the subject  
document and believes that the proposed project will not  
adversely affect the agricultural resources of the area nor the  
plans, programs, and activities of the Department of  
Agriculture.

Thank you for the opportunity to comment.

*Jack K. Suma*

JACK K. SUMA  
Chairperson, Board of Agriculture

cc: Mr. Cedric Takamoto, DAGS

STATE OF HAWAII  
DEPARTMENT OF PLANNING AND  
ECONOMIC DEVELOPMENT  
P.O. Box 2139  
Honolulu, Hawaii 96804

November 24, 1986

Ref. No. P-5461

MEMORANDUM

TO: Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control

FROM: *Robert H. Ketch*  
*Murray E. Farnell*

SUBJECT: EIS for Kahuku High, Intermediate and Elementary School, Kahuku, Oahu

We have reviewed the subject draft environmental impact statement (EIS) and offer the following comments for your consideration.

According to the Archaeological Reconnaissance Survey by Rose Schilt, there are four potentially significant areas that may be impacted by development within the project area. The recommendations of the Archaeological Reconnaissance Survey should be followed as much as possible to comply with the Hawaii Coastal Zone Management law. Also, all pre-construction and construction activities should be coordinated with the State Historic Preservation Office of the Department of Land and Natural Resources.

The EIS should have considered the consistency of the proposal project with the Hawaii State Plan (Chapter 225, HRS) and the State Functional Plans. This analysis should at a minimum discuss the relationship of the proposed project to the following: Physical Environment (Sections 226-12 and 226-13, HRS), Facility Systems (Sections 226-15 thru 226-17, HRS) and Socio-Cultural Advancement (Sections 226-20 and 226-21, HRS). The EIS should examine the Priority Guidelines for Quality Education (Section 226-107, HRS). The State Functional Plans should be reviewed to determine their relevance to your project and major relationships should be discussed in the EIS.

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

cc: Mr. Cedric Takamoto, DADS



STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 2490  
HONOLULU, HAWAII 96804

November 5, 1986

MEMORANDUM

TO: Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control

FROM: Deputy Director for Environmental Health

SUBJECT: Environmental Impact Statement (EIS) for Kahuku High, Intermediate, and Elementary School, Kahuku, 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 Administrative Rules, please be informed that we do not have any objections to this project.

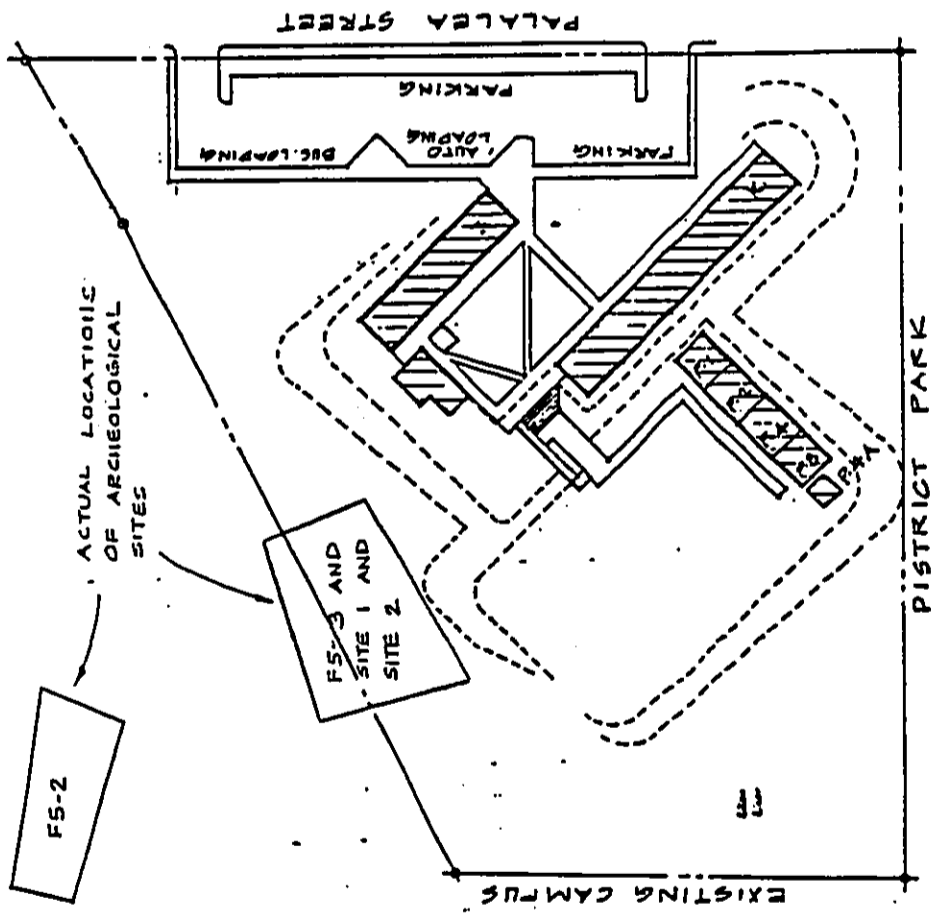
We realize that the statements are general in nature due to preliminary plans being the sole source of discussion. We, therefore, reserve the right to impose future environmental restrictions on the project at the time final plans are submitted to this office for review.

*James K. Ikeda*  
JAMES K. IKEDA

cc: Mr. Cedric Takamoto, DADS



FIGURE 22  
 INCREMENT 1 -- KAIKIU ELEMENTARY FACILITY



E-9

CONSTRUCTION THIS INCREMENT

INCREMENT 1

NOTE: THE DIFFERENCE BETWEEN FIG. 1 ON PAGE B-3 OF THE EIS AND THIS DRAWING WAS AN "EYEBALL" IS THAT THE 1979 BISHOP MUSEUM SURVEY WAS A NOVEMBER SURVEY WHILE THIS DRAWING IS BASED ON A NOVEMBER 1986 SURVEY BY A REGISTERED LAND SURVEYOR SURVEYING FLAGGED-OUT AREAS DETERMINED BY A NOVEMBER 1975 BISHOP MUSEUM SURVEY.





University of Hawaii at Manoa

Water Resources Research Center  
Holmes Hall 253 • 2540 Duke Street  
Honolulu, Hawaii 96822

November 10, 1986

28 October 1985

5254  
STP 8.1676

Ms. Letitia Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, Room 115  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Review of EIS, Kahuku High, Intermediate and  
Elementary School, Kahuku, Oahu

We have reviewed the Kahuku High, Intermediate and Elementary  
School environmental impact statement and have no comments to  
offer.

Thank you for the opportunity to provide comments on the  
subject EIS.

AS:ko

Ab

Enclosure

cc: Mr. Cedric Takamoto, DAGS  
HWY, STP(dt)

Very truly yours,

Wayne J. Yamasaki  
Director of Transportation

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: Environmental Impact Statement Public Review Phase for  
the Kahuku High, Intermediate and Elementary School,  
Kahuku, Oahu, Hawaii, September 1986

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

Sincerely,

Edwin T. Murabayashi  
EIS Coordinator

ETM:ja

cc: C. Takamoto, DAGS

AN EQUAL OPPORTUNITY EMPLOYER

 COPY

November 20, 1986

Ms. Letitia M. Uyehara, Director  
Office of Environmental Quality  
Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: Draft Environmental Impact Statement for Kahuku  
High, Intermediate, and Elementary School


Thank you for the opportunity to review the environmental  
document for the new elementary school and additional  
improvements at the existing secondary school.

In addition to our comments on page D-10, we have the  
following:

1. There is no existing water service at the proposed  
elementary school site.
2. Water service for the new elementary school should  
be segregated from the existing Kahuku  
High/Intermediate facility.
3. On page 62, Item 4 should read: "The distribution  
waterline for the elementary facility site is  
8 inches in diameter along Pualea Street. This  
waterline increases to 12 inches from Pualea  
Place to Kamehameha Highway."

If you have any questions, please contact Lawrence Whang at  
527-6138.

Very truly yours,

  
KAZUO HAYASHIDA  
Manager and Chief Engineer

cc: Mr. Cedric Takamoto

FB 86-933

November 3, 1986

Ms. Letitia M. Uyehara, Director  
Office of Environmental Quality Control  
465 S. King Street, #104  
Honolulu, Hawaii 96813


Dear Ms. Uyehara:

Subject: Kahuku High, Intermediate and Elementary School  
Environmental Impact Statement

We have no comments on the subject EIS.

Thank you for the opportunity to review the EIS.

Very truly yours,

  
HENSERT K. MURAOKA  
Director and Building Superintendent

TH:jo  
cc: J. Harada  
J. Takamoto, DACS

FIRE DEPARTMENT  
CITY AND COUNTY OF HONOLULU

1435 S. BERTLAND STREET, APOPOKE, HI 96813  
HONOLULU, HAWAII 96813



FRANK K. KAHOOHAROHANO  
FIRE CHIEF  
LIONEL E. CARROLL  
SUBSTATION CHIEF

November 24, 1986

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

SUBJECT: EIS FOR KAHUKU HIGH, INTERMEDIATE AND ELEMENTARY SCHOOL

We have reviewed the EIS for the above subject and have no additional comments at this time.

We are returning the EIS under separate cover as we have no further use for it. Should you have any questions, please contact Battalion Chief Kenneth Word at 943-3848.

Sincerely,

*Frank K. Kahooharohano*  
FRANK K. KAHOOHAROHANO  
Fire Chief

FKK:KAM/sb

cc: Cedric Takamoto, Planning Branch  
Division of Public Works, DAGS

DEPARTMENT OF GENERAL PLANNING  
CITY AND COUNTY OF HONOLULU  
100 SOUTH KING STREET  
HONOLULU, HAWAII 96813



DONALD A. CLEGG  
Chief Planning Officer  
JRB/DCP 10/86-9899

November 6, 1986

Ms. Leticia N. Uyehara, Director  
Office of Environmental Quality Control  
State of Hawaii  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Kahukū High, Intermediate, and Elementary School  
Environmental Impact Statement, September 1986  
Public Review Phase

Your Letter Dated October 21, 1986

We have the following comments for your consideration.

1. Statements indicating that (1) the proposed project is in conformity with the Development Plan Public Facilities Map for the Koolauloa District, and (2) that an amendment to the Development Plan Land Use Map to redesignate the land use of the proposed school site from Residential to Public Facility use will be filed with DCP at an appropriate time, have been duly noted. (P.28)
2. The Environmental Impact Statement (EIS) should indicate that the sale of City-owned lands to the State of Hawaii will require City Council's approval before a sale agreement is executed.

Page 58 of the EIS should be enlarged to indicate this and which particular City department now has jurisdiction over the property. The EIS should also indicate when the matter is expected to be brought to City Council for approval.

Ms. Leticia N. Uyehara  
November 6, 1986  
Page 2

3. No mention is made in the document that the parcels identified by Tax Map Key 5-5-9: 131 through 146, inclusive, encompassing approximately 1.56 acres, will be consolidated with the elementary school site.

These parcels were originally a part of the Koolauloa Housing development.

If these parcels are not consolidated, a Conditional Use Permit development for the off-street parking use may be required under the Land Use Ordinance which became effective October 22, 1986.

We suggest that you solicit the views of the City Department of Land Utilization on this matter before transmitting the EIS to the Governor for his acceptance.

4. A List of Necessary Approvals from Governmental Agencies should be a part of this EIS.

Thank you for this opportunity to review this EIS for the proposed project.

Sincerely,

DONALD A. CLEGG  
Chief Planning Officer

cc: DAGS  
DLU



GEORGE A. JANTZEN  
GOVERNOR

STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
DIVISION OF PUBLIC WORKS  
700, BOX 114, HONOLULU, HAWAII 96810

REGIO MARIANUM  
CONTRACTS

NO. 10-100-0000  
SERIAL 00000000

LETTER NO. P12066.6

NOV 17 1986

Mr. Donald Clegg  
Page 2  
Ltr. No. (P)2066.6

Should there be any questions, please have your staff contact Mr. Cedric Takamoto of the Planning Branch at 548-5460.

Very truly yours,

TEUANE TOMIHAGA  
State Public Works Engineer

CT:jnc

Mr. Donald Clegg  
Chief Planning Officer  
Department of General Planning  
City and County of Honolulu  
Honolulu, Hawaii

Dear Mr. Clegg:

Subject: Kahuku High, Intermediate & Elementary School  
EIS Public Review Phase

Thank you for your November 6, 1986 comments on the subject EIS. Our responses are as follows:

E-1-4

1. Development Plan: No comment.
2. City Council Approval: The City Council will probably be requested by the County Administration to approve the sale of the elementary school site during negotiations with the State Department of Land and Natural Resources. However, this is not a "requirement" since the State has eminent domain powers.  
  
The EIS will indicate that the sale will probably be arranged between the State Department of Land and Natural Resources and the City and County of Honolulu Department of Finance in 1987.
3. Consolidation: The EIS will state that a subdivision application will be made to the City and County of Honolulu Department of Land Utilization for consolidation of all involved parcels into one parcel when they are acquired.
4. List of Approvals: A List of Necessary Approvals from governmental agencies will be included in the Appendix.

POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
 100 SOUTH KING STREET  
 HONOLULU, HAWAII 96813-3111

DOUGLAS G. GIBB  
 Chief  
 MARGEN FERRERIA  
 DEPUTY CHIEF



FRANK P. FARM  
 Captain

OUR REFERENCE CS-LK

October 27, 1986

Ms. Letitia M. Uyehara, Director  
 Office of Environmental Quality Control  
 465 South King Street, #104  
 Honolulu, Hawaii 96814

Dear Ms. Uyehara:

Subject: Kahuku High, Intermediate, and Elementary School Environmental Impact Statement

The Environmental Impact Statement for Kahuku High, Intermediate, and Elementary School is being returned to your office. We have reviewed the subject document as requested and find that we have no comment to offer at this time.

Sincerely,  
  
 DOUGLAS G. GIBB  
 Chief of Police

ENC.  
 cc: Mr. Cedric Takamoto

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT  
**CITY AND COUNTY OF HONOLULU**  
 400 SOUTH KING STREET  
 HONOLULU, HAWAII 96813-3111

MICHAEL M. MOON  
 Director  
 ROBERT MURRAY  
 Deputy Director



FRANK P. FARM  
 Captain

November 3, 1986

Ms. Letitia M. Uyehara, Director  
 Office of Environmental Quality Control  
 465 South King Street, #104  
 Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: EIS - Kahuku High, Intermediate and Elementary School

Thank you for the opportunity to review and comment on the EIS report for the proposed school facilities in Kahuku, Oahu.

We support the proposed project and note that the long-term benefit derived from the development will be an educational facility intended for elementary students and programmed for the increased student enrollment.

We will retain the EIS for our files.

Sincerely,  
  
 ROBERT MURRAY  
 Deputy Director

cc: Department of Accounting and General Services

DEPARTMENT OF TRANSPORTATION SERVICES  
CITY AND COUNTY OF HONOLULU  
HONOLULU MUNICIPAL BUILDING  
510 SOUTH KING STREET  
HONOLULU, HAWAII 96813



ALAN S. WALKER  
DIRECTOR  
CUSTOMER SERVICE  
TE-5864  
PL 1.0490

ENV 96-225

October 28, 1986

November 14, 1986

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
State of Hawaii  
465 South King Street, Room 104  
Honolulu, Hawaii 96813

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Re: Draft EIS for Kahuku High, Intermediate,  
and Elementary School, Kahuku, Oahu, Hawaii  
(Tax Map Key: 5-6-06, 11, 15)

Subject: Kahuku High, Intermediate, and Elementary Schools  
Environmental Impact Statement

We have reviewed the subject Draft EIS and have the following comments.

This is in response to your request of October 21, 1986 for comments on the subject Environmental Impact Statement.

We note that the elementary school is adjacent to the district park site. We believe that frontage improvements along Puulalea Street are needed to accommodate the vehicular and pedestrian traffic that will be generated from these uses.

1. The discussion on drainage is satisfactory.
2. Existing sewers and wastewater treatment capacity are adequate and available to serve the proposed new elementary facility.

We thank you for providing us this opportunity to review and comment on the project.

Very truly yours,

Sincerely,

RUSSELL L. SMITH, JR.  
Director and Chief Engineer

cc: Department of Accounting  
and General Services

cc: Cedric Takamoto, DAGS

GEORGE S. LANTIERO  
DIRECTOR



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
DIVISION OF PUBLIC WORKS  
P. O. BOX 114, HONOLULU, HAWAII 96810

HONO KAUAI  
HAWAII

MADE IN HAWAII  
HAWAII

LETTER NO. (P)2078-6

NOV 24 1986

Mr. John E. Hirtzen  
Director  
Department of Transportation Services  
City and County of Honolulu  
Honolulu, Hawaii

Dear Mr. Hirtzen:

Subject: Kahuku High, Intermediate & Elementary School  
EIS

Thank you for your November 14, 1986 letter regarding the subject Environmental Impact Statement (EIS). Our responses are as follows:

1. Sidewalks will be provided on Pualealea Street where the school site abuts the roadway.
2. Vehicular parking, loading, and unloading areas will be provided on-site in front of the school off Pualealea Street.
3. These improvements will be included in the first increment construction of the school.

Very truly yours,

TEUANE TOMINAGA  
State Public Works Engineer

CT:jnt

EJ  
1-17



EW 2-1  
W/C



Blanche Munguel Ph.D. PE  
Manager  
Environmental Department  
(808) 548 6000

November 12, 1986

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Subject: Environmental Impact Statement (EIS) for Kahuku High,  
Intermediate and Elementary School

We have reviewed the subject document and find that concerns of  
the HECO Distribution Engineering Department were adequately  
addressed on Page C-1 of Appendix C.

Sincerely,

*Banner Holzner*

Enclosure

cc: Mr. Cedric Takamoto

1108

A Hawaiian Electric Industries Company

**Kahuku Community Association**

General Delivery  
P. O. Box 2028 739  
Kahuku, Hawaii 96731

November 17, 1986

Ms. Letitia N. Uyehara, Director  
Office of Environmental Quality Control  
465 South King Street, #104  
Honolulu, Hawaii 96813

Dear Ms. Uyehara:

Re: Kahuku High, Intermediate and Elementary School - E.I.S.

Thank you for permitting us to review the above captioned  
Environmental Impact Statement.

Creation of a retention basin of approximately 1 acre in size  
could become a source for mosquito breeding especially with  
uncontrolled growth of weeds and residual water remaining  
long after the rain. A program should be developed to prevent  
this from happening. Also, the creation of such a large  
retention basin would require some safety measures to be taken  
to avoid accidental drowning.

Thank you for the opportunity to comment.

Very truly yours,

*Donald Huribut*  
Donald Huribut  
President

DH:ap

cc: Randall Iwase  
Cedric Takamoto, Division of Public Works

GEORGE B. JANTON  
Director



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
DIVISION OF PUBLIC WORKS  
P. O. BOX 115, HONOLULU, HAWAII 96810

MOLO MAHALANI  
Commissioner  
MAIL ROOM  
STATE OF HAWAII  
HONOLULU, HAWAII 96810

LETTER #PJ2080.6

DEC 5 1986

Mr. Donald Hurlbut, President  
Kahuku Community Association  
General Delivery  
P. O. Box 739  
Kahuku, Hawaii 96731

Dear Mr. Hurlbut:

Subject: Kahuku High, Intermediate & Elementary School  
EIS

Thank you for your November 17, 1986 comments on the EIS.  
Our responses are as follows:

E-19

1. The proposed drainage system for the school will consist of drywells dispersed around the campus and a retention basin. The drywells will be similar to those provided for certain areas of the campus and should be able to discharge the runoff from most rainfalls underground.
2. In the case of less frequent but larger storms, runoff that exceeds the drywells' capacity will flow into the retention basin which is planned to accommodate a rainfall that occurs an average of once every 50 years. This runoff may take a few days to percolate into the ground through a permeable layer of soil at the bottom of the retention basin. Thus, the basin should be empty most of the time.
3. For safety purposes, a wire-mesh fence will be constructed around the retention basin with a locked gate for maintenance access.

Very truly yours,

TEUANE TOMINAGA  
State Public Works Engineer

CT:jnt

APPENDIX F  
List Of Necessary Approvals From Government Agencies

1. Development Plan Land Use Map  
Proposed elementary facility site must be amended from Residential to Public Facility use. Application will be made to the City and County of Honolulu Department of General Planning.
  
2. Subdivision  
Consolidation of the TMK parcels discussed on page v of this EIS into one parcel will be done when parcels are acquired. Subdivision applications will be made to the City and County Department of Land Utilization.