DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 Fax: (808) 523-4567
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Project Summary Attached

JEREMY HARRIS
MAYOR

GARY Q. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

WWDE.P 00-591

August 28, 2000

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Final Environmental Assessment and Finding of No Significant Impact for Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: portion of 2 & 52

The City and County of Honolulu Department of Design and Construction has reviewed the comments received during the 30-day public comment period which began on April 23, 2000. The agency has determined that this project will not have significant environmental effects and has issued a Finding of No Significant Impact (FONSI). Please publish this determination in the next edition of *The Environmental Notice*. ✓

Four (4) copies of the Final EA/FONSI and a completed OEQC Publication Form with attached project summary are enclosed.

Contact persons for further information are:

Proposing Agency: Mr. Carl Arakaki
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813
(808) 523-4671

102

Consultant: Mr. Kenneth Ishizaki
Engineering Concepts, Inc.
1150 South King Street, Suite 700
Honolulu, Hawaii 96814
(808) 591-8820

Very truly yours,

FOR GARY Q. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.

2000-09-08-OA-FEA-

FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

(Kaneohe Civic Center Neighborhood Park Parking Lot)
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: *portion of* 2 & 52

Proposing Agency:

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 South King Street
Honolulu, Hawaii 96813

Prepared by:

ENGINEERING CONCEPTS, INC.
1150 South King Street, Suite 700
Honolulu, Hawaii 96814

JULY 2000

FINAL ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: portion of 2 & 52

This environmental document has been prepared pursuant to Chapter 343, Hawaii Revised Statutes

Proposing Agency:

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 South King Street
Honolulu, Hawaii 96813

Responsible Official:

FOR Gary Q.L. Yee, Director

7.31.00
Date

Prepared by:

ENGINEERING CONCEPTS, INC.
1150 South King Street, Suite 700
Honolulu, Hawaii 96814

JULY 2000

CONTENTS

APPENDICES

TABLES

FIGURES

DEVELOPMENT SUMMARY

PROPOSING AGENCY:	Department of Design and Construction City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813
Responsible Official:	Mr. Gary Q.L. Yee, AIA Director
Contact:	Mr. Carl Arakaki Division of Planning and Programming
Phone:	523-4671
Fax:	523-4642
PROJECT NAME:	Kaneohe Civic Center Neighborhood Park Parking Lot
PROPOSED ACTION:	Construction of a 46-stall parking lot to serve the Kaneohe Civic Center Neighborhood Park
PROJECT LOCATION:	Adjacent to the Kaneohe Public Library and Kaneohe Police Station
TAX MAP KEY:	4-5-18: portion of parcels 2 and 52
LAND OWNER:	City and County of Honolulu (4-5-18:2) State of Hawaii (4-5-18:52)
PROJECT AREA:	0.9 acre
STATE LAND USE DESIGNATION:	Urban
DEVELOPMENT PLAN LAND USE MAP DESIGNATION:	Public and Quasi-Public (Public Facilities)
ZONING:	R-7.5 Residential
EXISTING USE:	A portion of the site is used by the City and County Division of Road Maintenance in association with maintenance of Kaneohe Stream. The remainder of the site is undeveloped and includes a drainageway and small stream.

CHAPTER 1
INTRODUCTION

1.1 PURPOSE OF THIS DOCUMENT

The purpose of this Final Environmental Assessment (EA) is to disclose potential environmental impacts which may result from development of 0.9 acres for a parking lot to serve the Kaneohe Civic Center Neighborhood Park; and to identify measures to mitigate these potential impacts. This document was prepared after public review of a Draft EA. Public comments and applicant responses have been incorporated in this document.

1.2 BACKGROUND

The City and County of Honolulu Department of Design and Construction is proposing to construct a parking lot to serve the needs of the Kaneohe Civic Center Neighborhood Park. Presently, there is no designated parking area for users of the neighborhood park. Parking is not allowed along Waikalua Road, resulting in use of parking facilities at Benjamin Parker Elementary School or parallel parking along the driveway to the park entrance. Demand for parking often results in the unauthorized use of the limited stalls in the adjacent Kaneohe Public Library parking lot. The need for parking is heightened during the youth soccer season when practice sessions and games are held at the neighborhood park.

A portion of the project site is presently used by the City and County of Honolulu Department of Facility Maintenance. Approximately 0.26 acres is used by the Division of Road Maintenance to store equipment, and for stockpiling and drying materials when performing maintenance on the adjacent Kaneohe Stream.

1.3 OBJECTIVES

The objectives of the project are to provide a parking area for the neighborhood park users which minimizes both construction cost and impacts to the surrounding environment, including Kaneohe Stream and the onsite wetland.

1.4 PROJECT DESCRIPTION / LOCATION

The project site is situated on undeveloped portions of TMK 4-5-18: parcels 2 and 52. The project site is bound by Kamehameha Highway to the west, Kaneohe Civic Center Neighborhood Park to the east, Kaneohe Stream to the south, and the Kaneohe Public Library to the north. Access to the project site is provided by a driveway off Waikalua Road which presently serves the Kaneohe Police Station and the Kaneohe Public Library (see Figure 1-1).

The proposed action is construction of the following: a 46-stall parking lot; an accessible path from the parking lot to the neighborhood park; and a graveled overflow parking area within the present Division of Road Maintenance yard.

1.5 ALTERNATIVES CONSIDERED

In addition to the proposed action, two alternatives plus "no action" were considered. The alternatives included construction of a larger or smaller parking lot. Impacts associated with each alternative layout were assessed.

1.6 SUMMARY OF POTENTIAL IMPACTS AND MITIGATION MEASURES

Regional Impacts

No significant long term regional impacts are foreseen. However, in the short term, regional impacts may include temporary increases in fugitive dust, noise and traffic generated by construction vehicles traveling to and from the project site. Complaints relating to these issues may also have a short term impact on calls for police service.

Topography

The grassed drainageway between the library parking lot and project site will be filled. However, the drainage function will be maintained by installation of an underground piped system.

Soil Erosion

Long term soil erosion is expected to decrease after development. However, soil erosion potential will increase during construction. Mitigation measures may include construction of temporary silt fencing along the downstream grading limits, and installation of debris barriers in drainage inlets.

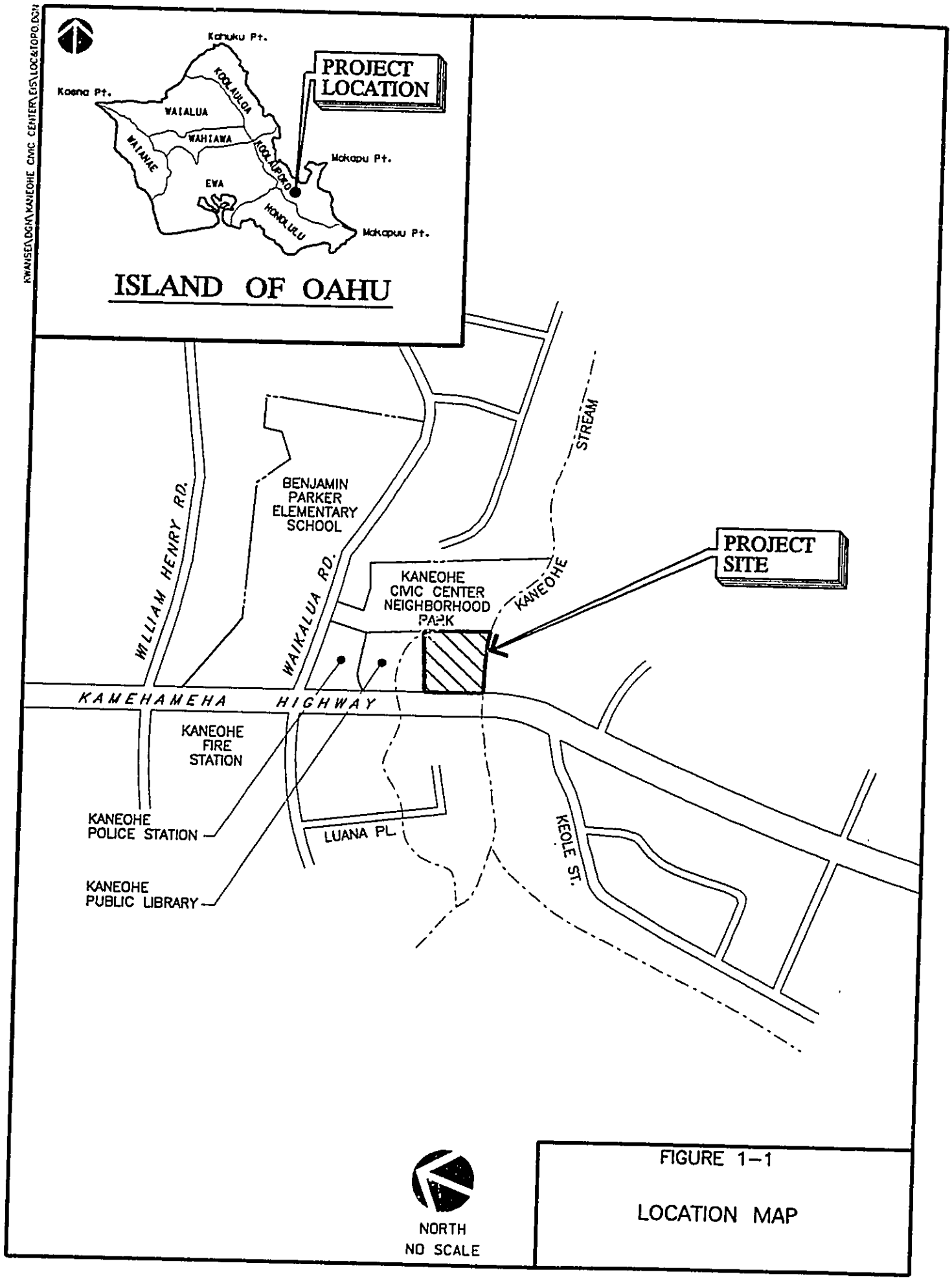


FIGURE 1-1

LOCATION MAP

Water Quality
No long term water quality impacts are anticipated. The natural water treatment function of the wetland will be maintained, protecting the water quality of Kaneohe Stream. Short term impacts to water quality will be mitigated by erosion and sediment control measures described above.

Flora
The project site does not contain any threatened or endangered species or species of concern. Two large trees will be relocated to other areas within the project site to fulfill part of the landscaping requirement.

Archaeological and Historic Resources
The project site appears to be free of archaeological constraints and no further work is anticipated. The State Historic Preservation (SHPD) concurs with the archaeological inventory survey report findings. During construction, work will cease and the SHPD will be contacted for direction should artifacts be encountered.

Neighboring Lands
The loss of three parking stalls within the library parking lot will be mitigated in the long term since the proposed project will provide additional public parking in an adjacent lot. Construction activities will be coordinated with the Kaneohe Public Library and Kaneohe Police Station to minimize impacts on their neighboring facilities.

Traffic
Increased traffic and parking congestion will be a short term impact. In the long term, the proposed parking lot is expected to increase turning movements entering and exiting the driveway off of Waikalua Road, which may increase delays. However, the (Level-of-Service) LOS for critical movements at the driveway intersection would not be affected.

Air Quality
No long term air quality impacts are anticipated. The contractor will be required to comply with applicable state regulations to minimize short term impacts associated with construction vehicle emissions and fugitive dust.

Noise
No long term noise impacts are anticipated. The contractor will be required to comply with applicable state regulations and obtain a noise permit to minimize short term impacts associated with construction activities.

Utilities
Long term impacts on utilities are not anticipated to be significant. Electrical requirements will be coordinated with Hawaiian Electric Company during the design phase.

1.7 PERMITS AND APPROVALS REQUIRED

Permits and approvals which may be required for construction of the proposed project are listed in **Table 1-1**. The applicability of these environmental permits will be coordinated with the respective agencies, and permit applications will be prepared as planning and design of the project proceeds. A joint use agreement with the State of Hawaii will be in place prior to the start of construction.

The project site is not located within the Special Management Area or Conservation District. Further, it has been determined that the following permits will not be required:

National Pollutant Discharge Elimination System (NPDES) Permit. The proposed action will not result in grading activities in excess of five acres, and therefore, will not be subject to a NPDES permit for discharge of storm water associated with construction activity.

Stream Channel Alteration Permit (SCAP). The Commission on Water Resource Management has determined that a SCAP is not required for fill of the grassed drainageway. Refer to **Appendix A** for a copy of the correspondence.

Section 404 Permit. The Corps of Engineers has determined that the project will not be subject to a Section 404 Permit. Refer to correspondence in **Appendix A.**

TABLE 1-1
PERMITS AND APPROVALS

AGENCY	PERMIT/APPROVAL
State of Hawaii Department of Health	• Community Noise Permit for Construction Activities • Variance from Pollution Controls • Construction Plan Approval by the Disability and Communication Access Board
City and County of Honolulu Department of Planning and Permitting	• Grubbing, Grading and Stockpiling Permit • Building Permit • Sign Permit • *Construction Plan Approval*
City and County of Honolulu Department of Environmental Services	• Permit to Discharge Effluent to the Municipal Storm Sewer System
City and County of Honolulu Department of Design and Construction	• Construction Plan Approval
City and County of Honolulu Department of Parks and Recreation	• Construction Plan Approval
City and County of Honolulu Department of Facility Maintenance	• Construction Plan Review

CHAPTER 2
PROJECT DESCRIPTION

2.1 NEED FOR THE PROJECT

The City and County of Honolulu Department of Design and Construction is proposing to construct a parking lot for the Kaneohe Civic Center Neighborhood Park, which lacks sufficient parking to accommodate the existing demand. The park does not have a designated parking lot and street parking is not allowed on Waikalua Road, fronting the site. Users of the neighborhood park presently utilize parking facilities across the street at Benjamin Parker Elementary School (when school is not in session) or parallel park along the entrance driveway to the neighborhood park (which is shared with the Kaneohe Police Station and Kaneohe Public Library). Demand for parking often results in the unauthorized use of the limited stalls in the adjacent library parking lot. The need for parking is heightened during the youth soccer season when practice sessions and games are held at the park. Representatives of the local youth soccer league have stated that a minimum of 40 parking stalls would be desirable, based on average soccer game attendance.

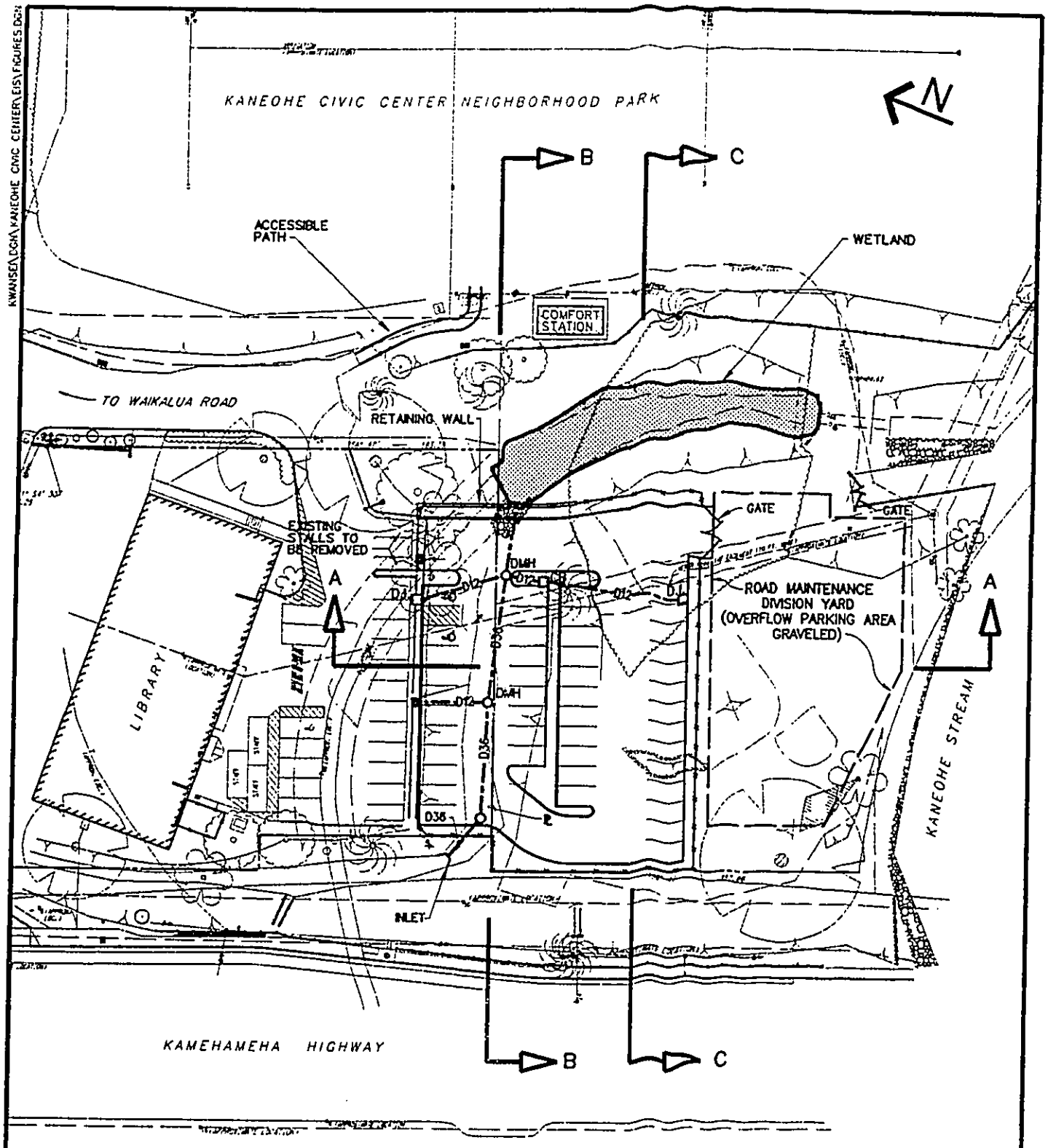
2.2 DESCRIPTION OF THE PROPOSED ACTION

The proposed action includes construction of a 46-stall parking lot, construction of an accessible path from the parking lot to an existing comfort station located in the neighborhood park, and construction of a graveled overflow parking area within the present Division of Road Maintenance yard (see **Figures 2-1** and **2-2**).

2.2.1 Parking Lot

Parking for 46 cars will be provided within two asphalt concrete paved parking bays. The entrance to the proposed parking lot will be located through the existing library parking lot, resulting in the elimination of three of the library's parking stalls. An existing drainageway between the library parking lot and project site will be filled, resulting in fill within the state-owned library parcel as well.

Parking stalls will be sized in accordance with the City and County of Honolulu Land Use Ordinance (LUO). Two accessible parking stalls will be provided, to meet the Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements.



NOTES:

1. MINIMUM PARKING STALL DIMENSIONS ARE 8'-6"x18'-0". PARKING AISLE IS 22 FT. WIDE.
2. NUMBER AND TYPE OF ACCESSIBLE PARKING STALLS SHALL MEET ADAAG REQUIREMENTS.
3. LANDSCAPING SHALL BE PROVIDED AS REQUIRED BY THE LUO.
4. PARKING LOT AREA LIGHTING MEETING THE ILLUMINATING ENGINEERING SOCIETY REQUIREMENT FOR ILLUMINATION LEVEL OF PARKING LOTS SHALL BE PROVIDED.

30 0 60 120

GRAPHIC SCALE IN FEET

FIGURE 2-1

PROPOSED
PARKING LOT LAYOUT

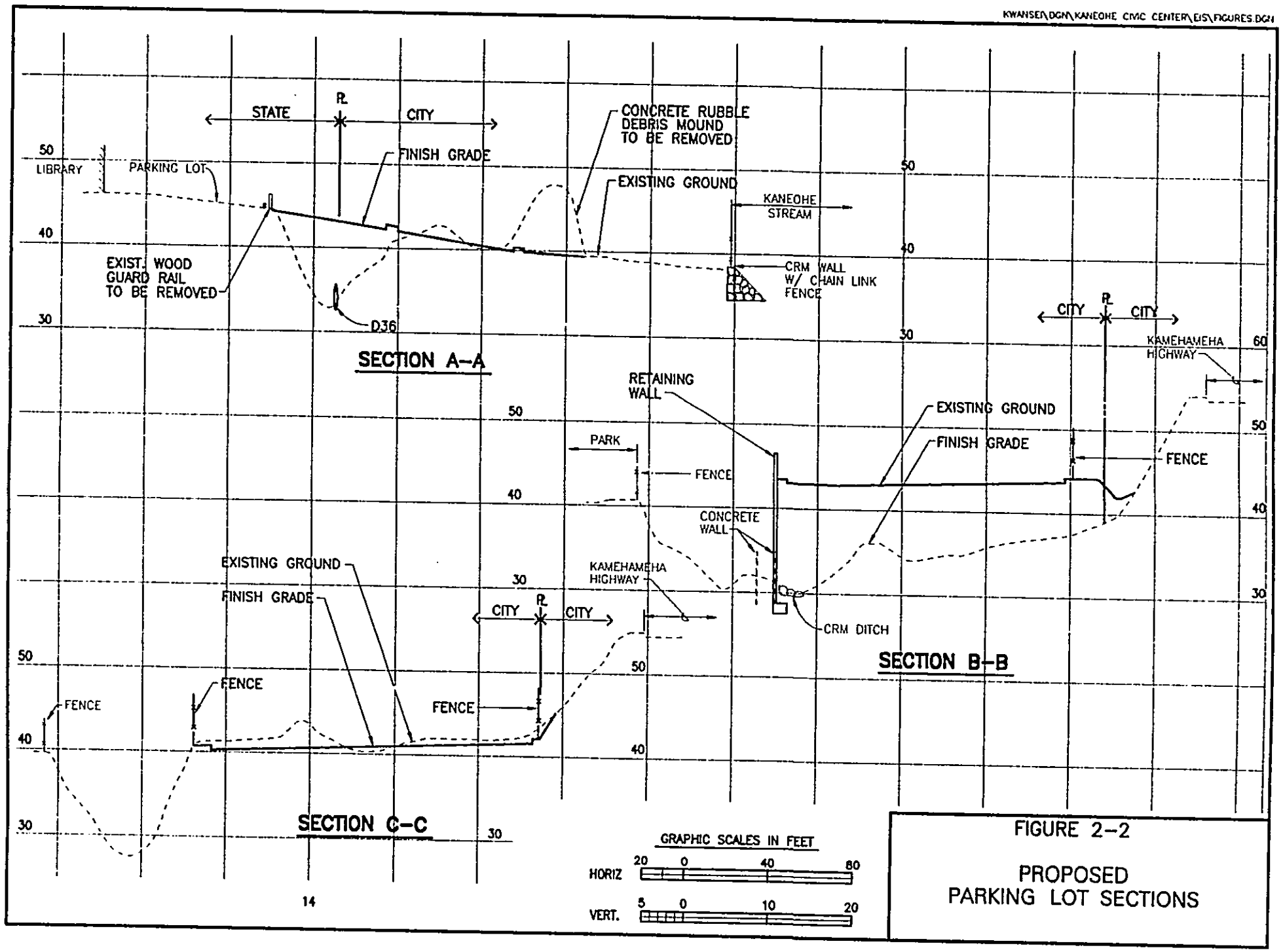


FIGURE 2-2

PROPOSED
PARKING LOT SECTIONS

An underground drainage system will be constructed within the proposed parking lot to collect and convey runoff from the site and offsite areas to the adjacent stream. A 36-inch drain line will be installed within the existing drainageway to convey storm runoff from a 3-acre tributary area that presently enters the drainageway to the stream. Storm runoff from the library parking lot will also enter the proposed drainage system and be conveyed to the stream.

The parking lot will be fenced, with a gate leading to an overflow parking area within the Division of Road Maintenance's yard. The gate would be normally locked since the yard area is used by City and County maintenance personnel.

Landscaping will be provided as required by the LUO. A two-inch caliper tree will be planted for every six parking stalls or a six-inch caliper tree will be planted for every 12 parking stalls.

Low intensity area lighting will be provided to illuminate the parking lot at night. The Illuminating Engineering Society requirement for illumination level of parking lots will be met.

2.2.2 Accessible Path

In order to meet ADAAG requirements, an accessible path will be constructed in association with the parking lot, connecting the accessible parking stalls with the neighborhood park. The path will be five feet wide, paved with asphalt concrete.

2.2.3 Graveled Overflow Parking Area

An area of approximately 10,000 square feet, presently utilized by the Division of Road Maintenance, will be graded and graveled for intermittent use as an overflow parking area. A gate between the proposed parking lot and overflow lot will remain closed and locked under normal conditions due to use by City and County maintenance personnel. However, the Division of Road Maintenance has consented to intermittent use of the yard for overflow parking upon request. It is anticipated that the graveled area can provide parking for an additional 25 to 30 cars. Further details regarding access and use of the graveled overflow parking area remain "unresolved" at present and need to be coordinated between the City and County of Honolulu and park users. A 12-foot wide double swing gate will also be installed at the top of the stream maintenance ramp to prohibit public access to Kaneohe Stream.

2.3 PROJECT SCHEDULE AND CONSTRUCTION COST

The project is scheduled for construction in late 2000. The actual start date will be dependent on obtaining the required permits and approvals. It is anticipated that construction will take six months to complete. The estimated construction cost for the project is $350,000, to be funded by the City and County of Honolulu, through the City's Vision Program for fiscal year 2000.

CHAPTER 3
DESCRIPTION OF THE AFFECTED ENVIRONMENT

The intent of this chapter is to describe the existing physical and social environment which is affected by the proposed action. Potential impacts which may result from development of the proposed action, and mitigation measures which will be employed to minimize negative impacts, are described in **Chapter 4.**

3.1 TOPOGRAPHY

Topographic features are identified on **Figure 3-1.** The project site generally slopes from west to east, at three to six percent. A grassed drainageway separates the site from the library parking lot to the north, and a wetland separates the site from the neighborhood park to the east. To the west, the land slopes up approximately 10 feet to guard rails along Kamehameha Highway. Kaneohe Stream is located to the south, beyond a concrete rubble masonry (CRM) wall and chain link fence.

3.2 SOILS

According to the *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai and Lanai,* the project site soils are classified as Hanalei silty clay (HnA). This soil type consists of dark gray and very dark gray silty clay. Permeability is moderate, runoff is very slow, and the erosion hazard is slight.

3.3 SURFACE WATER

3.3.1 Small Stream

A small stream flows through the project site. The stream appears to be fed by two 48-inch pipes which discharge below the water surface of a small pond at the northwest end of the wetland. The two 48-inch pipes convey storm water runoff to the wetland from a tributary area of over 40 acres. The small stream flows through the wetland and enters a corrugated metal culvert beneath the existing access road to the Division of Road Maintenance yard. The small stream discharges from the culvert's two 48-inch pipes and enters Kaneohe Stream adjacent to the Division of Road Maintenance stream access ramp.

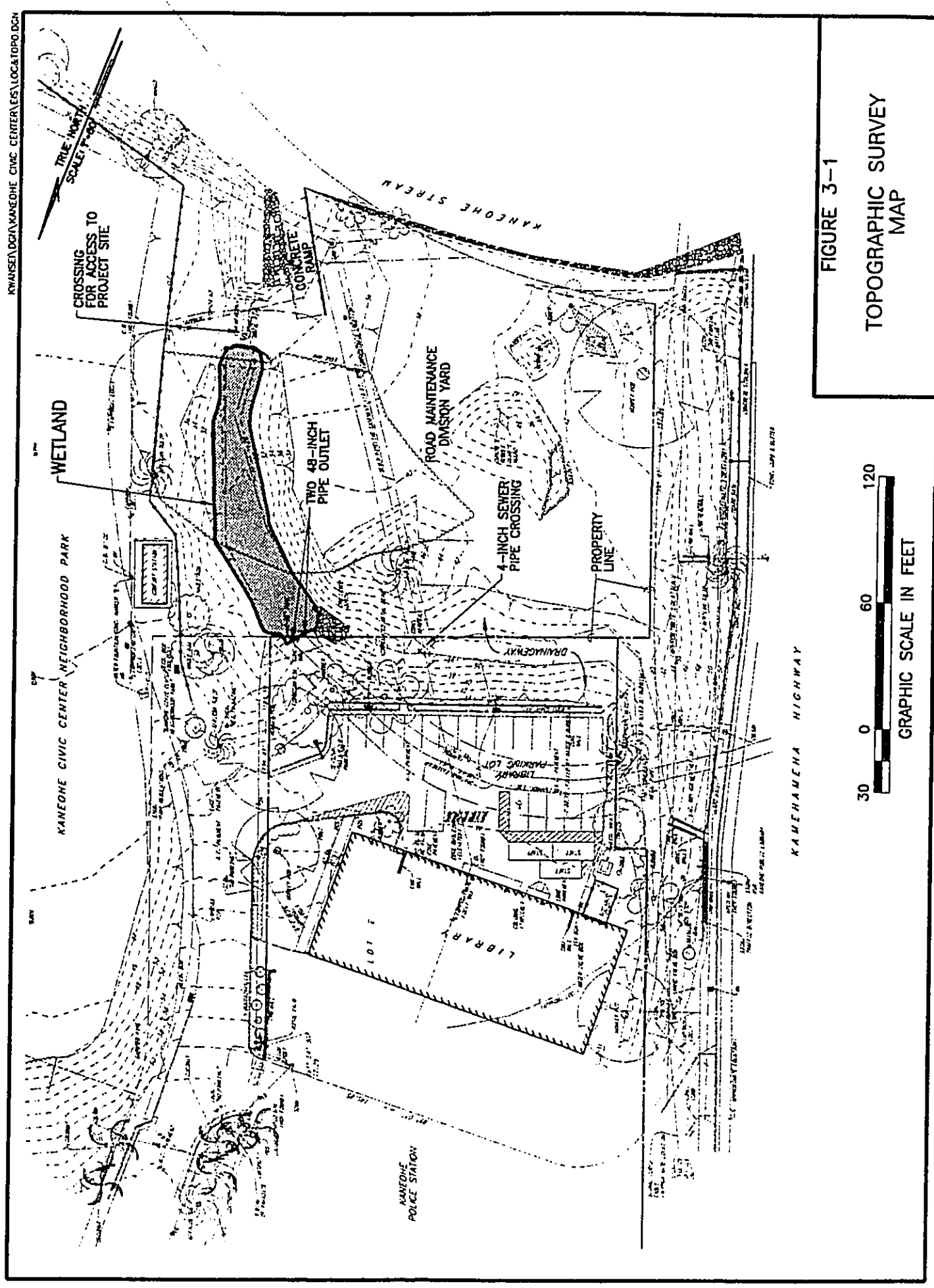


FIGURE 3-1

TOPOGRAPHIC SURVEY MAP

3.3.2 Wetland

Char & Associates identified and delineated the limits of the wetland within the project site. The Corps of Engineers, in their letter of January 8, 2000, concurred with Char's delineation of the wetland limits (see **Appendix A**). The wetland encompasses an area including the small stream within the 30-foot contour line on the topographic map (see **Figure 3-1**). Char reported that wetland indicator species such as Job's tears, primrose willow, hau and honohono make up about 95 percent of the vegetal cover in this area. The soils along the stream have been identified as Hanalei silty clay (HnA) which is on the local list of hydric soils. Refer to the wetland delineation in **Appendix C** for more information.

Wetlands provide natural water quality treatment by settling, filtering and plant uptake of pollutants in runoff. Presently, storm water runoff from over 40 acres of urbanized land in Kaneohe is conveyed to the wetland by the two 48-inch drainage pipes.

3.3.3 Kaneohe Stream

Kaneohe Stream is located along the southern boundary of the project site. The stream is perennial, with a drainage area for the stream and its tributaries reportedly totaling 3,640 acres. In the vicinity of the project site, Kaneohe Stream is confined to a concrete channel ending just below the project site. Further downstream, the stream bed is natural with mostly soil banks. Upstream, the stream bed is concrete with vertical walls constructed of concrete or CRM.

3.3.4 Water Quality

Water samples were collected from three stations for evaluation of water quality. Two stations were located onsite in the small stream and the third station was located in Kaneohe Stream just downstream of its confluence with the small stream. A summary of the results is presented in **Table 3-1**. Based on the water quality analysis, it appears that flows of the small stream have recently originated from a ground water source. Refer to the report by AECOS, Inc. in **Appendix C** for more information.

3.4 FLOOD AND TSUNAMI HAZARDS

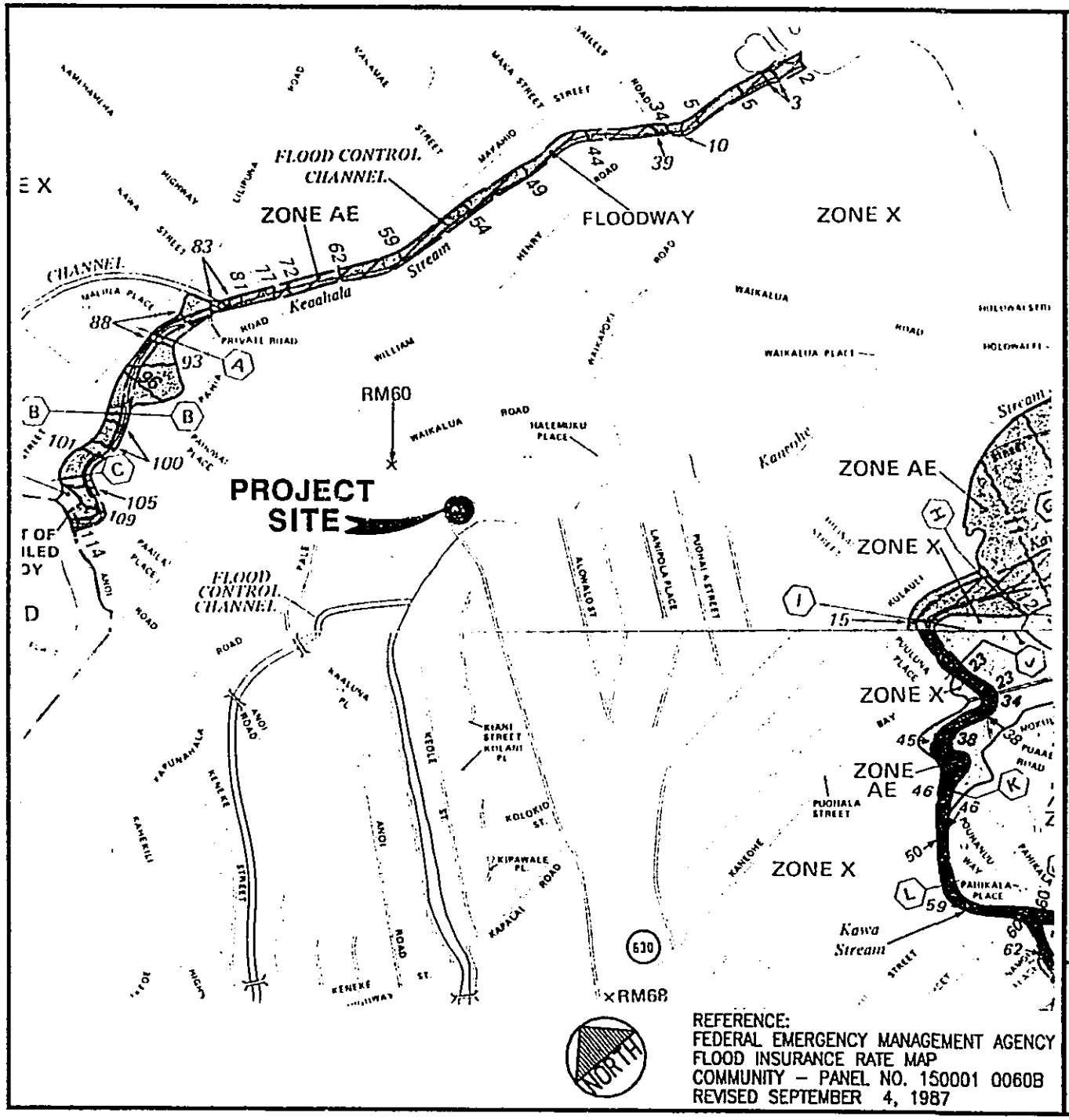
According to the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM), the project site is located in Zone X, an area determined to be outside of the 500-year flood plain (see **Figure 3-2**).

TABLE 3-1
WATER QUALITY CHARACTERISTICS

Constituent	Station 1 [1]	Station 2 [2]	Station 3 [3]
Time sampled [4]	12:45 pm	12:35 pm	12:30 pm
Temperature (°C)	25.4	26.4	29.9
Dissolved Oxygen (mg/l)	2.70	6.4	11.4
DO saturation (%)	33	79	150
Conductivity (μmhos/cm)	283	282	190
pH	6.97	7.24	9.43
Turbidity (NTU)	6.51	4.12	6.52
Total Suspended Solids (mg/l)	4.8	2.9	8.9
Ammonia (μg N/l)	110	30	23
Nitrate + nitrite (μg N/l)	1510	1210	356
Total N (μg N/l)	1620	1240	356
Total Phosphorus (μg P/l)	70	58	41

Reference: AECOS, Inc.

1 Station 1 located in tributary, downstream of upper pool
2 Station 2 located in tributary, downstream pool
3 Station 3 located Kaneohe Stream, downstream of channelization
4 Water samples taken on April 27, 1999



LEGEND

SPECIAL FLOOD HAZARD AREAS INUNDATED BY 100-YEAR FLOOD

- ZONE A — No base flood elevations determined
- ZONE AE — Base flood elevations determined
- ZONE AH — Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.
- ZONE AO — Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE A99 — To be protected from 100-year flood by Federal flood protection system under construction; no base elevations determined
- ZONE V — Coastal flood with velocity hazard (wave action); no base flood elevations determined.
- ZONE VE — Coastal flood with velocity hazard (wave action); base flood elevations determined

FLOODWAY AREAS IN ZONE AE

OTHER FLOOD AREAS

- ZONE X — Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood

OTHER AREAS

- ZONE X — Areas determined to be outside 500-year flood plain.
- ZONE D — Areas in which flood hazards are undetermined

Flood Boundary

Floodway Boundary

Zone D Boundary

Boundary Dividing Special Flood Hazard Zones, and Boundary Dividing Areas of Different Coastal Base Flood Elevations Within Special Flood Hazard Zones.

513 — Base Flood Elevation Line; Elevation in Feet*

(D) (D) — Cross Section Line

(EL 987) — Base Flood Elevation in Feet Where Uniform Within Zone*

RM7/X — Elevation Reference Mark

*Referenced to the National Geodetic Vertical Datum of 1929

FIGURE 3–2

FLOOD HAZARD MAP

According to the Oahu Civil Defense Agency's Tsunami Evacuation Map 7 (Kailua to Kaneohe Bay), the project site is not located within an evacuation area.

3.5 FLORA

A botanical survey of the project site was conducted by Char & Associates in April 1999. Refer to **Appendix C** for the complete report. Char reported that the project site is dominated almost exclusively by introduced or alien species. The only native plant observed was hau (*Hibiscus tiliaceus*), an indigenous species. Plants originally of early Polynesian introduction include the green ti leaf (*Cordyline fruticosa*), primrose willow or kamole (*Ludwigia octovalvis*) and 'ape (*Alocasia macrorrhiza*). The site does not support any remnant native plant-dominated vegetation types. No threatened and endangered species or species of concern were observed.

The portion of the project site next to Kaneohe Stream that is utilized by the Division of Road Maintenance is open and scattered with patches of weedy plants such as cheeseweed (*Malvastrum coramandelianum*), fuzzy rattlepod (*Crotalaria incana*), swollen fingergrass (*Chloris barbata*), pigweed (*Portulaca oleracea*), milkweed (*Sonchus oleraceus*), and creeping indigo (*Indigofera spicata*).

The rest of the project site supports dense vegetation of almost exclusively introduced species. Large trees, 30 to 60 feet tall, include monkeypod (*Samanea saman*), African tulip (*Spathodea campanulata*), and octopus or rubber tree (*Schefflera actinophylla*). Beneath the trees are scattered thickets of 10 to 30 feet tall koa haole shrubs (*Leucaena leucocephala*) and dense clumps of 3 to 6 feet tall Guinea grass (*Panicum maximum*). Ornamental species found along Kamehameha Highway include mock orange shrubs (*Murraya paniculata*), fern tree (*Filicium decipiens*), cinnamon or Padang cassia (*Cinnamomum burnamii*), Mickey Mouse plant (*Ochna kirkii*), red ti leaf (*Cordyline fruticosa*), asparagus fern (*Asparagus setaceus*), and wedelia (*Wedelia trilobata*). An abundance of golden pothos or taro vine (*Epipremnum pinnatum*) and ivy gourd vine (*Coccinia grandis*) was noted.

The drainageway adjacent to the library parking lot supports dense clumps of Guinea grass. Also noted were banana (*Musa X paradisiaca*), green ti leaf and koa haole shrubs, maile pilau (*Paederia scandens*) and moon flower (*Ipomoea alba*)

Along the small stream, the banks are overgrown with Job's tears (*Coix lachryma-jobi*). Other species include honohono (*Crommelina diffusa*), barnyard grass (*Echinochloa crus-galli*), primrose willow, blue ginger (*Dichorisandra thyrsiflora*) and 'ape. A very large hau thicket covers the southern half of the small stream.

Where the small stream enters Kaneohe Stream, elodea (*Egeria densa*) and mats of a green filamentous algae are abundant.

3.6 AQUATIC FLORA AND FAUNA

The small stream was found to harbor a diversity of aquatic plants and animals, all introduced (non-native) species. Of note was a sparse growth of monochoria (*Monochoria vaginalis*), a somewhat rare emergent aquatic plant, in the upper pool; and abundance of a green alga (*Spirogyra* sp.) and elodea (*Egeria densa*) in the lower pool. The introduced atyid shrimp, *Neocaridina denticulata* was observed. A list of aquatic species observed or reported from lower Kaneohe Stream is presented in **Appendix D.**

3.7 ARCHAEOLOGICAL AND HISTORIC RESOURCES

An archaeological inventory survey of the project site was performed by Cultural Surveys Hawaii in March 1999. Refer to **Appendix E** for the complete report. The field investigation noted extensive grading and filling of the southern portion of the project site which significantly altered the surface topography. Due to extensive development within the project area, no archaeological resources were observed or are predicted to be encountered during construction of the proposed parking lot. The State Historic Preservation Division has reviewed accepted the report documenting the archaeological inventory survey (refer to correspondence in **Appendix B**).

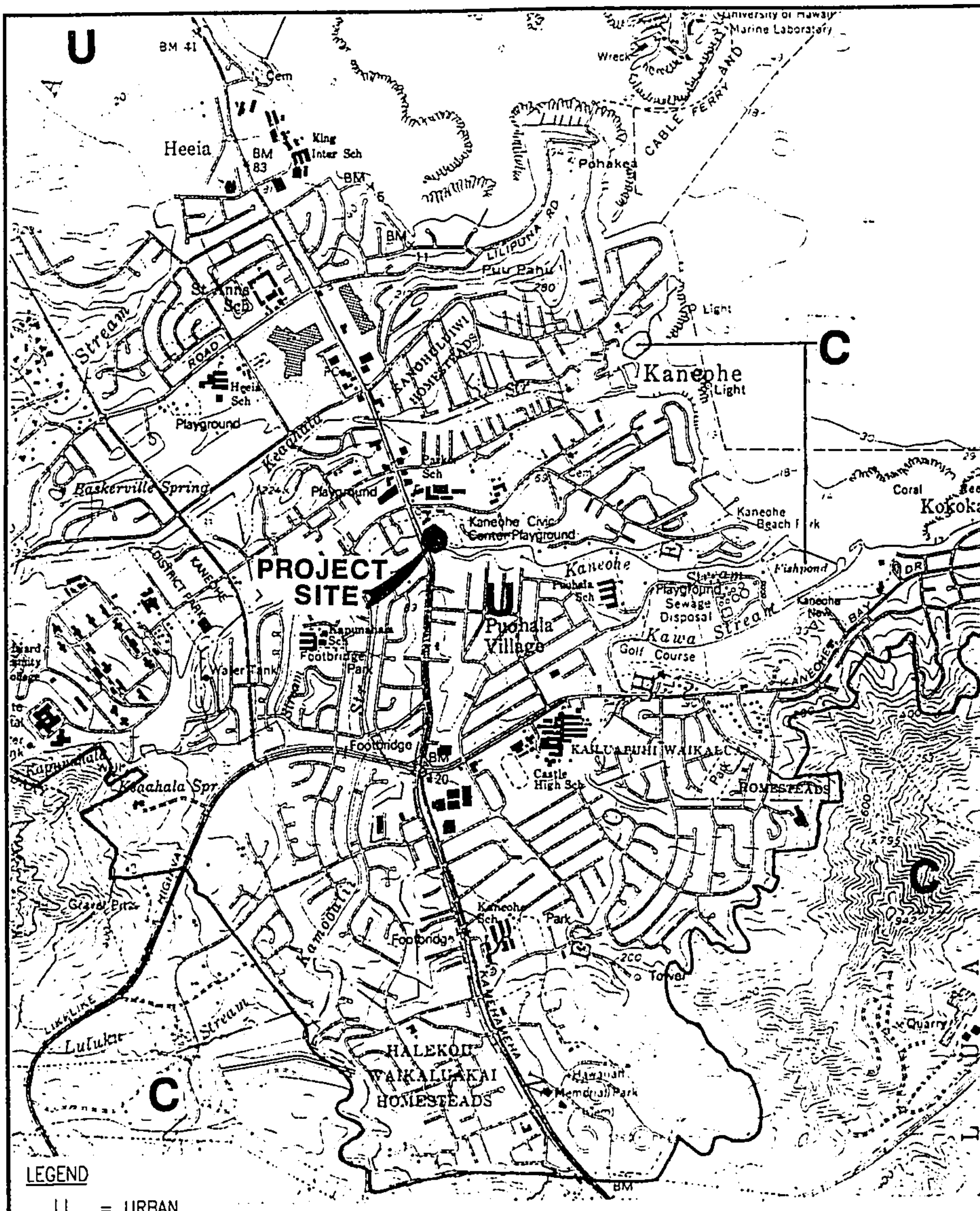
3.8 LAND USE AND ZONING

The project site is located in the Urban district according to the State Land Use Commission District Boundary Map for the area (see **Figure 3-3**).

The project site is located in the R-7.5 Residential district according to the City and County of Honolulu Zoning Map for the area (see **Figure 3-4**).

3.9 NEIGHBORING LANDS

The entire 5.443-acre Civic Center parcel (TMK: 4-5-18:2) abuts lands owned by the City and County of Honolulu, State of Hawaii, seven privately-owned residential parcels along Waikalua Road and Halemuku Place (TMKs: 4-5-18:4, 5, 27, 28, 29, 30, and 31) and a stream-side parcel (TMK: 4-5-18:50). However,



LEGEND

U = URBAN

C = CONSERVATION

—— = LAND USE DISTRICT BOUNDARY

NORTH

Reference:
State Land Use Commission
Boundary Map O-12

0 1000 2000 4000
GRAPHIC SCALE IN FEET

FIGURE 3-3

STATE LAND USE DISTRICT BOUNDARY MAP

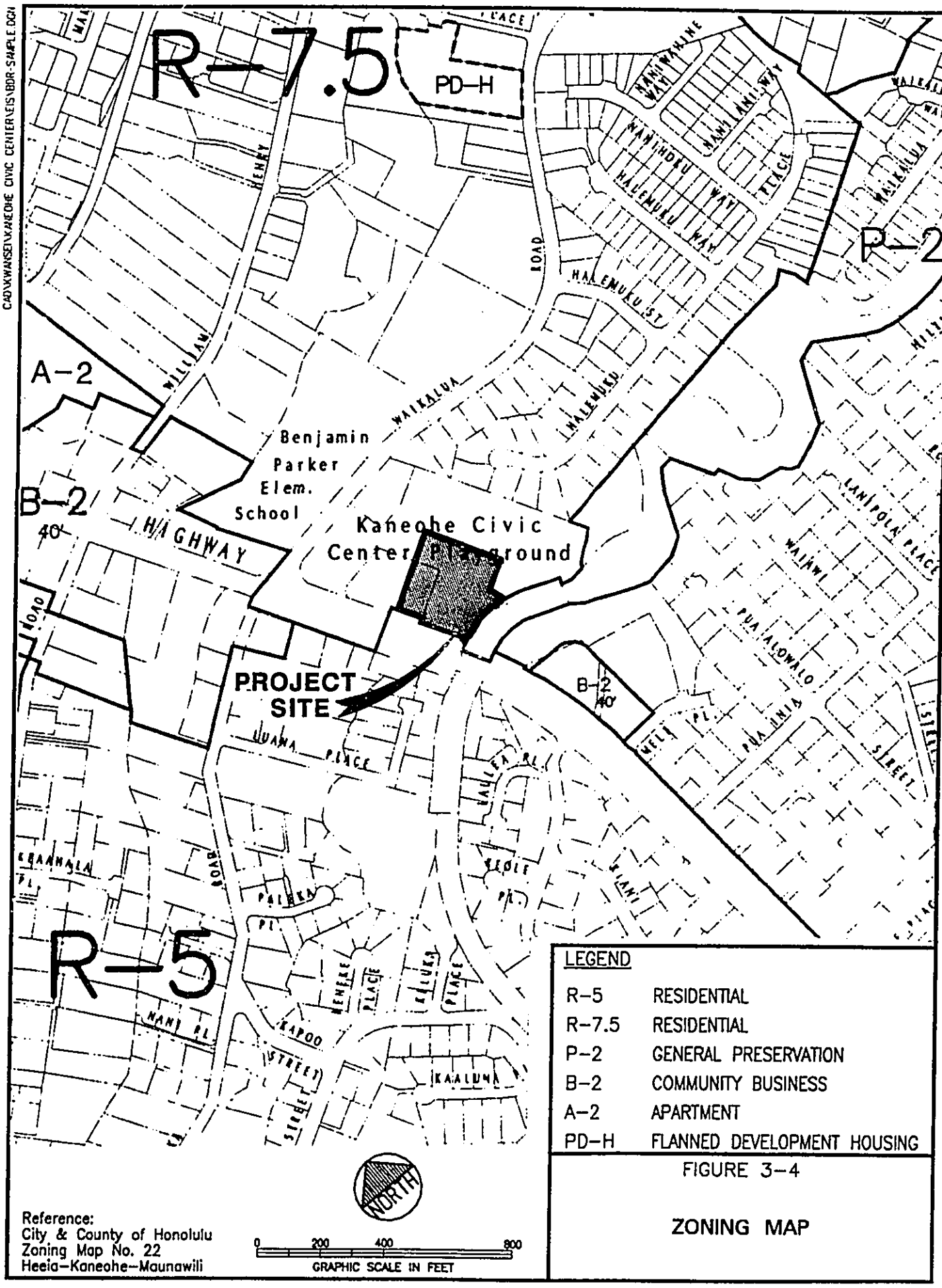


FIGURE 3-4

ZONING MAP

the proposed action is limited to a portion of parcel 4-5-18:2 located furthest from the residential area, separated from the residential boundaries by approximately 300 feet of the neighborhood park.

The lands adjacent to the project site itself are publically-owned, identified as TMK: 4-5-18:2 (Kaneohe Public Library), Kaneohe Stream, and Kamehameha Highway.

3.10 ROADS AND TRAFFIC

Access to the Kaneohe Civic Center Neighborhood Park is provided by a driveway off of Waikalua Road. Use of the driveway is shared with the Kaneohe Police Station and the Kaneohe Public Library. Waikalua Road is a local two-lane road with a posted speed limit of 25 mph. On-street parking is not allowed in the vicinity of the project site. Waikalua Road intersects with Kamehameha Highway at a signalized intersection located to the west of the project site.

A traffic impact assessment was prepared by Pacific Planning and Engineering for the project. Refer to **Appendix F** for the complete report. Manual traffic counts were taken at the intersections of Waikalua Road and the project driveway on a Saturday morning when an AYSO soccer game was being held at the park. Through traffic on Waikalua Road was observed to flow smoothly. Level-of-Service (LOS) conditions for critical traffic movements under existing conditions were reported as follows:

Traffic Movement	Level-of-Service (LOS)
Left-turn from Waikalua Rd.to project driveway	A
Left-turn/through/right-turn from project driveway to Waikalua Rd.	C

3.11 UTILITIES

The neighborhood park comfort station has potable water service and is connected to the municipal sewer system. A sewer easement bisects the proposed parking lot site, extending from the Kaneohe Public Library to a manhole near Kaneohe Stream. The 10-foot wide easement accommodates a 6-inch sewer from the library. There is presently no water, electrical power or telephone service at the proposed parking lot site.

CHAPTER 4
POTENTIAL IMPACTS AND MITIGATION MEASURES

The intent of this chapter is to describe the potential impacts to the existing physical and social environment which may result from construction and operation of the proposed project. Mitigation measures which will be employed to minimize negative impacts are also discussed in this chapter.

Potential impacts may be classified as "short term" or "long term". Short term impacts are generally associated with construction activities. Long term impacts are those which are lasting, resulting from the presence or operation of the project after it is constructed.

4.1 REGIONAL IMPACTS

Short term regional impacts associated with construction of the project may include temporary increases in fugitive dust, noise and traffic generated by construction vehicles traveling to and from the project site. Complaints relating to these issues may also have a short term impact on calls for police service. These impacts will cease upon completion of construction. Refer to the sections which follow for a discussion of each specific topic.

Significant long term regional impacts are not foreseen.

4.2 TOPOGRAPHY

The grassed drainageway separating the library parking lot from the project site will be filled in order to construct the proposed parking lot. The drainage function will be maintained by installation of an underground drainage system within the filled drainageway in order to continue conveyance of storm runoff from offsite areas through the site.

4.3 SOIL EROSION

The potential for soil erosion will be a short term impact, limited to construction activities. Removal of existing vegetation and grading will result in bare soil which is subject to erosion. After completion of construction, the erosion potential for

the site will be less than existing conditions due to the increase in impervious surfaces and establishment of permanent landscaping.

Mitigative measures will be implemented during construction to minimize soil erosion and offsite sediment transport. Control measures will be included on the construction drawings and may include the following:

- Construction of a temporary silt fence along the downstream side of the grading limits to minimize offsite transport of sediment and debris to the small stream, wetlands and Kaneohe Stream.

- Installation of debris barriers at existing drainage inlets to minimize deposition of construction-related trash and sediment within the municipal storm drain system.

Clearing and grubbing will be conducted in accordance with Chapter 23, "Grading, Soil Erosion and Sediment Control," of the Revised Ordinances of Honolulu, 1978, as amended.

4.4 WATER QUALITY

The proposed action avoids fill within the onsite wetland, maintaining its existing natural water treatment function. Existing treatment processes provided by the wetland will continue to protect water quality within Kaneohe Stream. Although the quantity of storm water runoff is expected to increase after pavement of the parking lot, any impact to the wetland would be small since the affected area is only a fraction of the 40-acre wetland tributary area. Similarly, any change in the quality of runoff to the wetland after construction would be minimal due to the dilution of parking lot runoff with runoff from the rest of the urbanized tributary area. The mitigative measures to control erosion and offsite sediment transport described previously will aid in preserving the existing water quality of the small onsite stream and Kaneohe Stream during the construction period.

4.5 FLOOD AND TSUNAMI HAZARD

The project site is not located within a flood zone or tsunami innundation area, nor will the proposed action impact these areas.

4.6 FLORA

The botanical resources assessment reported that the entire parcel appears to have been disturbed for a long period of time, and as a result, is dominated almost exclusively by introduced plants. The site does not support any remnant native plant-dominated vegetation types. No threatened or endangered species or species of concern occur on the property. The assessment concluded that there are no reasons to impose any restrictions, conditions, or impediments to the proposed use of the site as a parking lot.

Two large trees (African tulip and rubber tree) will need to be relocated. The affected trees are intended to be relocated within the site, to fulfill part of the Land Use Ordinance landscaping criteria for the parking lot.

4.7 AQUATIC FLORA AND FAUNA

The proposed project will avoid filling the small stream and onsite wetland.

4.8 ARCHAEOLOGICAL AND HISTORIC RESOURCES

Based on historical research of archival documents, maps, Land Commission Awards, historical accounts, previous archaeological research, and field investigations, the archaeological inventory survey states that the project area is free of any archaeological constraints and no further archaeological work is recommended. The State Historic Preservation Division (SHPD) has reviewed this report and concurs with its findings (refer to correspondence in **Appendix B**).

Construction drawings will be submitted to the SHPD for review, when available. In the unlikely event that human remains or significant cultural deposits are encountered during construction, all work in the project area will cease and the SHPD will be contacted for direction.

4.9 LAND USE AND ZONING

The proposed project will not require a change in the existing land use or zoning.

According to the Department of Planning and Permitting, the proposed project is consistent with the objectives and policies of the General Plan and the provisions of the current Koolaupoko Development Plan. A symbol for the project is included on the Development Plan Public Facilities Map. The proposed project is also

generally consistent with Bill 82 (1999), CD1, to adopt the proposed Koolaupoko Sustainable Communities Plan.

4.10 NEIGHBORING LANDS

The Kaneohe Public Library, adjacent to the project site, will lose three parking stalls due to location of the proposed parking lot entrance within the library parking lot. The loss of stalls will be mitigated upon completion of construction since the project provides additional public parking in an adjacent lot. The proposed parking lot will be lighted, providing a considerable increase in available parking stalls for library patrons, particularly at night when activity at the neighborhood park ceases.

The schedule of construction activities will be coordinated with the library and Kaneohe Police Station to minimize impacts on their operations.

In addition, the Fire Communication Center (523-4411) will be notified of any interruption of the fire hydrant system during construction. Fire apparatus access will be maintained along the shared entrance driveway and throughout the project site for the duration of construction.

Due to the buffer zone provided by the neighborhood park (approximately 300 feet), residences along Waikalua Road and Halemuku Place are not anticipated to be impacted by the project.

4.11 TRAFFIC

Traffic and parking congestion may increase during the construction period as a result of construction workers and haul trucks. Construction activities will be coordinated with the neighboring Kaneohe Police Station and Kaneohe Library in order to minimize impacts to their operations due to construction vehicles utilizing the shared driveway.

As a general rule, parking lots do not generate traffic. Rather, they service traffic generated by the surrounding land uses. Many of the motorists who would be using the proposed parking lot are already on the roadways (i.e. dropping park users off or parking nearby and walking to the neighborhood park). Although the number of vehicles on Waikalua Road would not change significantly, construction of the proposed parking lot would increase turning movements entering and exiting the park driveway. The additional turning movements would cause some increase in delays. However, the Level-of-Service (LOS) for critical movements at the

CORRECTION

THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY
SEE FRAME(S)
IMMEDIATELY FOLLOWING

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intersection of the project site driveway and Waikalua Road would not be affected by the proposed parking lot.

The project is located in a community that has already been substantially developed. The likelihood of further development is small, as reflected in the Oahu Regional Transportation Plan (ORTP) which does not indicate major traffic growth.

4.12 AIR QUALITY

A potential short term impact of the project is increased emissions associated with construction-related vehicles and fugitive dust from haul trucks and grading operations. State air pollution control regulations require no visible dust emissions at the property line. To ensure compliance with these regulations, the following mitigation measures will be implemented:

- Dust minimization will be considered when planning construction activities.
- An adequate water source will be provided prior to the start-up of construction activities.
- Bare areas, including slopes, will be grass-mulched or landscaped as soon as physically possible.
- Adequate dust control measures will be provided during weekends, after hours, and prior to daily start-up of construction activities.
- Dust from debris being hauled away from the site will be controlled by covering truck beds.

The contractor will be required to implement an effective dust control plan and comply with the provisions of Hawaii Administrative Rules (HAR), Chapter 11-60.1, "Air Pollution Control", Section 11-60.1-33 on Fugitive Dust.

Additionally, the contractor will be required to implement measures to minimize air quality degradation by other sources, including vehicle exhaust emissions. Exhaust emissions may be mitigated by inspecting construction vehicles and transporting construction vehicles and equipment to and from the project site during off-peak hours.

4.13 NOISE

Increased noise during the construction period is a potential short-term impact. Actual onsite noise levels will be dependent upon the construction methods employed by the contractor. Noise transmission from the project site to surrounding areas is influenced by three natural effects: distance, atmospheric conditions, and terrain/vegetation.

Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control" states the maximum permissible sound levels for various zoning districts. The allowable noise level for residential districts during daytime hours (7:00 a.m. to 10:00 p.m.) is 55 dBA. As with most construction projects, noise will likely exceed the allowable limits. Therefore, the contractor will be required to obtain a noise permit from the state Department of Health which will specify the allowable conditions under which noise-producing operations can occur (i.e. restricted time periods of the day, restricted days, etc.). Construction equipment that emit exhaust gas or air and roadway transit vehicles must be equipped with mufflers to meet the noise level limits stated in HAR, Chapter 11-42, "Vehicular Noise Control for Oahu".

Construction noise can be mitigated by use of noise control devices (exhaust mufflers, intake silencers) and barriers (partition shields), and by scheduling construction activities in accordance with permit conditions to minimize disturbances and inconveniences to motorists, residents and neighboring facilities.

4.14 UTILITIES

The proposed project is not anticipated to have a long term impact on existing water use or wastewater generation at the neighborhood park. Water use may increase initially during construction during establishment of permanent landscaping. However, a permanent irrigation system has not been proposed for the parking lot.

A slight increase in the quantity of storm runoff from the project site is anticipated after development of the parking lot due to the increase in impervious surfaces at the site. The increased quantity of storm runoff is not expected to have a significant impact on downstream drainage facilities or Kaneohe Stream.

Electrical requirements will also increase due to illumination of the parking lot at night. However, the project is not expected to significantly impact electrical service in the area. Electrical requirements will be coordinated with Hawaiian Electric Company during the design phase.

CHAPTER 5
ALTERNATIVES TO THE PROPOSED ACTION

This chapter discusses alternatives against which the proposed action was evaluated. The alternatives were rejected for their inability to meet the project objectives (no action) or attainment of the objectives at a higher cost (financially and/or environmentally).

To restate, the Department of Design and Construction's objectives for this project are to:

- provide parking for users of the Kaneohe Civic Center Neighborhood Park; and
- minimize the environmental impact of development on Kaneohe Stream and other sensitive habitats.

5.1 NO ACTION

Under the "no action" alternative, neighborhood park users would continue to park their vehicles at distances and walk to the park. Unauthorized use of the adjacent Kaneohe Public Library parking lot would also continue, at the expense of library patrons.

5.2 LARGER PARKING LOT LAYOUT

Construction of a larger parking lot to accommodate 75 parking stalls within two parking bays was considered (see **Figure 5-1**). The alternative would require filling the existing wetland and extension of the drainage system. This alternative would be more expensive and have a greater environmental impact than the proposed action.

5.3 SMALLER PARKING LOT LAYOUT

Construction of a smaller parking lot (single parking bay for 24 cars) was also considered (see **Figure 5-2**). With this alternative, all improvements could be contained within property owned by the City and County of Honolulu. There

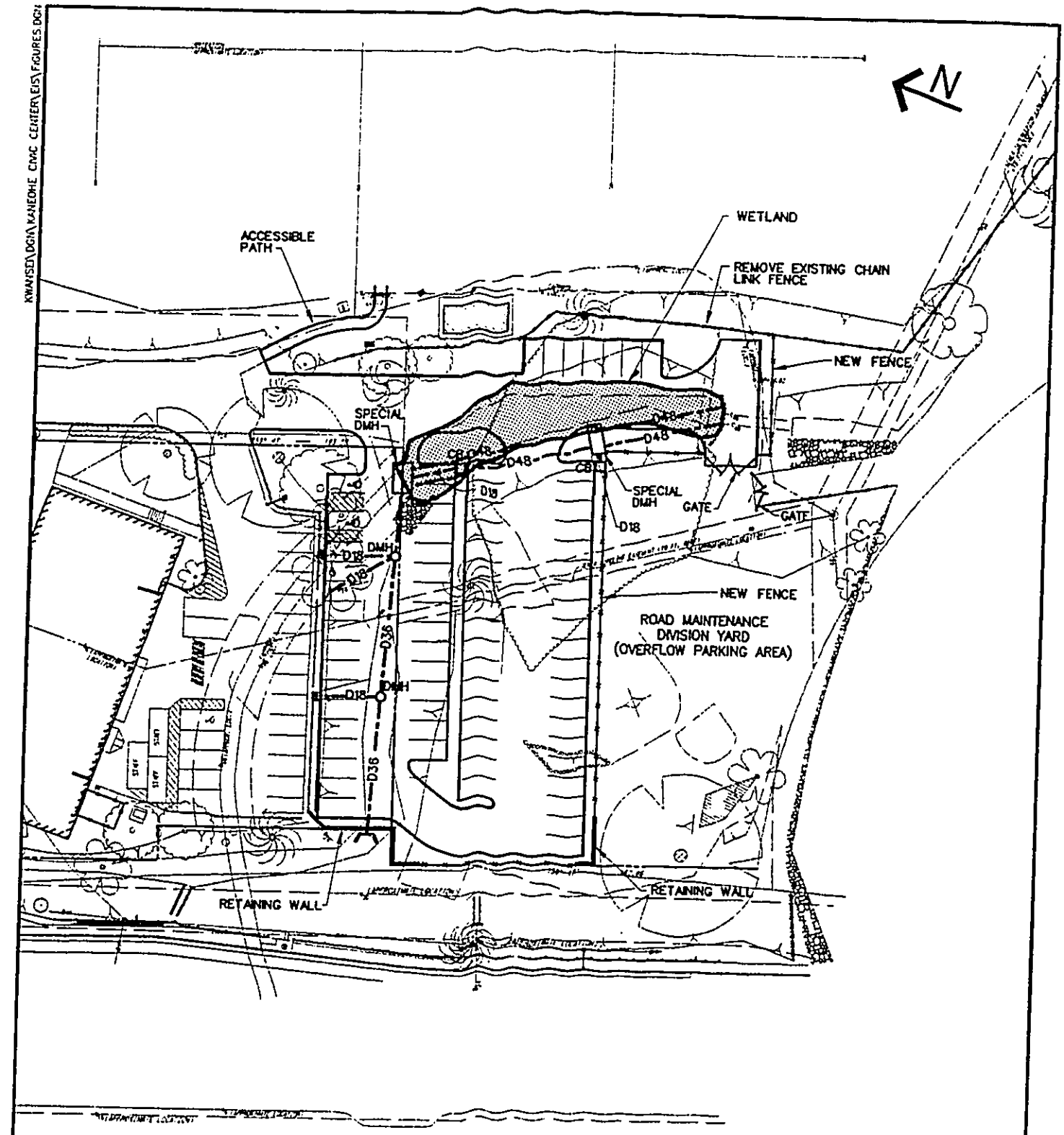

FIGURE 5-1

LARGER
PARKING LOT ALTERNATIVE

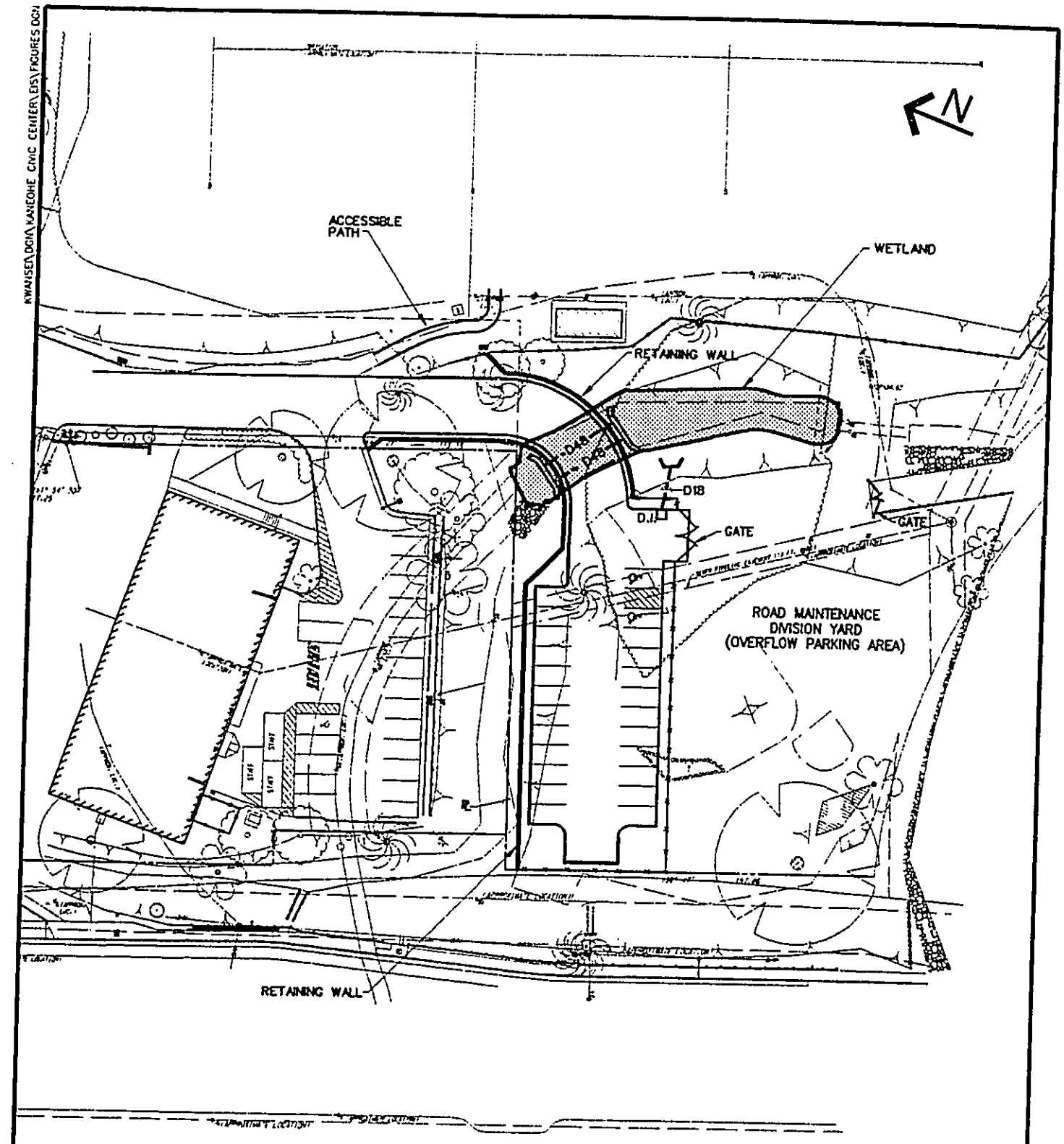

FIGURE 5-2

SMALLER
PARKING LOT ALTERNATIVE

would be minimal fill within the drainageway between the library parking lot and project site. However, a portion of the wetland would need to be filled in order to construct an entrance to the parking lot. Alternatively, construction of a bridge would be required to span the wetland, resulting in a significant increase in the cost of the project. While the addition of 24 parking stalls would be a significant improvement over existing conditions, the parking lot would be too small to alleviate the parking shortfall during soccer games.

CHAPTER 6
FINDINGS AND DETERMINATION

6.1 DETERMINATION

The Department of Design and Construction has concluded that the proposed project does not have the potential to generate significant environmental impacts and the need to prepare an environmental impact statement is not evident. Therefore, this Final Environmental Assessment has been submitted with a Finding of No Significant Impact (FONSI) determination.

6.2 FINDINGS AND REASONS SUPPORTING DETERMINATION

The overall and cumulative impacts of the proposed action were evaluated with respect to Hawaii Administrative Rules (HAR) Title 11, Department of Health, Chapter 200, Environmental Impact Statement Rules, Section 11-200-12 "Significance Criteria". The following findings and conclusions can be made in support of the FONSI determination:

(1) *The proposed action will not involve an irrevocable commitment to loss or destruction of any natural or cultural resource.*

The project site and surrounding lands have been previously altered due to construction of Kamehameha Highway, Kaneohe Public Library, and various drainage structures. There are no historical or pre-historical archaeological resources known to exist within the project site. The onsite wetland and small stream (tributary to Kaneohe Stream) will not be filled by construction of the project.

(2) *The proposed action will not curtail the range of beneficial uses of the environment.*

The project site (TMK 4-5-18:2) is owned by the City and County of Honolulu and is designated for civic center use. The proposed parking lot will support the existing civic center functions.

(3) *The proposed action will not conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344,*

HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders.

Development of the proposed parking lot will comply with the environmental policies, goals and guidelines of Chapter 344, HRS.

(4) *The proposed action will not have a substantial negative effect on the economic or social welfare of the community or state.*

The proposed parking lot will have a positive effect on the community by filling a need for parking at the neighborhood park. The project will also relieve the parking situation presently experienced by the Kaneohe Public Library due to unauthorized use of library stalls by park users, and provide additional public parking for library patrons.

(5) *The proposed action will not have a substantial negative effect on public health.*

Construction activities may temporarily increase noise, fugitive dust and vehicular air emissions. However, these impacts will subside upon completion of construction. There should be no long term impact on public health.

(6) *The proposed action will not involve substantial secondary impacts, such as population changes or effects on public facilities.*

The proposed action will not impact population. The project will provide needed public parking to serve existing community facilities.

(7) *The proposed action does not involve substantial degradation of environmental quality.*

Potential impacts have been addressed in **Chapter 4**. Substantial degradation of environmental quality is not foreseen in the long term.

(8) *The proposed action will not have a considerable cumulative effect upon the environment or involve a commitment for larger actions.*

The surrounding lands have been previously developed. The proposed parking lot will serve the existing land uses.

(9) *The proposed action will not substantially affect a rare, threatened, or endangered species or its habitat.*

There were no rare, threatened or endangered species or habitats identified within the project site or its immediate vicinity.

(10) *The proposed action will not affect air or water quality or ambient noise levels.*

During construction, short term impacts to air quality, water quality and noise may be experienced. Chapter 4 includes discussions of mitigative measures to minimize these potential impacts. No long term impacts are anticipated.

(11) *The proposed action will not affect, nor is it likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal water.*

The project site is not located in a flood plain, coastal, erosion-prone or geologically hazardous area. The proposed project will not significantly impact the onsite wetland or small stream (tributary to Kaneohe Stream). Existing treatment processes provided by the wetland will continue to protect water quality within Kaneohe Stream. Although the quantity of runoff is expected to increase due to pavement of the parking lot, any impact to the wetland would be small since the affected area is only a fraction of the 40-acre wetland tributary area. Alternatively, neither the wetland or stream are anticipated to impact the proposed parking lot once it has been constructed.

(12) *The proposed action will not substantially affect scenic vistas or viewplanes identified in county or state plans or studies.*

No visual impact is anticipated. The project site is situated in a depression below Kamehameha Highway. Large canopy trees within the site which are visible from the highway will remain.

(13) *The proposed action will not require substantial energy consumption.*

The proposed parking lot will be illuminated at night. However, energy consumption will not be substantial.

CHAPTER 7
CONSULTATION

7.1 PARTICIPANTS

This environmental assessment (EA) was prepared for the City and County of Honolulu Department of Design and Construction by Engineering Concepts, Inc. The following consultants were also involved in the preparation of this document:

Consultant	Area of Expertise
AECOS, Inc.	Stream Biology / Water Quality
Char & Associates	Botanical Resources
Cultural Surveys Hawaii, Inc.	Archaeological / Historic Resources
Pacific Planning & Engineering, Inc.	Traffic Engineering

7.2 PARTIES CONSULTED DURING PREPARATION OF THE DRAFT EA

Preliminary consultation with agencies and other interested organizations was conducted during preparation of the Draft EA. Selected correspondence is included in **Appendix A.** The following parties were consulted:

Kaneohe Neighborhood Board No. 30
Councilmember Steve Holmes
City and County of Honolulu, Department of Parks and Recreation
City and County of Honolulu, Department of Facility Maintenance, Division of Road Maintenance
State of Hawaii, Department of Education, State Librarian
State of Hawaii, Department of Land and Natural Resources, Division of Historic Preservation
U.S. Army Corps of Engineers, Regulatory Branch

7.3 PARTIES CONSULTED DURING PREPARATION OF THE FINAL EA

Forty-one (41) copies of the Draft EA were mailed to agencies, organizations and other interested parties. A complete listing of these consulted parties is included in **Table 7-1.** Availability of the Draft EA was published in the April 23, 2000 edition of *The Environmental Notice* by the Office of Environmental Quality Control. A total of twenty-one comment letters were received as of

TABLE 7-1
DRAFT EA DISTRIBUTION LIST

	FEDERAL GOVERNMENT
	U.S. Army Engineer District, Honolulu
	U.S. Fish and Wildlife Service
NC	U.S. Geological Survey, Water Resources Division
	STATE GOVERNMENT
	Senator Marshall Ige, 24th District
	Representative Iris Ikeda Catalani, 47th District
	Representative Ken Ito, 48th District
NC	Dept. of Accounting and General Services
	Dept. of Business, Economic Development & Tourism
NC C	Dept. of Education: Superintendent of Education State Librarian
NC	Dept. of Hawaiian Home Lands, Hawaiian Homes Commission
NC	Dept. of Health, Environmental Planning Office
 C C	Dept. of Land and Natural Resources: Chairperson Commission on Water Resource Management State Historic Preservation Division
C	Dept. of Transportation
C	Office of Environmental Quality Control
C	Office of Hawaiian Affairs
C	University of Hawaii Environmental Center

TABLE 7-1 (continued)

CITY AND COUNTY GOVERNMENT	
	Councilmember Steve Holmes, District II
C	Board of Water Supply
NC	Dept. of Environmental Services
NC	Dept. of Facility Maintenance
	Dept. of Parks and Recreation
C	Dept. of Planning and Permitting
C	Dept. of Transportation Services
C	Honolulu Fire Department
C	Honolulu Police Department
OTHER INTERESTED PARTIES	
	Hawaiian Electric Company, Inc.
C	GTE Hawaiian Telephone Company, Inc.
C	Oceanic Cable
	The Gas Company
	Kaneohe Neighborhood Board No. 30
	Outdoor Circle
LIBRARIES	
	State Main Library
	Kaneohe Public Library

June 29, 2000 (the public review period ended on May 23, 2000). Agencies, organizations and other interested parties responding to the request for comments are indicated with a "C" in Table 7-1. Those parties responding with "no comments" are labeled with a "NC".

7.4 COMMENTS ON THE DRAFT EA

Comment letters received as a result of public review of the Draft EA and responses prepared by the applicant have been included in Appendix B.

REFERENCES

Engineering Concepts, Inc., *Preliminary Engineering Report for the Proposed Kaneohe Civic Center Parking Lot, Kaneohe, Hawaii*, prepared for the City and County of Honolulu Department of Design and Construction, March 2000.

Federal Emergency Management Agency, "Flood Insurance Rate Map, City and County of Honolulu Community-Panel No. 150001 0060B, revised September 4, 1987.

Hawaii State, Department of Health, Title 11, *Department of Health Administrative Rules*, "Chapter 200 - Environmental Impact Statement Rules", August 20, 1996.

Hawaii State, Department of Health, *Title 11, Department of Health Administrative Rules*, "Chapter 42 - Vehicular Noise Control for Oahu", October 24, 1981.

Hawaii State, Department of Health, *Title 11, Department of Health Administrative Rules*, "Chapter 46 - Community Noise Control", September 23, 1996.

Hawaii State, Department of Health, *Title 11, Department of Health Administrative Rules*, "Chapter 60.1 - Air Pollution Control", October 29, 1993.

Honolulu, City and County of, Department of Land Utilization, *Land Use Ordinance*, 1997.

U.S. Department of Agriculture Soil Conservation Service, *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, August 1972.

APPENDIX A

Correspondence

April 28, 1999

To: Memorandum To File

From: C. Arakaki

Subject: Civic Center Parking Lot

Following is the summary of Albert Miyashiro's (Assistant Chief, Division of Road Maintenance, Department of Facility Maintenance) comments on the three parking lot schemes which was forwarded for his review and comments:

a. He said DRM use their area about once a year when the the stream requires cleaning. The area is used for parking their equipment and for temporarily storing the debris removed from the stream for drying.

b. He mentioned that it is not a big concern if we encroach into their work area (adjusted), if they have an open area to store their equipment and the stream debris.

c. He advised that he remembers that during discussion with the Kaneohe Neighborhood Board no trees or shrubberies behind the rest room will be removed. Scheme 1 shows removal of trees and shrubberies. Scheme 2 also shows removal of trees for the construction of the access road. He reiterated that we shouldn't deviate from this understanding or we may have some difficulty with the Neighborhood Board.

d. He suggested that if we would clear, level, and lay gravel over the DRM area, it can be used for overflow parking when DRM is not using the area.

BENJAMIN J. CAYETANO
GOVERNOR

Ltr. No. OSL-99-481

Virginia Lowell
XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX
STATE LIBRARIAN

DC 99-628

STATE OF HAWAII
DEPARTMENT OF EDUCATION
HAWAII STATE PUBLIC LIBRARY SYSTEM
465 SOUTH KING STREET, B-1
HONOLULU, HAWAII 96813

OFFICE OF THE STATE LIBRARIAN

June 29, 1999

Mr. Randall K. Fujiki
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 2nd Floor
Honolulu, Hawaii 96813

Dear Mr. Fujiki:

Subject: Kaneohe Civic Center Parking Lot, Kaneohe, Koolaupoko, Oahu

We reviewed Scheme 1 (Maximum Parking Stalls [77 stalls], Scheme 2 (Improvements Restricted to City Property [28 stalls]), and Scheme 3 (Avoid Wet Area [47 stalls] for the Kaneohe Civic Center Parking Lot. The Hawaii State Public prefers Scheme 2 to Scheme 3, but either is acceptable. We also have the following comments/questions:

Parking plans

Any plan to add parking needs to include provisions for upgrading the access road to the parking areas?

- Road needs to be widened to allow for a better flow of traffic, specifically given the heavy multi-use nature of the area: driver's license renewal, library use and special programs, bookstore operation, soccer games, etc.

- Parking along the access road needs to be banned. Given the mix of pedestrians and drivers, access road needs to be as straight as possible and not curve around existing trees.

What are the dimensions of the proposed parking spaces? Spaces need to accommodate sport utility vehicles (SUVs), vans, and pickups. "Compact" spaces are not adequate.

Scheme 2

Adding 28 parking spaces will not alleviate the dire need for parking.

Scheme 3

More parking stalls should be added. Access road needs to be widened.

If the project is undertaken, add as many parking spaces as possible NOW. Parking has been a problem for decades. Take advantage of this opportunity to expand the number of spaces. It is unlikely the City or State will again address this problem for another 20 years.

If there are any questions regarding our comments and/or questions, please call my Special Assistant John Penebacker at 586-3713. Thank you.

Very truly yours,

VIRGINIA LOWELL
State Librarian

KANEOHE NEIGHBORHOOD BOARD NO. 30

c/o KANEOHE SATELLITE CITY HALL • 46-035 KAMEHAMEHA HIGHWAY • KANEOHE, HAWAII 96744

RESOLUTION OF THE KANEOHE NEIGHBORHOOD BOARD (NB #30) CONCERNING THE PROPOSED KANEOHE CIVIC CENTER PARKING IMPROVEMENTS DESIGN

WHEREAS, The Kaneohe Neighborhood Board has reviewed the plans presented by Engineering Concepts, the City & County of Honolulu's consultant for the parking area improvements; and

WHEREAS, Engineering Concepts presented three differing proposals and recommended one proposal, referred to as "Alternate Three"; and,

WHEREAS, the recommended proposal appeared to the Board to be most consistent with the broader planning concerns of the project including the best balance of parking spaces provided as compared with cost per space and generally met the community's need for parking for Soccer events at the adjacent field, and

WHEREAS, the consultant acknowledged that further development of the plans will accommodate the community's concerns that the parking area projects design will include the following elements:

1. Provides sufficient parking to satisfy needs based on studies of need.
2. Costs within the budget constraints allocated for the project.
3. Includes elements of landscaping that will meet or exceed city requirements and are designed to reduce the utilitarian appearance of so much hard surfacing in the Civic Center area.
4. Includes saving as many of the full grown trees that are presently on the site which, when evaluated for species, health and appearance, are considered visual assets to the park and Civic Center.
5. Includes provisions for lighting consistent with its location in a park, and adjacent to buildings of public pride, i.e., something that balances safety with aesthetic considerations.

NOW THEREFORE, be it resolved that,

The Kaneohe Neighborhood Board adopts the recommendation of the Consultant to proceed with the development of Scheme "Alternate Three", for the Civic Center Parking Improvements consistent with the above concerns and design criteria.

BE IT FURTHER RESOLVED, that copies of this Resolution shall be transmitted to the Department of Planning and Permitting, City and County of Honolulu.

Adopted by unanimous vote of the Kaneohe Neighborhood Board, October 21, 1999.

Roy S. Yanagihara
Chairman
Kaneohe Neighborhood Board #30

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

REPLY TO ATTENTION OF

January 8, 2000

Regulatory Branch

Ms. Dana Arakaki
Engineering Concepts, Inc.
1150 South King Street, Suite 700
Honolulu, Hawaii 96814

Dear Ms. Arakaki:

This letter responds to your request for the Corp's concurrence with the wetland delineation for the Kaneohe Civic Center Neighborhood Park, dated November 5, 1999. Based on the report by Char & Associates, dated June 8, 1999, and an independent site visit and evaluation by my staff, I concur with the delineation contained in the Char & Associates, Inc. report.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-6986, and reference File No. 200000041.

Sincerely,

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

ENGINEERING CONCEPTS, INC.
Consulting Engineers

May 9, 2000

Regulatory Branch
U.S. Army Engineer District, Honolulu
Building 230
Fort Shafter, Hawaii 96858-5440

Attention: Mr. William Lennan

Subject: Kaneohe Civic Center Neighborhood Park Parking Lot
Determination of Army Permit Requirements
File No. 200000041

We are seeking a determination of the Army permit requirements for development of the proposed parking lot. A copy of the Draft EA dated March 2000 is enclosed for your reference.

The proposed parking lot will not encroach into Kaneohe Stream or the small tributary and onsite wetland (which was the subject of our previous correspondence). However, construction of the parking lot will result in fill of an existing grassed drainageway located to the south of the Kaneohe Library parking lot.

Should you have any questions or require additional information, please call me or Dana Arakaki at 591-8820.

Very truly yours,

Kenneth Ishizaki, P.E.
Vice President

enclosure

1150 South King Street, Suite 700 Honolulu, Hawaii 96814
Tel [illegible] Fax [illegible] E-Mail Address [illegible]

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

RECEIVED
MAY 16 2000
ENGINEERING

REPLY TO ATTENTION OF

May 11, 2000

Regulatory Branch

Mr. Kenneth Ishizaki, P.E.
Vice President
Engineering Concepts, Inc.
1150 South King Street, Suite 700
Honolulu, Hawaii 96814

Dear Mr. Ishizaki:

This letter responds to your request, dated May 9, 2000, for review of the Draft Environmental Assessment for the Kaneohe Civic Center Neighborhood Park Parking Lot, dated March 2000. Based on the information contained in the report and your assertion that there will be no construction in the delineated wetland, I have determined that a Department of the Army (DA) permit will not be required for this project.

If you have any questions concerning this determination, please contact William Lennan of my staff at 438-6986 or FAX 438-4060, and reference File No. 200000041.

Sincerely,

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

BENJAMIN J. CAYETANO
Governor of Hawaii

RECEIVED
JUN 13 2000
ENGINEERING CONC...

TIMOTHY E. JOHNS
Chairperson

BRUCE S. ANDERSON
ROBERT G. GIRALD
BRIAN C. NISHIOKA
DAVID A. ROBINSON
HERBERT M. RICHARDS, JR.

LINNEL T. NISHIOKA
Deputy Director

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

JUN - 9 2000

Ms. Dana S. Arakaki, P.E.
Engineering Concepts, Inc.
1150 South King Street, Suite 7000
Honolulu, Hawaii 96814

Dear Ms. Arakaki:

Request for Determination of SCAP Applicability
Proposed Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Oahu TMK:4-5-18:por 2 & 52

Thank you for sending a file copy of the Draft Environmental Assessment for our use. This is in response to your facsimile dated May 9, 2000, and telephone conversation with David Higa requesting a determination if a Stream Channel Alteration Permit (SCAP) application would be required for the proposed Kaneohe Civic Center Parking Lot.

A site inspection was conducted by our staff on May 9, 2000. The inspection confirmed that the watercourse labeled as "drainageway" in Figure 3-1 in the Environmental Assessment is not a Stream; therefore, alteration of this watercourse does not require a stream channel alteration permit. The hatched area indicated as "Wetland" is a natural watercourse which supports aquatic life; therefore, it is considered a stream. Any alteration to the bed or banks of this watercourse will require a stream channel alteration permit. However, it is our understanding that the proposed alternative for the new parking area will not include any alteration of this stream. Please notify us immediately if this understanding is not correct.

Thank you for coordinating with us on permit requirements. Should you have any questions, please contact David Higa at 587-0249.

Sincerely,

for LINNEL T. NISHIOKA
Deputy Director

SKS:sd

APPENDIX B

Draft EA Comments and Responses

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

RECEIVED
MAY 3 1 2000
ENGINEERING CONCEPTS

BRUCE S. ANDERSON, Ph.D., M.P.H.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

In reply, please refer to:
File:

May 22, 2000

00-071/epo

City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, Hawaii 96813

Attention: Mr. Carl Arakaki
Division of Planning and Programming

Dear Mr. Arakaki:

Subject: Draft Environmental Assessment (DEA)
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Oahu
TMK: 4-5-18: por. of 2 & 52

Thank you for allowing us to review and comment on the subject project. We do not have any comments to offer ar this time, as any concerns that we might have had, were addressed in the DEA.

Sincerely,

Gary Gill
Deputy Director
for Environmental Health

c: OEQC
Engineering Concepts, Inc. ✓

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY G. L. YEE, A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR., A.I.A.
DEPUTY DIRECTOR

DCP 2000-449

July 7, 2000

Mr. Gary Gill
Deputy Director for Environmental Health
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Gill:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 22, 2000 (reference: 00-071/epo) regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY G. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 621
HONOLULU, HAWAII 96809

TIMOTHY E. JOHNS
CHAIRPERSON

BRUCE S. ANDERSON
ROBERT G. GIRALD
BRIAN C. MISHIOA
DAVID A. NOBRIGA
HERBERT M. RICHARDS, JR.

LINNEL T. NISHIOKA
DEPUTY DIRECTOR

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MAY 17 2000
ENGINEERING CONCEPTS

May 12 2000

Mr. Carl Arakaki
City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment for Kaneohe Civic Center Neighborhood Park Parking Lot

FILE NO.: DCP 2000-204

Thank you for the opportunity to review the subject document. Our comments related to water resources are marked below.

In general, the CWRM strongly promotes the efficient use of our water resources through conservation measures and use of alternative non-potable water resources whenever available, feasible, and there are no harmful effects to the ecosystem. Also, the CWRM encourages the protection of water recharge areas, which are important for the maintenance of streams and the replenishment of aquifers.

[ ] We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.

[ ] We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.

[ ] We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

[ ] A Well Construction Permit and/or a Pump Installation Permit from the Commission would be required before ground water is developed as a source of supply for the project.

[ ] The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.

[ ] Groundwater withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.

[ ] We recommend that no development take place affecting highly erodible slopes which drain into streams within or adjacent to the project.

[ ] If the proposed project includes construction of a stream diversion, the project may require a stream diversion works permit and amend the instream flow standard for the affected stream(s).

[x] If the proposed project alters the bed and banks of a stream channel, the project may require a stream channel alteration permit.

[ ] OTHER:

If there are any questions, please contact Ryan Imata at 587-0255.

Sincerely,

LINNEL T. NISHIOKA
Deputy Director

RI:ss

c: Office of Environmental Quality Control
Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR., A.I.A.
DEPUTY DIRECTOR

DCP 2000-436

July 7, 2000

Ms. Linnel T. Nishioka, Deputy Director
Commission on Water Resource Management
Department of Land and Natural Resources
State of Hawaii
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Nishioka:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 12, 2000 (File No. DCP2000-204) regarding the Draft EA for the subject project. We acknowledge your comment that the proposed project may require a Stream Channel Alteration Permit (SCAP) if the work alters the bed or banks of a stream channel.

Our consultant has contacted Mr. David Higa of your staff to determine whether a SCAP is needed for fill of the grassed drainage way located to the south of the Kaneohe Library parking lot.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, A.I.A.
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111
http://www.honolulupd.org
www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

LEE D. DONOHUE
CHIEF

MICHAEL CARVALHO
ROBERT AU
DEPUTY CHIEFS

RECEIVED
MAY 18 2000

OUR REFERENCE CS-TL

May 15, 2000

TO: CARL ARAKAKI
DIVISION OF PLANNING AND PROGRAMMING

FROM: LEE D. DONOHUE, CHIEF OF POLICE
HONOLULU POLICE DEPARTMENT

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 AND 52

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

Complaints relative to dust, noise and traffic will be inevitable during the construction phase of the project and will have an impact on calls for police service. However, after construction has been completed, there should be no significant impact on calls for police service.

If there are any questions, please call me at 529-3255 or Lieutenant John Thompson of District 4 at 247-2166.

Sincerely,

LEE D. DONOHUE
Chief of Police

By Eugene Uemura
EUGENE UEMURA
Assistant Chief
Support Services Bureau

cc: Office of Environmental Quality Control
/Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

July 7, 2000

DCP 2000-439

MEMORANDUM

TO: MR. LEE D. DONOHUE, CHIEF
HONOLULU POLICE DEPARTMENT

FROM: for GARY O. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your memorandum dated May 15, 2000 (reference: CS-TL) regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document. Your comment that construction-related complaints about dust, noise and traffic having an impact on calls for police service will be included in the Final EA. We acknowledge your comment that there should be no significant impact on calls for police service after the completion of construction.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

GTE Hawaiian Tel
Beyond the call

GTE Hawaiian Telephone Company Incorporated
P.O. Box 2200 • Honolulu, HI 96841 • 808 546-4511

May 3, 2000

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MAY 5 2000
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City and County of Honolulu
Department of Design and Construction
650 South King Street, 11th Floor
Honolulu, Hawaii 96813
Attention: Mr. Carl Arakaki

Subject: Draft Environmental Assessment for Kaneohe Civic Center
Neighborhood Park Parking Lot, Kaneohe, Koolaupoko, Oahu, Hawaii

Dear Sir:

Thank you for the opportunity to review the above subject Draft Environmental Assessment. We do not have any facilities located within the project area, and there should be no impact to the telephone facilities in the future.

Should you have any questions, please call Garret Hayashi at 840-1438.

Sincerely,

Wayne L. Cabral
Section Manager
Access Design & Construction

cc: Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Engineering Concepts, Inc. ✓
1150 South King Street, Suite 700
Honolulu, HI 96814
Attention: Mr. Kenneth Ishizaki

File (Kaneohe)

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-441

July 7, 2000

GTE Hawaiian Telephone Company, Inc.
P.O. Box 2200
Honolulu, Hawaii 96805

Attention: Mr. Wayne L. Cabral, Section Manager
Access Design and Construction

Aloha!

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 3, 2000 regarding the Draft EA for the subject project. We acknowledge your comment that there are no GTE telephone facilities in the project area and that there should be no impact to telephone facilities in the future.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

for GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

United States Department of the Interior

U.S. GEOLOGICAL SURVEY
WATER RESOURCES DIVISION
677 Ala Moana Boulevard, Suite 415
Honolulu, Hawaii 96813

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April 25, 2000

Mr. Carl Arakaki
Division of Planning and Programming
City and County of Honolulu
Department of Design and Construction
650 South King St.
Honolulu, Hawaii 96813

Dear Mr. Arakaki:

Subject: *Draft Environmental Assessment for*
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: portion of 2 & 52

We have received the Draft Environmental Assessment, and we regret that we are unable to review the report within the 30-day deadline.

The report is being returned to you for your future use.

Sincerely,

Gordon Tribble
District Chief

Enc.

cc: Office of Environmental Quality Control
Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY Q. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

July 7, 2000

DCP 2000-443

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ENGINEERING CONCEPTS

Mr. Gordon Tribble, District Chief
Water Resources Division
U.S. Geological Survey
677 Ala Moana Boulevard, Suite 415
Honolulu, *Hawaii 96813-5412*

Dear Mr. Tribble:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated April 25, 2000 regarding the Draft EA for the subject project. We understand that you have no comments at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

for GARY Q. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

(P)1209.0

MAY 1 1 2000

Mr. Carl Arakaki
Department of Design and Construction
Division of Planning and Programing
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Arakaki:

Subject: Draft Environmental Assessment for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii

Thank you for the opportunity to review the Environmental Assessment for the subject project.

The proposed project does not impact any of our facilities, therefore, we have no comments to offer.

Should you have further questions regarding the above, please have your staff contact Mr. Alan Sanborn of our Planing Branch at 586-0499.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

LZ:mo
c: Office of Environmental Quality Control
Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4566 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

July 7, 2000

DCP 2000-437

Mr. Gordon Matsuoka
Public Works Administrator
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, Hawaii 96810-0119

Dear Mr. Matsuoka:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 11, 2000 (reference: (P)1209.0) regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BENJAMIN J. CAYETANO
GOVERNOR

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

PAUL G. LeMAHIEU, Ph.D.
SUPERINTENDENT

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OFFICE OF THE SUPERINTENDENT

May 9, 2000

Mr. Gary Yee, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street
Honolulu, Hawaii 96813

Attention: Mr. Carl Arakaki

Dear Mr. Yee:

Subject: Kaneohe Civic Center Neighborhood Park Parking Lot Draft EA

The Department of Education has no comment on the proposed project.

Thank you for the opportunity to respond.

Very truly yours,

Paul G. LeMahieu, Ph.D.
Superintendent of Education

PLeM:el

cc: OEQC
Kenneth Ishizaki, Engineering Concepts

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

July 7, 2000

DCP 2000-434

Mr. Paul G. LeMahieu, Ph.D.
Superintendent of Education
Department of Education
P.O. Box 2360
Honolulu, Hawaii 96804

Dear Mr. LeMahieu:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 9, 2000 regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

Ltr. No.: OSL-00-462

BENJAMIN J. CAYETANO
GOVERNOR

VIRGINIA LOWELL
STATE LIBRARIAN

OFFICE OF THE STATE LIBRARIAN

RECEIVED
STATE OF HAWAII MAY 22 A10:59
DEPARTMENT OF EDUCATION
HAWAII STATE PUBLIC LIBRARY SYSTEM
465 SOUTH KING STREET, 4TH FLOOR
HONOLULU, HAWAII 96813
DESIGN & CONSTRUCTION

May 16, 2000

City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, Hawaii 96813

Attention: Mr. Carl Arakaki
Division of Planning and Programming

Dear Mr. Arakaki:

Subject: Draft Environmental Assessment for Kaneohe Civic Center Neighborhood Park Parking Lot Kaneohe, Koolaupoko, Oahu, Hawaii
TMK:4-5-18:portion of 2 & 52

We reviewed the Draft Environmental Assessment for the Kaneohe Civic Center Neighborhood Parking Lot. I concur and endorse the following comments provided by Tom Churma, Branch Manager of the Kaneohe Public Library:

- Additional parking in the Kaneohe Civic Center area has been needed for years. I strongly support the proposal for 46 additional parking stalls (plus a graveled overflow parking area) even though the library parking lot will lose three stalls. I also realize that construction will be somewhat disruptive to our operation but necessary if the parking situation is to be improved.

- The access road must be improved by widening it and by banning parking of any kind along it. This will not only allow for better traffic flow but it will also improve pedestrian safety.

- I agree that long term planning must involve the relocation of the base yard storage area. As mentioned in the Assessment, this is an inappropriate use of land for a Civic Center - an area that has the potential to be very attractive part of the community.

Thank you for the opportunity to review the Environmental Impact Assessment for the Kaneohe Neighborhood Park Parking Lot.

If there are any questions, please call my Special Assistant John Penebacker at 586-3713.

Very truly yours,

Virginia Lowell

VIRGINIA LOWELL
State Librarian

cc: Mr. Tom Churma
Kaneohe Public Library

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-431

July 7, 2000

Ms. Virginia Lowell, State Librarian
Hawaii State Public Library System
Department of Education
State of Hawaii
465 South King Street, B-1
Honolulu, Hawaii 96813

Dear Ms. Lowell:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 16, 2000 regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and acknowledge your comment supporting the proposed project. In reply to your other comments, the following responses are offered:

1. *The access road must be improved by widening it and by banning parking of any kind along it. This will not only allow for better traffic flow but it will also improve pedestrian safety.*

   Although the access road will not be widened in conjunction with this project, parking along it could be banned after the proposed parking lot is constructed.

2. *I agree that long term planning must involve the relocation of the base yard storage area. As mentioned in the Assessment, this is an inappropriate use of land for a Civic Center - an area that has the potential to be very attractive part of the community.*

As a point of clarification, the referenced statement was made in an appendix of the Draft EA. Long term planning would address many issues, including present land uses.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

for GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control
Tom Churma - Kaneohe Public Library

BENJAMIN J. CAYETANO
GOVERNOR
STATE OF HAWAII

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

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MAY 10 2000
ENGINEERING CONCEPTS

COPY

RAYNARD C. SOON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

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

May 9, 2000

Mr. Carl Arakaki
Division of Planning and Programming
Department of Design and Construction
650 South King Street
Honolulu, Hawaii 96813

Dear Mr. Arakaki:

Subject: Draft Environmental Assessment for Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Oahu, Hawaii TMK: 4-5-18: por. 2, 52

The Department of Hawaiian Home Lands (DHHL) has reviewed the subject draft environmental assessment. The project proposes to construct a parking lot to serve the needs of the Kaneohe Civic Center Neighborhood Park. DHHL has no comments to offer at this time.

If you have any questions, please call Rebecca Alakai of our Planning Office at 587-6423.

Aloha,

Raynard C. Soon, Chairman
Hawaiian Homes Commission

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR., A.I.A.
DEPUTY DIRECTOR

DCP 2000-435

July 7, 2000

Mr. Raynard C. Soon, Chairman
Hawaiian Homes Commission
Department of Hawaiian Home Lands
P.O. Box 1879
Honolulu, Hawaii 96805

Dear Mr. Soon:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 9, 2000 regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, A.I.A.
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII

RECEIVED
'00 JUN -6 A9:16
DEPARTMENT OF LAND AND NATURAL RESOURCES

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

TIMOTHY E. JOHNS, CHAIRPERSON
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LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

May 25, 2000

City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, HI 96813
Attn: Carl Arakaki, Division of Planning and Programming

LOG NO: 25494
DOC NO: 0005EJ22

Dear Mr. Arakaki:

SUBJECT: Chapter 6E-8 Historic Preservation Review – Draft environment Assessment (DEA) for
the Kaneohe Civic Center Neighborhood Park Parking Lot
Kane`ohe, Ko`olaupoko, O`ahu
TMK: 4-5-18: por. 002; & 52

Thank you for the opportunity to comment on the DEA for the Kane`ohe Civic Center Neighborhood Park Parking Lot. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the project areas. We received notification of this undertaking from your office on April 25, 2000.

We have reviewed and accepted a report documenting the results of an archaeological inventory survey for this project (*An Archaeological Inventory Survey of the Kane`ohe Civic Center Playground Parking Lot*, Perzinski & Hammatt, 2000). No historic sites were located on this parcel and we concurred with the finding that is unlikely that significant historic sites are present. We also concurred with the recommendation that no further archaeological work is needed in the project area.

Therefore, based on the above findings, we believe that this project will have "no effect" on historic sites.

Should you have any questions, please feel free to call Sara Collins at 692-8026 or Elaine Jourdane at 692-8027.

Aloha,

Don Hibbard, Administrator
State Historic Preservation Division

EJ:jk

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
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JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-430

July 7, 2000

Mr. Don Hibbard, Administrator
State Historic Preservation Division
601 Kamokila Boulevard
Kakuhihewa Building, Room 555
Kapolei, Hawaii 96707

Dear Mr. Hibbard:

SUBJECT: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 25, 2000 (LOG NO: 25494, DOC NO: 0005EJ22) regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and acknowledge your concurrence with the archaeological inventory survey for the project. We understand that you agree with the recommendation that no further archaeological work is needed in the project area and that the project will have no effect on historic sites.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BENJAMIN J. CAYETANO
GOVERNOR

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

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MAY 11 2000
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1959 2000+

KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

May 8, 2000

IN REPLY REFER TO:
STP 8.9536

Mr. Gary Q. L. Yee, AIA
Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention: Mr. Carl Arakaki
Division of Planning and Programming

Dear Mr. Yee:

Subject: Kaneohe Civic Center Neighborhood Park Parking Lot
Draft Environmental Assessment (DEA)
TMK: 4-5-18: portion of 2 & 52

Thank you for your transmittal requesting our review of the subject draft assessment.

The subject development will not impact our State transportation facilities. The portion of Kamehameha Highway fronting the subject project is under the jurisdiction of the county.

We appreciate the opportunity to provide comments.

Very truly yours,

Kazu Hayashida

KAZU HAYASHIDA
Director of Transportation

c: Ms. Genevieve Salmonson, Office of Environmental Quality Control
Mr. Kenneth Ishizaki, Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

GARY Q. L. YEE A.I.A
DIRECTOR

ROLAND D. LIBBY, JR. AIA
DEPUTY DIRECTOR

July 7, 2000

DCP 2000-448

Mr. Kazu Hayashida, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Dear Mr. Hayashida:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 8, 2000 (reference: STP 8.9536) regarding the Draft EA for the subject project. We acknowledge your comments that the proposed project will not impact State transportation facilities, and that the portion of Kamehameha Highway fronting the site is under the jurisdiction of the City and County of Honolulu.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

for GARY Q. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BENJAMIN J. CAYETANO
GOVERNOR

GENEVIEVE SALMONSON
DIRECTOR

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

RECEIVED
MAY 25 2000
ENGINEERING CONCEPTS

May 23, 2000

Mr. Gary Yee, Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, Second Floor
Honolulu, Hawaii 96813

Dear Mr. Yee:

Subject: Draft Environmental Assessment for the Kaneohe Civic Center Neighborhood Park Parking Lot, Oahu

Thank you for the opportunity to review the subject document. We have the following comments.

1. Storm runoff from the parking lot will be discharged into the adjacent Kaneohe Stream. Petroleum products and other pollutants from the parking lot will enter the stream. Please describe mitigation measures to eliminate or minimize this adverse water quality impact.

2. Although this project will avoid filling the onsite wetland, the proposed changes to the drainage pattern may indirectly impact the wetlands. Please analyze this potential adverse impact and describe mitigation measures to eliminate or minimize this possible impact

3. We recommend that glassphalt be used in constructing this parking lot.

Should you have any questions, please call Jeyan Thirugnanam at 586-4185.

Sincerely,

Genevieve Salmonson
Director

c: Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

GARY O. L. YEE A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR. AIA
DEPUTY DIRECTOR

DCP 2000-446

July 7, 2000

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Ms. Salmonson:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated May 23, 2000 regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and offer the following response to your comments:

1. *Storm runoff from the parking lot will be discharged into the adjacent Kaneohe Stream. Petroleum products and other pollutants from the parking lot will enter the stream. Please describe mitigation measures to eliminate or minimize this adverse water quality impact.*

   Runoff from the proposed parking lot will enter Kaneohe Stream after passing through the onsite wetland. Wetlands provide natural water quality treatment by settling, filtering and plant uptake of pollutants in runoff. It should be noted that the wetland is presently thriving while receiving storm water runoff discharges from over 40 acres of urbanized land in Kaneohe. Runoff is conveyed by two 48-inch drainage pipes which discharge into the wetland prior to reaching Kaneohe Stream. The presence of the wetland is a natural mitigation measure which minimizes the amount of pollutants entering Kaneohe Stream.

2. *Although this project will avoid filling the onsite wetland, the proposed changes to the drainage pattern may indirectly impact the wetlands. Please analyze this potential adverse impact and describe mitigation measures to eliminate or minimize this possible impact.*

The proposed project will not affect the wetland tributary area acreage. Offsite runoff that presently enters the grassed drainage way that discharges to the wetland will continue to be conveyed to the wetland via underground drainage pipes proposed for the project. Onsite runoff that presently sheet flows to the grassed drainage way will be conveyed to the wetland by catch basins and inlets after construction. Potential impacts to the wetland would result from the loss of the grassed drainage way and the water quality function it provides, and from the slight increase in runoff quantity due to increased impervious surfaces associated with the parking lot. However, the resulting impact to the wetland would be small because the affected area is only a fraction of the over 40-acre wetland tributary area. The Final EA will include an expanded discussion of the impacts and mitigation associated with runoff from the proposed parking lot, and the existing water quality function of the wetland.

3. *We recommend that glassphalt be used in constructing this parking lot.*

The applicability of glassphalt for the parking lot construction will be considered during the design phase of the project.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY Q. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.

PHONE (808) 594-1888

FAX (808) 594-1865

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

April 25, 2000

City & County of Honolulu
Dept. of Design & Construction
650 South King Street
Honolulu, HI 96813
Attn: Mr. Carl Arakaki
Division of Planning & Programming

EIS# 384

Subject: DEA for Kaneohe Civic Center Neighborhood Park Parking Lot
TMK: 4-5-18: portion of 2 & 52

Dear Mr. Arakaki,

Thank you for the opportunity to review and comment on the above-referenced draft environmental assessment. At this time, the Office of Hawaiian Affairs has no concerns or comments on this project. We do await concurrence from the State Historic Preservation Division on the report done by Cultural Surveys Hawai'i, and we look forward to receiving a copy of the final environmental assessment.

If you have any question, please contact Ken R. Salva Cruz, Policy Analyst, at 594-1847.

Sincerely,

Colin C. Kippen, Jr.
Deputy Administrator

cc: Board of Trustees
OEQC
Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
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JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-447

July 7, 2000

Mr. Colin C. Kippen, Jr.
Deputy Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Ala Moana Boulevard, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Kippen:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your letter dated April 25, 2000 (reference: EIS#384) regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments at this time. The Final EA will include correspondence from the State Historic Preservation Division. A copy of the Final EA will be sent to you for review.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

University of Hawai'i at Mānoa

Environmental Center
A Unit of Water Resources Research Center
2550 Campus Road • Crawford 317 • Honolulu, Hawai'i 96822
Telephone: (808) 956-7361 • Facsimile: (808) 956-3980

May 22, 2000
EA: 00196

Mr. Carl Arakaki
City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, HI 96813

Dear Mr. Arakaki:

Kaneohe Civic Center Neighborhood Park Parking Lot
Draft Environmental Assessment
Koolaupoko, Oahu

The City and County of Honolulu Department of Design and Construction is proposing to construct a parking lot to serve the needs of the Kaneohe Civic Center Neighborhood Park, which presently lacks parking facilities. The need for parking is heightened during the youth soccer season when practice sessions and games are held at the park. The proposed action includes construction of a 46-stall parking lot; an accessible path from the parking lot to an existing comfort station within the park; and a graveled overflow parking area within the present Division of Road Maintenance yard.

Access to the project is off of Waikalua Road. Neighboring facilities include the Kaneohe Public Library and Kaneohe Police Station. The project site is bound by Kamehameha Highway to the west and Kaneohe Stream to the south.

This review was conducted with the assistance of Roger Babcock and Yu-Si Fok, Civil Engineering; Jacquelin N. Miller and Cameron Lowry, Environmental Center.

General Comments

Our review of the Draft EA, although generally favorable, found it insufficient in several areas. Questions and concerns were raised about potential negative impacts of runoff on adjacent wetlands and on water quality of the nearby receiving waters. These issues are discussed in greater detail in the following section labeled water quality.

There are specific ways in which the Draft EA can be clarified so as better to facilitate comprehension. On p. 1-1 under the purpose of the document the total area of the project of .9

acres should be included. On p. 1-3 Figure 1-1 the map scale should be provided. On p 1-4 under the heading of water quality the last word should be changed to "later" as opposed to "above". Finally, on p. 2-4 the discussion of the 36-inch drain line could be improved with the inclusion of the acreage of drainage area to be served by the line.

Under sub-heading 2.2.1 Parking Lot on p. 2-4 the discussion of the graveled overflow parking area warrants clarification. It is our understanding that the gate to the area will remain closed and locked unless required for intermittent use for overflow parking. How will consent to use overflow parking be obtained? How will unlocking of the gate and so on be coordinated? Who will have the key or combination to unlock the gate when needed? This matter should be clarified to avoid future problems.

Under the sub-heading Neighboring Lands on p. 4-3 it is stated that "The schedule of construction activities will be coordinated with the Library and Kaneohe Police Station to minimize impacts on their operations." Why haven't discussions already taken place? It would be useful to know when the Police and Librarians feel it is the best time to begin construction.

The Traffic Impact Assessment should also be made more clear so that those who do not have a background in traffic assessment may have a better understanding of the analysis. For example, on p. 2 of Appendix E Traffic Impact Assessment it is claimed that "As a general rule, parking lots do not generate trips, but merely services the traffic generated by the surrounding land uses." In line with this claim all traffic volume projections for Waikalua Road in the traffic assessment are the same irregardless of which parking lot scheme is being projected. We do not understand why mode choice (bus, carpool) was not included as a variable in the model as availability of parking could cause great variation in mode choice and thus traffic volumes, especially in the no-build alternative.

These changes, while not critical, are useful as pursuant to the goal of an information gathering document to be mediated by the professional and layman alike.

Water Quality

Section 4.4 Water Quality p. 4-2 does not address the impacts of parking lot runoff (non-point water pollution) on receiving water quality. Parking lots inherently impact receiving water quality without proper mitigative measures. Parking lots accumulate crankcase oil drippings, grease drippings, various metal fragments from brake linings, cooling system drippings, as well as all types of improperly disposed refuse. All of these pollutants are washed into the receiving water during rainfall events. The effects are most pronounced during rainfall events that occur after long dry periods (first flush events). Such potential negative impacts are compounded in this specific case by the presence of a wetland. Mitigative measures to minimize these impacts have not been discussed. This leads to significant questions being raised such as how parking lot runoff will impact the wetland?

The current design shows two drain outlets discharging into the wetland. It is our understanding that the wetland will serve as a "retention pond" to capture and settle pollutants and thus protect the receiving waters of Kaneohe Stream and subsequently Kaneohe Bay. This raises the issue of whether this is an acceptable use of the wetland.

Findings and Determination

Under sub-heading 10 of 6.2 "Findings And Reasons Supporting Anticipated Determination", it is claimed that "No long term impacts are anticipated." with regards to water quality. However, it is our understanding that the proposed action will impact water quality and thus does have the potential to generate significant environmental impacts.

Conclusions

The Draft EA discloses useful information about many aspects of the project. Much of the analysis is thorough and substantiates the feasibility and benefits of the proposed action. However, significant concerns regarding potential negative impacts on water quality have been raised. Our concerns warrant further discussion and the proposal of possible mitigative measures regarding non-point water pollution should be addressed in a revised Draft EA.

Thank you for the opportunity to review this draft environmental assessment.

Sincerely,

Peter Rappa
Assistant Environmental Coordinator

cc: OEQC
Roger Babcock, Civil Engineering
Yu-Si Fok, Civil Engineering
Jacquelin N. Miller, Environmental Center
Cameron Lowry, Environmental Center

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY G. L. YEE AIA
DIRECTOR

ROLAND D. LIBBY, JR. AIA
DEPUTY DIRECTOR

DCP 2000-144

July 7, 2000

Mr. Peter Rappa, Assistant Environmental Coordinator
Environmental Center
University of Hawaii
2550 Campus Road, Crawford 317
Honolulu, Hawaii 96822

Dear Mr. Rappa:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your fax transmission dated May 23, 2000 regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and offer the following response to your comments:

General Comments

1. *On p. 1-1 under the purpose of the document the total area of the project of 0.9 acres should be included.*

   Page 1-1, Section 1.1 of the Final EA will state: "The purpose of this Final Environmental Assessment (EA) is to disclose potential environmental impacts which may result from development of 0.9 acres for a parking lot to serve the Kaneohe Civic Center Neighborhood Park..."

2. *On p. 1-3 Figure 1-1 the map scale should be provided.*

   The statement "No Scale" will be included on Figure 1-1 of the Final EA.

3. *On p 1-4 under the heading of water quality the last word should be changed to "later" as opposed to "above".*

No change will be made since the sentence refers to the sediment and erosion control measures previously stated on page 1-2.

4. *On p. 2-4 the discussion of the 36-inch drain line could be improved with the inclusion of the acreage of drainage area to be served by the line.*
The Final EA will identify a drainage area of 3 acres to be served by the 36-inch drain line.

5. *Under sub-heading 2.2.1 Parking Lot on p. 2-4 the discussion of the graveled overflow parking warrants clarification.*

The Department of Facility Maintenance requested the graveled surface as a condition for allowing use of the area for overflow parking during major soccer events. Specific details clarifying use of and access to the graveled overflow parking lot will be identified as unresolved issues in the Final EA.

6. *Under sub-heading Neighboring Lands on p. 4-3 it is stated that "The schedule of construction activities will be coordinated with the Library and Kaneohe Police Station to minimize impacts to their operations." Why haven't discussions already taken place? It would be useful to know when the Police and Librarians feel it is the best time to begin construction.*

Consultation is ongoing with both the Hawaii State Public Library System and the Honolulu Police Department during this planning phase. The referenced statement was intended to be specific for construction since the contractor will need to coordinate his activities (specific days and times) with the affected neighbors.

7. *The Traffic Impact Assessment should also be made more clear so that those who do not have a background in traffic assessment may have a better understanding of the analysis. For example, on p. 2 of Appendix E Traffic Impact Assessment it is claimed that "As a general rule, parking lots do not generate trips, but merely services the traffic generated by the surrounding land uses." In line with this claim all traffic volume projections for Waikalua Road in the traffic assessment are the same, irregardless of which parking lot scheme is being projected. We do not understand why mode choice (bus, carpool) was not included as a variable in the model as availability of parking could cause great variation in mode choice and thus traffic volumes, especially in the no-build alternative.*

Traffic is a direct result of events held at the park, rather than parking lot size. The use of bus and carpools cannot be projected and would not eliminate the need for a parking lot.

Water Quality

1. *Section 4.4. Water Quality p. 4-2 does not address the impacts of parking lot runoff (non-point water pollution) on receiving water quality...The effects are most pronounced during rainfall events that occur after long dry periods (first flush events). Such potential impacts are compounded in this specific case by the presence of a wetland. Mitigative measures to minimize these impacts have not been discussed. This leads to significant questions being raised such as how parking lot runoff will impact the wetland?*

We concur that the impacts of parking lot runoff are most pronounced during first flush events. The presence of the wetland will mitigate the impact of runoff from the proposed parking lot and enhance the water quality in Kaneohe Stream. The wetland provides a means of natural water quality treatment by settling, filtering and plant uptake of pollutants. It should be noted that the wetland is presently thriving though it receives storm runoff from over 40 acres of primarily urbanized lands in Kaneohe.

2. *The current design shows two drain outlets discharging into the wetland. It is our understanding that the wetland will serve as a "retention pond" to capture and settle pollutants and thus protect the receiving waters of Kaneohe Stream and subsequently Kaneohe Bay. This raises the issue of whether this is an acceptable use of the wetland.*

The two 48-inch drain outlets are existing structures, constructed in 1961. Formation of the wetland may be a direct result of discharge from these drain outlets. The proposed parking lot is not imposing a new use on the wetland. Its water quality function has already been established.

Findings and Determination

Under sub-heading 10 of 6.2 "Findings and Reasons Supporting Anticipated Determination", it is claimed that "No long term impacts are anticipated" with regard to water quality. However, it is our understanding that the proposed action will impact water quality and thus does have the potential to generate significant environmental impacts.

We disagree.

Conclusions

> *...significant concerns regarding potential negative impacts on water quality have been raised. Our concerns warrant further discussion and the proposal of possible mitigative measures regarding non-point water pollution should be addressed in a revised Draft EA.*
>
> The Final EA will include an expanded discussion of the impacts and mitigation associated with runoff from the proposed parking lot and existing water quality function of the wetland.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY Q. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96843

RECEIVED
'00 MAY 10 P3:07
DESIGN & CONSTRUCTION
PLANNING BRANCH

May 10, 2000

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice Chairman
JAN M.L.Y. AMI
HERBERT S.K. KAOPUA, SR.
BARBARA KIM STANTON
KAZU HAYASHIDA, Ex-Officio
ROSS S. SASAMURA, Ex-Officio

CLIFFORD S. JAMILE
Manager and Chief Engineer

TO: MR. GARY Q. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: CLIFFORD S. JAMILE

SUBJECT: YOUR MEMORANDUM OF APRIL 23, 2000 REGARDING THE DRAFT ENVIRONMENTAL ASSESSMENT FOR THE KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT, KANEOHE, OAHU, TMK: 4-5-18: PORTION 02 & 52

Thank you for the opportunity to review and comment on the Draft Environmental Assessment (EA) for the proposed Kaneohe Civic Center neighborhood park parking lot.

We have the following comments:

1. There is a 1½-inch water meter serving TMK: 4-5-18: 02, and a 1½-inch water meter serving TMK: 4-5-18: 52.

2. We understand that the proposed parking lot is not anticipated to increase the existing water use at the neighborhood park since a permanent irrigation system has not been proposed.

If you have any questions, please contact Scot Muraoka at 527-5221.

Pure Water ... our greatest need - now it needs ...

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE (808) 523-4566 • FAX (808) 523-4567
WEB SITE ADDRESS www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY Q. L. YEE AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-433

July 7, 2000

MEMORANDUM

TO: MR. CLIFFORD S. JAMILE, MANAGER AND CHIEF ENGINEER
BOARD OF WATER SUPPLY

FROM: FOR GARY Q. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your memorandum dated May 10, 2000 regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and acknowledge your comments regarding the existing water meters and future water use.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
[illegible] STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
[illegible] • FAX: (808) 527-6875 • Website: www.co.honolulu.hi.us

RECEIVED

'00 MAY -4 P4 :04

DES... & CONSTRUCTION
DIVISION OF
PLANNING ... PROGRAMMING

JEREMY HARRIS
Mayor

KENNETH E. SPRAGUE, P.E., Ph.D.
Director

BARRY FUKUNAGA
Deputy Director

ENV 00-37

MAY - 3 2000

MEMORANDUM

TO: GARY G. L. YEE, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: CARL ARAKAKI

FROM: KENNETH E. SPRAGUE, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA)
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
TMK: 4-5-18: POR. 2 AND 52

We have reviewed the subject DEA and have no comments to offer at this time.

Should you have any questions, please contact Alex Ho at extension 4150.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4384 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY G. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-432

July 7, 2000

MEMORANDUM

TO: DR. KENNETH E. SPRAGUE, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: FOR GARY G. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your correspondence dated May 3, 2000 (reference: ENV 00-37) regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments to offer at this time.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4384 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

RECEIVED
DEPARTMENT OF
FACILITY MAINTENANCE
'00 APR 24 PM

JEREMY HARRIS
MAYOR

GARY G.L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-204

APR 23 2000

Dear Participant:

Subject: Draft Environmental Assessment for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: portion of 2 & 52

Attached for your review is a Draft Environmental Assessment (EA) which was prepared pursuant to the Environmental Impact Statement (EIS) law (Hawaii Revised Statutes, Chapter 343) and the EIS rules (Administrative Rules, Title 11, Chapter 200).

Please review the Draft EA and address your written comments to the Proposing Agency:

City and County of Honolulu
Department of Design and Construction
650 South King Street
Honolulu, HI 96813
Attention: Mr. Carl Arakaki
Division of Planning and Programming
(phone: 523-4671; fax: 523-4642)

Copies of your comments should also be furnished to the following parties:

OEQC: Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813 (phone: 586-4185; fax: 586-4186)

Consultant: Engineering Concepts, Inc.
1150 South King Street, Suite 700
Honolulu, HI 96814
Attention: Mr. Kenneth Ishizaki (phone: 591-8820; fax: 591-9010)

TO:

The 30-day comment period ends on MAY 23 2000. Comments must be received or postmarked by that date.

Thank you for participating in the environmental review process.

April 25, 2000
We do not have any comments. If you have any questions, please call Lavonne Higa at 527-6246.

Very truly yours,

ROSS S. SASAMURA
Director and Chief Engineer
Department of Facility Maintenance

GARY G.L. YEE, AIA
Director

Apr-25-00 07:21am From-DEPARTMENT OF FACILITY MAINTENANCE 523-4567 T-888 P.01/01 F-888

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4384 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY G. L. YEE, A.I.A.
DIRECTOR

ROLAND D. LIBBY, JR., A.I.A.
DEPUTY DIRECTOR

DCP 2000-438

July 7, 2000

MEMORANDUM

TO: MR. ROSS S. SASAMURA, DIRECTOR AND CHIEF ENGINEER
DEPARTMENT OF FACILITY MAINTENANCE

FROM: for GARY G. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your correspondence dated April 25, 2000 regarding the Draft EA for the subject project. We appreciate your efforts in reviewing the document and acknowledge that you have no comments.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 523-4414 • FAX: (808) 527-6743 • INTERNET: www.co.honolulu.hi.us/planning

JEREMY HARRIS
MAYOR

RECEIVED
MAY 19 2000
ENGINEERING CONCEPTS

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K.C. CHEE
DEPUTY DIRECTOR

2000/CLOG-2598(as)

May 18, 2000

MEMORANDUM

TO: GARY Q. L. YEE, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: CARL ARAKAKI
DIVISION OF PLANNING AND PROGRAMMING

FROM: RANDALL K. FUJIKI, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: REVIEW OF DRAFT ENVIRONMENTAL ASSESSMENT FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
TAX MAP KEY 4-5-18: POR 2 AND 52

This is in response to your request dated April 23, 2000, for comments on the Draft Environmental Assessment (DEA) for the Kaneohe Civic Center Neighborhood Park Parking Lot project.

The proposed project is consistent with the objectives and policies of the General Plan and with the provisions of the current Koolaupoko Development Plan. The current Koolaupoko Development Plan Public Facilities Map (DPPFM) depicts a symbol for this project. The applicant may wish to note DPPFM consistency in the Final Environmental Assessment.

The proposed project is also generally consistent with Bill 82(1999), CD1, to adopt the proposed Koolaupoko Sustainable Communities Plan.

We have no other comments. Thank you for the opportunity to review and comment. Should you have any questions, you may contact Adrian Siu-Li of our staff at 527-5072.

cc: Office of Environmental Quality Control
✓ Engineering Concepts, Inc.

POSSE doc no 38356

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4584 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY Q. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-442

July 7, 2000

MEMORANDUM

TO: MR. RANDALL K. FUJIKI, AIA, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: FOR GARY Q. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your memorandum dated May 18, 2000 (reference: 2000/CLOG-2598(as)) regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document. Your comments that the project is consistent with the objectives and policies of the General Plan; provisions of the current Koolaupoko Development Plan, including the Development Plan Public Facilities Map; and the bill to adopt the Koolaupoko Sustainable Communities Plan, will be included in the Final EA.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU
PACIFIC PARK PLAZA • 711 KAPIOLANI BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813
TELEPHONE (808) 523-4529 • FAX (808) 523-4730

JEREMY HARRIS
MAYOR

CHERYL D. SOON
DIRECTOR

JOSEPH M. MAGALDI, JR.
DEPUTY DIRECTOR

RECEIVED
JUN 29 2000
ENGINEERING CONCEPTS

June 26, 2000

TPD4/00-01984R

MEMORANDUM

TO: GARY Q. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTN: CARL ARAKAKI, DIVISION OF PLANNING AND PROGRAMMING

FROM: CHERYL D. SOON, DIRECTOR

SUBJECT: KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT

In response to your April 23, 2000 letter, the draft environmental assessment (EA) for the subject project was reviewed. The following comments are the result of this review:

1. The draft EA should address the following:

   a. The project's anticipated impact on the level of service at the Waikalua Road/Kamehameha Highway intersection; and

   b. The feasibility of providing a one-way ingress to the proposed parking lot directly from Kamehameha Highway.

2. The draft EA should discuss how the number of parking stalls that are being provided was determined. The discussion in Section 2.1 (Page 2-1) regarding the need for the project relates that representatives of the local youth soccer league have stated that, based on average soccer game attendance, a minimum of 40 parking stalls would be desirable. The proposed parking lot appears inadequate to serve the needs of park users during soccer season, and therefore, the provision of an overflow parking area is a good idea.

3. On Page 6-2, reference is made to the "illegal" use of library parking stalls by park users. It is questionable whether the use of the library parking stalls is illegal. Other sections of the draft EA refer to the use of library parking stalls by park users as being "unauthorized."

4. In accordance with the Americans with Disabilities Act Accessibility Guidelines, the transition from the nearest bus stop to major park facilities, such as the restrooms, water fountains, and play fields, as well as the connections between these facilities, should be accessible.

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation Planning Division at Local 6976.

CHERYL D. SOON

cc: Office of Environmental Quality Control
Mr. Kenneth Ishizaki, Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 523-4564 Fax: (808) 523-4567
Website: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

July 19, 2000

DCP 2000-493

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ENGINEERING CONCEPTS

MEMORANDUM

TO: MS. CHERYL D. SOON, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

FROM: FOR GARY O. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your memorandum dated June 26, 2000 (reference: TPD4/00-01984R) regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document and offer the following response to your comments.

1.1. *Impact on Waikalua Road / Kamehameha Highway intersection*. The proposed parking lot will not generate traffic, and therefore, will not impact the level of service at the intersection of Waikalua Road Kamehameha Highway.

1.b. *One-way ingress from Kamehameha Highway*. Construction of an alternative access to the proposed parking lot was not addressed since the Traffic Impact Assessment did not identify the need for one. Further, it would not be feasible to construct an entrance off of Kamehameha Highway due to the grade difference between the highway and the parking lot site.

2. *Number of parking stalls*. The traffic engineering consultant estimated the parking requirement based on activities at the neighborhood park. This estimate was presented at a Kaneohe Neighborhood Board meeting where representatives from the local American Youth Soccer Organization (AYSO), the primary users of the park, concurred that a minimum of 40 parking stalls would be desired.

3. *"Illegal" use of library parking stalls*. Reference to "illegal" use of stalls will be revised to state "unauthorized" use in the Final EA.

4. *Americans with Disabilities Act Accessibility Guidelines*. Construction plans will be submitted to the Disability and Communication Board of the State Department of Health for review and approval to ensure project compliance with the Americans with Disabilities Act Accessibility Guidelines. This approval will be listed in Table 1-1 of the Final EA.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

3375 KOAPAKA STREET, SUITE H423
HONOLULU, HAWAII 96819-1869

RECEIVED
MAY 19 2000
ENGINEERING CONCEPTS

JEREMY HARRIS
MAYOR

ATTILIO K. LEONARDI
FIRE CHIEF

JOHN CLARK
DEPUTY FIRE CHIEF

May 15, 2000

TO: CARL ARAKAKI
DIVISION OF PLANNING AND PROGRAMMING
DEPARTMENT OF DESIGN AND CONSTRUCTION

FROM: ATTILIO K. LEONARDI, FIRE CHIEF

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TAX MAP KEY: 4-5-018: PORTION OF 2 & 52

We received a letter from Gary Q. L. Yee, AIA, dated April 23, 2000, requesting the Honolulu Fire Department's (HFD) comments regarding the subject project.

The HFD requests that you comply with the following:

1. Maintain fire apparatus access throughout the construction site for the duration of the project.

2. Notify the Fire Communication Center (523-4411) of any interruption in the existing fire hydrant system during the project.

Should you have any questions, please call Battalion Chief Kenneth Silva of our Fire Prevention Bureau at 831-7778.

ATTILIO K. LEONARDI
Fire Chief

AKL/KS:jl

cc: Office of Environmental Quality Control
Kenneth Ishizaki, Engineering Concepts, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY Q. L. YEE, AIA
DIRECTOR

ROLAND D. LIBBY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-440

July 7, 2000

MEMORANDUM

TO: MR. ATTILIO K. LEONARDI, CHIEF
HONOLULU FIRE DEPARTMENT

FROM: FOR GARY Q. L. YEE, AIA, DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (EA) FOR
KANEOHE CIVIC CENTER NEIGHBORHOOD PARK PARKING LOT
KANEOHE, KOOLAUPOKO, OAHU, HAWAII
TMK: 4-5-18: PORTION OF 2 & 52

Thank you for your memorandum dated May 15, 2000 regarding the Draft EA for the subject project. We appreciate your effort in reviewing the document. Your comments requesting maintenance of fire apparatus access throughout the site for the duration of the construction period, and notification should any interruption of in the existing hydrant system occur during construction, will be included in the Final EA.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

Oceanic
Engineering and Design Department
200 Akamainui St.
Mililani, Hawaii 96789
(808) 625 – 2100
FAX (808) 625 – 5888

TO: ENGINEERING CONCEPTS,

OFFICE# 591-8820

FAX# 591-9010

FROM: LEONA L. PORTER

OFFICE# 625-8457 E-mail : leonap@oceanic.com

DATE: April 26, 2000

SUBJECT: KANEOHE CIVIC CENTER NEIGHBORHOOD PRKG LOT

Number of pages including cover sheet: 2

Comments: THANK YOU FOR YOUR DRAFT. WE DO NOT HAVE ANY CATV FACILITIES IN THE AREA OF YOUR PROJECT.

THERE WILL BE NO NEED IN SENDING US FUTURE CORRESPONDENCE TO THIS MATTER.

THANK YOU,

leona

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
PHONE: (808) 523-4564 • FAX: (808) 523-4567
WEB SITE ADDRESS: www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR

GARY O. L. YEE, AIA
DIRECTOR

ROLAND D. DIBSY, JR., AIA
DEPUTY DIRECTOR

DCP 2000-445

July 7, 2000

Ms. Leona L. Porter
Engineering and Design Department
Oceanic Cable
200 Akamainui Street
Mililani, Hawaii 96789

Dear Ms. Porter:

Subject: Draft Environmental Assessment (EA) for
Kaneohe Civic Center Neighborhood Park Parking Lot
Kaneohe, Koolaupoko, Oahu, Hawaii
TMK: 4-5-18: Portion of 2 & 52

Thank you for your facsimile transmission dated April 26, 2000 regarding the Draft EA for the subject project. We acknowledge your comment that no future correspondence is needed since Oceanic Cable has no CATV facilities in the project area.

A copy of your correspondence and this response will be included in the Final EA. Should you have any questions, please call Mr. Carl Arakaki of the Division of Planning and Programming at 523-4671.

Very truly yours,

FOR GARY O. L. YEE, AIA
Director

cc: Kenneth Ishizaki - Engineering Concepts, Inc.
Office of Environmental Quality Control

APPENDIX C

Botanical Resources Assessment and Wetland Determination by Char & Associates

BOTANICAL RESOURCES ASSESSMENT
KANE'OHE CIVIC CENTER PLAYGROUND PARKING LOT
KO'OLAU POKO DISTRICT, O'AHU

by

Winona P. Char

CHAR & ASSOCIATES
Botanical Consultants
Honolulu, Hawai'i

Prepared for: ENGINEERING CONCEPTS, INC.

May 1999

BOTANICAL RESOURCES ASSESSMENT
KANE'OHE CIVIC CENTER PLAYGROUND PARKING LOT
KO'OLAU POKO DISTRICT, O'AHU

INTRODUCTION

The proposed parking lot site consists of approximately one acre, and is bounded by the Kane'ohe Library parking lot to the north, Kamehameha Highway to the west, Kane'ohe Stream to the south, and the playground fence to the east. The site is largely overgrown with introduced plants such as monkeypod, koa haole, and Guinea grass. Along the southern portion of the property, adjacent to Kane'ohe Stream, there is a work storage/staging area which is lined with a layer of course gravel. There are piles of concrete rubble, boulders, and broken drain pipes in this area. A small stream with running water is found along the playground fence line. A ditch which channels storm runoff water from the highway into the small stream is found along the existing library parking lot.

Field studies to assess the botanical resources found on the proposed parking lot site were conducted on 29 April 1999. The primary objectives of the survey were to:

1) provide a description of the vegetation on the site;
2) search for threatened and endangered species as well as species of concern; and
3) identify areas of potential environmental problems or cocerns and propose appropriate mitigation measures.

DESCRIPTION OF THE VEGETATION

The plant names used in the discussion follow the most recent treatment of the Hawaiian flora by Wagner et al. (1990) for the naturalized species, and St. John (1973) for the ornamental plants.

Except for the work storage/staging area adjacent to Kane'ohe Stream, the rest of the site supports dense vegetation composed almost exclusively of introduced species. Several large trees of monkeypod (Samanea saman), African tulip (Spathodea campanulata), and octopus or rubber tree (Schefflera actinophylla), 30 to 60 fet. tall, are found around the perimeter of the parcel. Filling in the area beneath the large trees are scattered thickets of koa haole shrubs (Leucaena leucocephala), 10 to 30 ft. tall, and dense clumps of Guinea grass (Panicum maximum), 3 to 6 ft. tall. Several ornamental or landscape species are found along the Kamehameha Highway portion of the property. These include mock orange shrubs (Murraya paniculata), fern tree (Filicium decipiens), cinnamon or Padang cassia (Cinnamomum burmanii), Mickey Mouse plant (Ochna kirkii), red ti leaf (Cordyline fruticosa), asparagus fern (Asparagus setaceus), and wedelia (Wedelia trilobata); perhaps an old house was located nearby. Golden pothos or taro vine (Epipremnum pinnatum) is abundant on the site, often forming tangled masses over the trees and shrubs as well as covering the ground. Also common is the ivy gourd vine (Coccinia grandis), which is considered a noxious weed by the State Department of Agriculture.

The dry ditch adjacent to the library parking lot supports dense clumps of Guinea grass. Several banana (Musa X paradisiaca) and green ti leaf plants as well as koa haole shrubs are found along the ditch. The plants are often covered by vines of maile pilau

(Paederia scandens) and moon flower (Ipomoea alba).

Where the small stream enters the property, the stream banks are heavily overgrown with Job's tears (Coix lachryma-jobi). Also common to abundant in this area are honohono (Commelina diffusa), barnyard grass (Echinochloa crus-galli), and primrose willow (Ludwigia octovalvis). A few plants of blue ginger (Dichorisandra thyrsiflora) and 'ape (Alocasia macrorrhiza) are also found here. A very large hau (Hibiscus tiliaceus) thicket is found covering the southern half of the small stream. Vines of moon flower form dense tangles over the hau branches. Where the small stream enters Kane'ohe Stream, elodea (Egeria densa), an aquatic flowering plant, and mats of a green filamentous algae are abundant.

Most of the work storage/staging area next to Kane'ohe Stream is open with scattered patches of weedy plants such as cheeseweed (Malvastrum coramandelianum), fuzzy rattlepod (Crotalaria incana), swollen fingergrass (Chloris barbata), pigweed (Portulaca oleracea), milkweed (Sonchus oleraceus), and creeping indigo (Indigofera spicata). The vegetation in this area appears to be periodically treated with herbicide. The piles of rubble stored in this area are often overgrown with Guinea grass and other weedy plants.

DISCUSSION AND RECOMMENDATIONS

The vegetation on the parcel proposed for the Kane'ohe Civic Center Playground Parking Lot is dominated almost exclusively by introduced or alien species. Introduced species are all those plants which were brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact, that is, Cook's discovery of the islands in 1778. Hau (Hibiscus tiliaceus) was the only native plant observed on the site; it is an indigenous species, that is, it is native to the Hawaiian Islands and also

elsewhere throughout the tropics and subtropics. A few plants are originally of early Polynesian introduction; these are the green ti leaf (Cordyline fruticosa), primrose willow or kamole (Ludwigia octovalvis), and 'ape (Alocasia macrorrhiza). The parcel also supports a number of ornamental species and there may have been an old house site close by. A work storage/staging area, which is periodically treated with herbicide, is found near the Kane'ohe Stream section of the parcel.

The entire parcel appears to have been disturbed for a long period of time and, as a result, is dominated almost exclusively by introduced plants. The site does not support any remnant native plant-dominated vegetation types. No threatened and endangered species or species of concern (U.S. Fish and Wildlife Service 1999) occur on the property.

Given the findings above, there are no reasons to impose any restrictions, conditions, or impediments to the proposed use of the site as a parking lot. However, it is recommended that the landscaping be put in as soon as possible to prevent discharge of sediments into the small stream found on the property.

LITERATURE CITED

St. John, H. 1973. List and summary of the flowering plants in the Hawaiian Islands. Pacific Tropical Botanical Garden, Memoir No, 1. Lawai, Kaua'i.

U.S. Fish and Wildlife Service. 1999. U.S. Fish and Wildlife Service species list, plants. March 23, 1999. Pacific Islands Ecoregion Office, Honolulu, HI.

Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants of Hawai'i. 2 vols. University of Hawai'i Press and B.P. Bishop Museum Press, Honolulu. B.P. Bishop Museum Special Publication 83.

CHAR & ASSOCIATES
Botanical / Environmental Consultants
4471 Puu Panini Ave.
Honolulu, Hawaii 96816
(808) 734-7828

MEMORANDUM

TO Dana Arakaki
Engineering Concepts, Inc.

FROM Winona P. Char

DATE 05 June 1999

SUBJECT Kane'ohe Civic Center Playground Parking Lot

On the proposed parking lot site, the wetland area includes all the area along the small stream within the 30-foot contour line from where the stream exists the culvert near the existing library parking lot to the CRM headwall just past the hau (cross-hatched area on the topographic map of the site). Wetland indicator species (Reed 1988) such as Job's tears (Coix lachryma-jobi), primrose willow (Ludwigia octovalvis), hau (Hibiscus tiliaceus), and honohono (Commelina diffusa), make up about 95% cover in this area. The soils along the stream have been identified as "HnA", Hanalei silty clay, on the soil map (Foote et al. 1972); this soil type is on the local list of hydric soils. However, the areas immediately bordering the stream are fill land, "FL" on the soil map. Most of the filling and earth moving appears to have occurred after the soil maps were prepared; the maps are based on aerial photos taken from 1962, 1963, and 1965).

The dry ditch which funnels storm water runoff from the highway into the small stream does not meet the three criteria for a wetland. It is dominated by nonwetland or upland plants, primarily Guinea grass (Panicum maximum) and golden pothos vine (Epipremnum pinnatum). There are a few patches of Job's tear and honohono, but these provide only 5 to 10%. The soil type is mapped as "FL", fill land. There was a lot of junk in the soil test pit. Soda and beer cans and various plastic items in the top layer and concrete slabs at the bottom of the pit. There was no free water in the pit or standing surface water. The soils appeared well-drained and well-aerated.

Three soil test pits were excavated (STP1, STP2, STP3 on the topo map) and the data form sheets are attached.

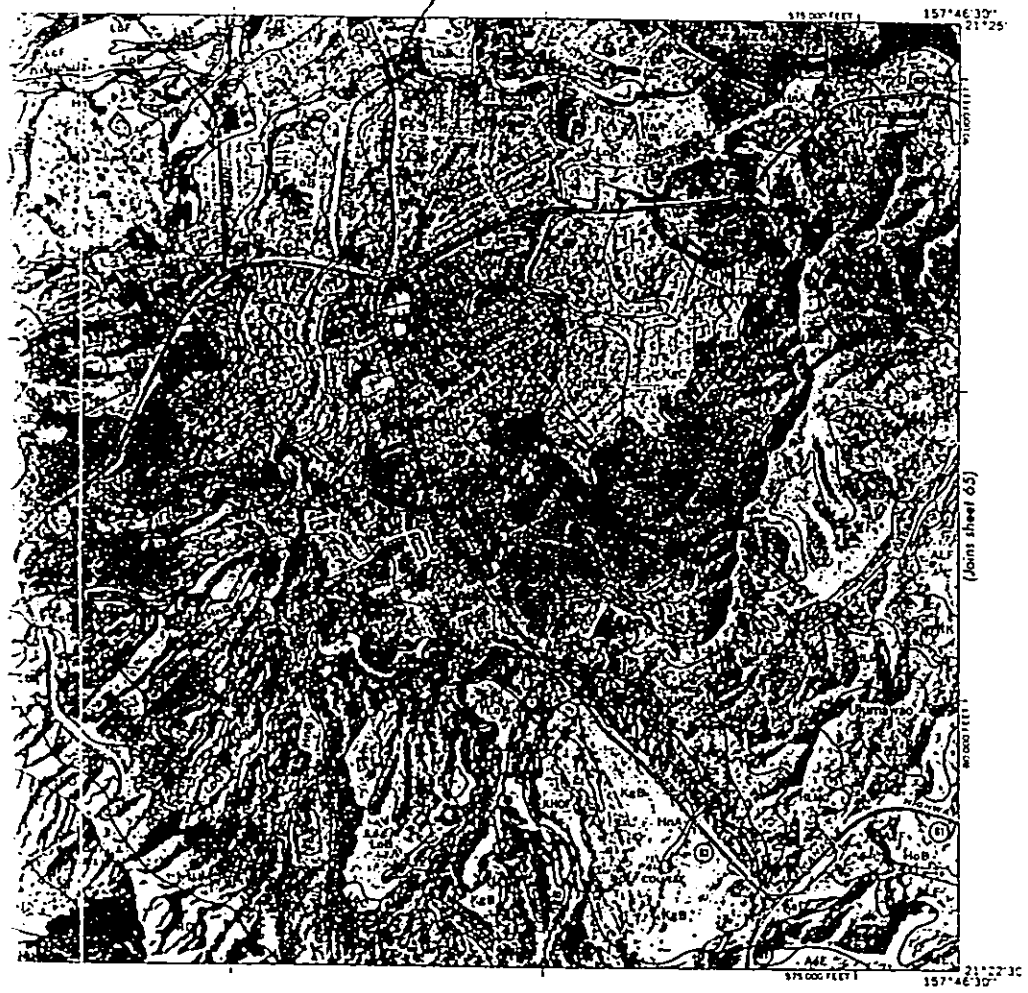
Please do not hesitate to call me should you have any questions regarding the findings.

References

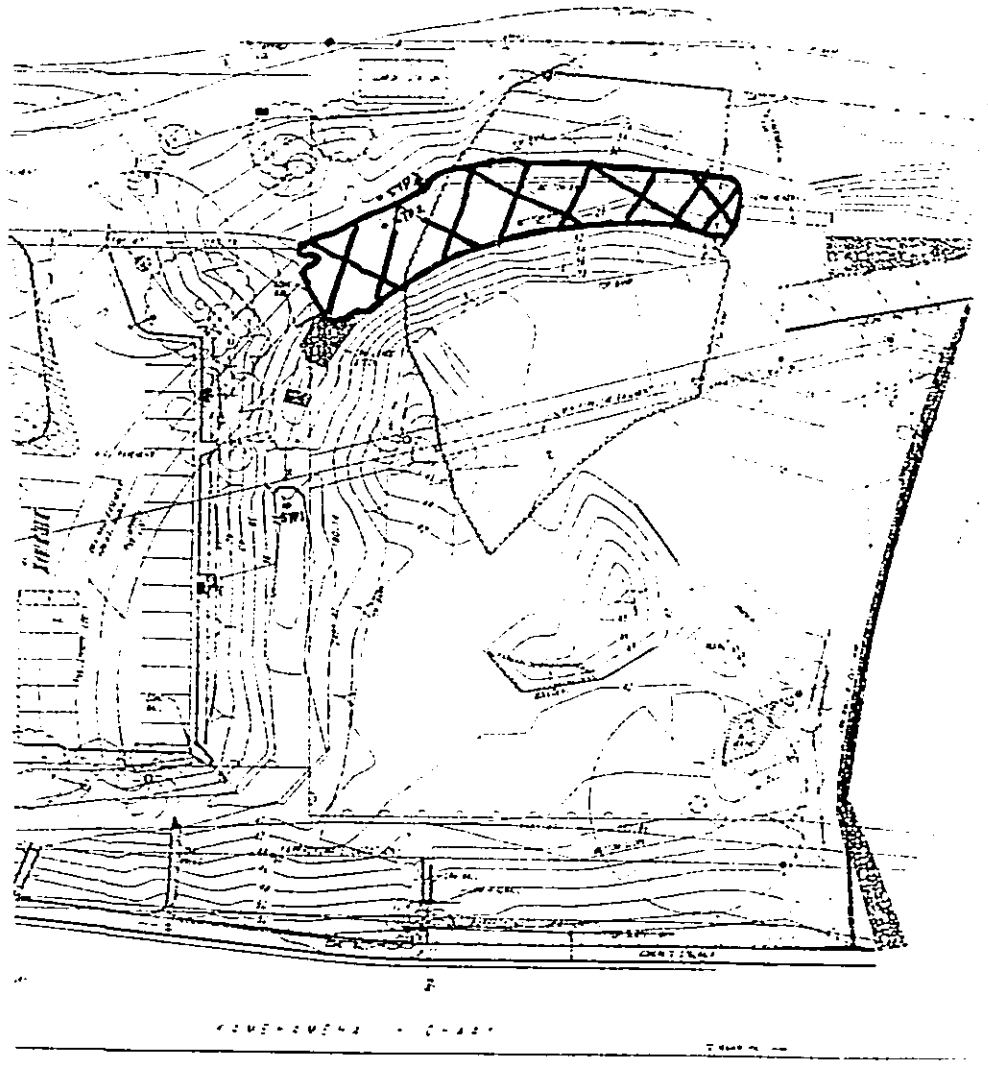
Foote, D.E., E.L. Hill, S. Nakamura, and F. Stephens. 1972. Soil survey of the islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. U.S. Department of Agriculture, Soil Conservation Service, Washington, D.C.

Reed, P.B., Jr. 1988. National list of plants that occur in wetlands: Hawaii (Region H). U.S. Fish and Wildlife Service Biological Report 88(26.13).

Project site (approximate location)



From Fuchs et al. (1972)



DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Kane'ohe Civic Center Playground Parking Lot
Applicant/Owner:
Investigator: Char + Associates: Winona Char

Date: 22 May 1989
County: C&C Honolulu
State: HI

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID: Guinea grass
Transect ID: —
Plot ID: Soil Test Pit #1 (Ditch)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Panicum maximum	grass	FACU
2. Epipremnum pinnatum	vine	*NL
3. Pederia scandens	vine	*NL
4. Musa x paradisiaca	herb	FACU
5. Cordyline fruticosa	shrub	*NL
6. Coix lacryma-jobi	grass	FACW+
7. Commelina diffusa	herb	FACW
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): Less than 50%. (Coix and Commelina cover 5 to 10%)

Remarks: Panicum maximum - Guinea grass - a nonwetland species, is the dominant cover on the sides and bottom of the dry ditch. Ditch occasionally sprayed with herbicide.
*NL= not listed in Reed (1988).

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: — (in.)
Depth to Free Water in Pit: — (in.)
Depth to Saturated Soil: — (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: No standing surface water despite recent rains. No free water in pit.

SOILS

Map Unit Name (Series and Phase): "FL", fill land.
Drainage Class:
Field Observations Confirm Mapped Type? (Yes) No
Taxonomy (Subgroup):

Profile Description: Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
2	A	Dark gray brown	—	—	grainy
3-18	B	Red clay mixed with gray brown soil	—	—	

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: No smells, clean with earthworms. Soil when moist forms loose ball, granular textured. Beverage cans, cardboard pieces, and plastic rubbish in upper surface. Concrete slabs and pieces in bottom of pit at 18 inches deep.

WETLAND DETERMINATION

		(Circle)
Hydrophytic Vegetation Present?	Yes (No)	
Wetland Hydrology Present?	Yes (No)	
Hydric Soils Present?	Yes (No)	
Is this Sampling Point Within a Wetland?		Yes (No)

Remarks: Does not meet three criteria for wetland.

Approved by mCUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Kane'ohe Civic Center Playground Parking Lot
Applicant/Owner:
Investigator: Char + Associates : Winona Char

Date: 22 May 1999
County: C+C Honolulu
State: HI

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? (Yes) No
(If needed, explain on reverse.)

Community ID: Job's tears
Transect ID: —
Plot ID: Soil Test Pit #2 (Small Stream)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Coix lacryma-jobi	grass	FACW+
2. Commelina diffusa	herb	FACW
3. Echinochloa crus-galli	grass	FACW
4. Ludwigia octovalvis	herb	OBL
5. Macaia macrorhiza	herb	FAC-
6. Dichorisandra thyrsiflora	herb	*NL
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): about 95% cover

Remarks:

*NL = not listed in Read (1988)

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
X Aerial Photographs
___ Other
___ No Recorded Data Available

Field Observations:
Depth of Surface Water: 1 (in.)
Depth to Free Water in Pit: 6 (in.)
Depth to Saturated Soil: 1 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
X Inundated
X Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
X Water-Stained Leaves
X Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: Soil maps based on aerial photos shows this as a stream. Area immediately bordering stream is covered by wetland indicator plants; margins may be flooded during heavy rains.

SOILS

Map Unit Name (Series and Phase): "Hn A", Hanaki silty clay
Drainage Class:
Field Observations
Confirm Mapped Type? (Yes) No
Taxonomy (Subgroup):

Profile Description:

Depth (Inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1-10	A	dark gray 10YR 4/1	—	—	
10-18	B	very dark gray 10YR 3/1	dark reddish brown 5YR 3/4(?)	weak	

Hydric Soil Indicators:
___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
X Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Fits soil type, but mottles weak.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? (Yes) No
Hydric Soils Present? (Yes) No
Is this Sampling Point Within a Wetland? (Yes) No (Circle)

Remarks: All three criteria are present.

Approved by HQUSACE 3/92

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: Kane'ohe Civic Center Playground Parking Lot
Applicant/Owner:
Investigator: Char + Associates : Winona Char

Date: 22 May 1997
County: C+C Honolulu
State: HI

Do Normal Circumstances exist on the site? (Yes) No
Is the site significantly disturbed (Atypical Situation)? Yes (No)
Is the area a potential Problem Area? Yes (No)
(If needed, explain on reverse.)

Community ID: Mixed Coix-Wedelia-Ipomoea
Transect ID:
Plot ID: Soil Test Pit #3
(Upslope of small stream)

VEGETATION

Dominant Plant Species	Stratum	Indicator
1. Coix lachryma-jobi	grass	FACW
2. Ipomoea alba	vine	FACU
3. Wedelia trilobata	herb	FACU
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): about 50% or less

Remarks: Wedelia, a commonly used landscape ground cover species, is abundant here. Test pit is close to edge of Coix line bordering stream at about 20' elev contour.

HYDROLOGY

___ Recorded Data (Describe in Remarks):
___ Stream, Lake, or Tide Gauge
___ Aerial Photographs
___ Other
X No Recorded Data Available

Field Observations:
Depth of Surface Water: ___ (in.)
Depth to Free Water in Pit: ___ (in.)
Depth to Saturated Soil: ___ (in.)

Wetland Hydrology Indicators:
Primary Indicators:
___ Inundated
___ Saturated in Upper 12 Inches
___ Water Marks
___ Drift Lines
___ Sediment Deposits
___ Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
___ Oxidized Root Channels in Upper 12 Inches
___ Water-Stained Leaves
___ Local Soil Survey Data
___ FAC-Neutral Test
___ Other (Explain in Remarks)

Remarks: No surface water. Soil moist but no free water in pit.

SOILS

Map Unit Name (Series and Phase): ?
Drainage Class:
Field Observations
Confirm Mapped Type? Yes No
Taxonomy (Subgroup):

Profile Descriptions:

Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/Contrast	Texture, Concretions, Structure, etc.
1–18		Reddish brown clay	—	—	

Hydric Soil Indicators:

___ Histosol
___ Histic Epipedon
___ Sulfidic Odor
___ Aquic Moisture Regime
___ Reducing Conditions
___ Gleyed or Low-Chroma Colors
___ Concretions
___ High Organic Content in Surface Layer in Sandy Soils
___ Organic Streaking in Sandy Soils
___ Listed on Local Hydric Soils List
___ Listed on National Hydric Soils List
___ Other (Explain in Remarks)

Remarks: Looks very similar to soil of adjacent soccer field, This whole area along small stream has been filled and no longer confirms to the soil types on the soil map.

WETLAND DETERMINATION

Hydrophytic Vegetation Present? (Yes) No (Circle)
Wetland Hydrology Present? Yes (No)
Hydric Soils Present? Yes (No)

(Circle)
Is this Sampling Point Within a Wetland? Yes (No)

Remarks: Hydrophytic vegetation criteria weak; suspect it probably fluctuates with Coix cover increasing during wet periods and Wedelia cover abundant during drier periods.
Wetland hydrology absent → appears well-drained.
Hydric soils → no longer "HnA", but encroaching fill type soil. Area disturbed in past, suspect much filling at one time.

Approved by HQUSACE 3/92

APPENDIX D

Biological Reconnaissance Survey of Kaneohe Stream by AECOS, Inc.

Biological reconnaissance survey of Kane`ohe Stream in the vicinity of the Kaneohe Civic Center[1]

February 22, 2000 *AECOS* No. 918

Eric B. Guinther
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Introduction

This report describes a tributary of Kane`ohe Stream which flows into the latter just downstream of the Kamehameha Highway bridge. This small tributary is located at the Kaneohe Town Civic Center at the corner off Kamehameha Highway and Waikalua Road in Kane`ohe on the Island of O`ahu. The purpose of the report is to assess biological and water quality impacts of proposed expansion of a parking lot by the City & County of Honolulu. The project is located on mostly previously graded land adjacent to the back lot of the Kaneohe Library and the Kaneohe Civic Park. A reconnaissance survey of the site was conducted by *AECOS* biologists Eric Guinther and Rodger Douglas on April 26-27, 1999. Water quality samples were collected and biological observations made along the tributary stream and Kane`ohe Stream in the project vicinity. Representative specimens of aquatic biota that could not be readily identified in the field were collected.

Stream Description

Kane`ohe Stream drains a large, amphitheater-headed valley on the windward side of O`ahu, with numerous branches arising along the base of the Nu`uanu Pali of Ko`olau mountain (Figure 1). Total drainage area for Kane`ohe Stream and its tributaries is 1,473 ha (3,640 ac; Geographic Decision Systems International & Dashiell, 1994). Kane`ohe Stream is a perennial stream and its State code number is 3-2-10. The tributary located behind the library is presumably unnamed and of uncertain relationship to the natural drainage. Thus, it is shown on both the 1968 and 1983 topographic maps from USGS (Kaneohe Quadrangle, 7.5 Minute Series) as an alternate channel of Kapunahala Stream and indicated by a blue line as crossing Kamehameha Highway roughly 90 m north of Kane`ohe Stream, then flowing into the latter a short distance downstream. No bridge exists in this area today. A plot plan map of the Kaneohe Branch Library (DAGS, 1961) shows this stream as a narrow (3-6 m; 10-20 ft) channel labeled "old Kaneohe Stream line" draining from a culvert passing under Kamehameha Highway. The plans further show that in order to construct the library and its parking lot, the culvert, consisting of two 48-inch concrete pipes, was extended east to a new outlet some 60 m (200 ft) further downstream. The remaining segment of stream not buried in a culvert is a little under 60 m (200 ft) in length. The capacity of the culvert, and the small stream bed indicated on the plan, seem clear indication that this was not the main channel of "Kaneohe" Stream, nor Kapunahala Stream[2].

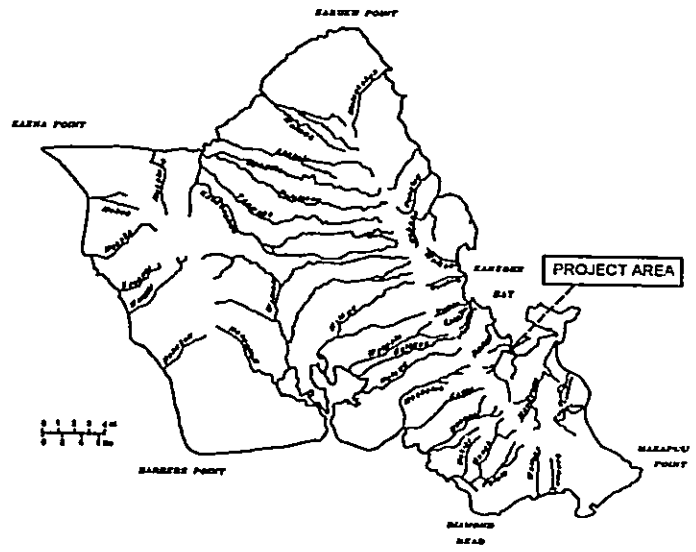

Figure 1. Location of Kane`ohe Stream on O`ahu

The plans for the library clearly show that the former stream, whatever its name, was buried under graded fill between Kamehameha Highway and a new culvert outlet when the library was built. A drainage swale was placed along the south margin of the parking lot, and this swale

[1] Report prepared for Engineering Concepts, Inc. for their project: "Kaneohe Civic Center Parking Lot, Kaneohe, Koolaupoko, Oahu, Hawaii". This report will become part of the public record.

[2] To be fair, there is confusion of names here. The main branch of the Kane`ohe Stream system is Kamo`oali`i Stream, and the name Kane`ohe is applied sometimes to the branch draining Kapunahala (see Wilson Okamoto & Assoc. Inc. 1983). These two streams join just upstream of Kamehameha Highway (presumably forming Kane`ohe Stream), but this junction is within the highly channelized segment and may once have been further downslope. All of these names are of modern origin, as the streams of this watershed were once called Wailele (changed from Pani`ohele), Hi`ilaniwai, Kahuaiki, and Mamalahoa (Handy and Handy, 1940).

(present today) receives drainage from very local parts of Kamehameha Highway and the library property.

This drainage swale appears to be an old stream bed because of the presence of rounded cobble, however it is not. The bed also contains debris and concrete structures and is crossed by a narrow road with a small culvert as also shown in DAGS (1961) plans. The swale drains into a pond several meters in length and width. The pond abuts a vertical, concrete retaining wall with culvert openings below the water surface (these are the 48-inch concrete pipes shown in the 1961 plans). Water must be flowing in the culvert because there is a steady outflow (estimated on the order of 0.3 cfs) from the pond, which has no visible inflows. Wetland vegetation chokes the shallow water coming out of the pond, dominated by Job's tears (*Coix lachryma-jobi*), primrose willow (*Ludwigia octovalvis*), day-flower (*Commelina diffusa*), elephant ear (*Alocasia macrorrhiza*), monochoria (*Monochoria vaginalis*), and kalo (*Colocasia esculenta*). Surrounding (riparian) vegetation includes scrambled-egg plant (*Senna surattensis*), hau (*Hibiscus tiliaceus*), koa-haole (*Leucaena leucocephala*), Formosan koa (*Acasia confusa*), banyan (*Ficus* cf. *microcarpa*), Guinea grass (*Panicum maximum*) and banana (*Musa* x *paradisiaca;* infected with bunchy-top virus). Other herbaceous plants noted around the stream area include spiral flag (*Costus* sp.), moon flower vine (*Ipomoea alba*), pothos vine (*Epipremnum pinnatum*), and wedelia (*Wedelia trilobata*).

This stream flows through a corrugated metal culvert under a gravel access road from the park, down a CRM surface into a long pool confined by rockwork banks, thence into Kane'ohe Stream next to a service access ramp. The metal culvert is a "hanging" type, projecting out about 30 cm (1 ft) and set some 0.5 m (18 in) above the pool. The stream bottom is mostly silt, with a concrete section below the metal culvert. This lower segment is unshaded as there is minimal vegetation along the channelized stream banks.

Kane'ohe Stream is confined in a massive concrete channel which ends just below the point where the small side stream from the library side enters. Further downstream, Kane'ohe is channelized, but the bed is natural, comprised of rounded cobble, and the banks are mostly soil. Upstream, the bed is concrete, and the banks are high vertical walls of either concrete or (beneath the highway bridge) massive basalt boulders grouted together (CRM).

Water Quality

Samples were collected on April 27, 1999 from three stream stations near the Kane'ohe Library. Station 1 was located at the downstream end of the upper pool on the small, unnamed tributary to Kaneohe Stream. Station 2 was located downstream on a pool of the same stream. Station 3 was located in Kaneohe Stream just downstream of the tributary stream and immediately below the concrete channel section of Kane'ohe Stream. Analytical methods and instruments used to obtain water quality measurements are given in Table 1.

Table 1. Analytical methods and instruments used for the April 27, 1999 sampling in Kane'ohe Stream, O'ahu.

Analyses List	Method	Reference	Instrument
Ammonia	alkaline phenol	Koroleff in Grasshoff et al. (1986)	Technicon AutoAnalyzer II
Dissolved Oxygen	EPA 360.1	EPA (1979)	YSI Model 58 DO meter
Nitrate + Nitrite	EPA 353.2	EPA (1993)	Technicon AutoAnalyzer II
pH	EPA 150.1	EPA (1979)	Orion SA 250 pH meter / Ross combination electrode
Salinity (field)	refractive index	—	handheld, temperature compensating refractometer
Temperature	thermister calibrated to NBS cert. Thermometer (EPA 170.1)	EPA (1979)	YSI Model 58 DO meter
Total Nitrogen	persulfate digestion / EPA 353.2	D'Elia et al. (1977) / EPA (1993)	Technicon AutoAnalyzer II
Total Phosphorus	persulfate digestion / EPA 365.1	Koroleff in Grasshoff et al. (1986) / EPA (1993)	Technicon AutoAnalyzer II
Total Suspended Solids	Method 2540D (EPA 160.2)	Standard Methods 18th Edition (1992); EPA (1979)	Mettler H31 balance
Turbidity	Method 2130B (EPA 180.1)	Standard Methods 18th Edition (1992), EPA (1993)	Hach 2100P Turbidimeter

D'Elia, C.F., P.A. Steudler, & N. Corwin. 1977. *Limnol. Oceanogr.* 22(4): 760-764.

EPA. 1979. Methods for Chemical Analysis of Water and Wastes. U.S. Environmental Protection Agency, EPA 600/4-79-020.

EPA. 1993. Methods for the Determination of Inorganic Substances in Environmental Samples. EPA 600/R-93/100

EPA. 1994. Methods for Determination of Metals in Environmental Samples, Supplement 1. EPA/600/R-94/111 May 1994.

Grasshoff, K., M. Ehrhardt, & K. Kremling (eds). 1986. Methods of Seawater Analysis (2nd ed). Verlag Chemie, GmbH, Weinheim.

Standard Methods. 1992. Standard Methods for the Examination of Water and Wastewater. 18th Edition 1992 (Greenberg, Clesceri, and Eaton, eds.). APHA, AWWA, & WEF. 1100 p.

The results of the water quality analyses are shown in Table 2. The DO saturation level at Station 1 (Table 2) is low and is in violation of the State water quality criterion (Table 3) of a minimum of 80 percent saturation. This could be caused if the water in this tributary originates from a spring not far upstream of Station 1; i.e., water that has not recently been in contact with air. The DO saturation level at Station 2 further downstream also does not meet the State's criterion, but is just below the minimum saturation. The difference in saturation levels between Station 1 and 2 could be due to turbulent flow in the stream causing mixing with air and/or aquatic plant productivity.

Table 2. Water quality characteristics of Kane'ohe Stream and a tributary sampled on April 27, 1999.

	Time sampled	Temp. (°C)	DO (mg/l)	DO Sat. (%)	Cond. (µmhos/cm)	pH (pH units)
04-27-99						
Sta. 1	1245	25.4	2.70	33	283	6.97
Sta. 2	1235	26.4	6.4	79	282	7.24
Sta. 3	1230	29.9	11.4	150	190	9.43

		Turbidity (ntu)	TSS (mg/l)	Ammonia (µg N/l)	Nitrate + nitrite (µg N/l)	Total N (µg N/l)	Total P (µg P/l)
04-27-99							
Sta. 1	1245	6.51	4.8	110	1510	1620	70
Sta. 2	1235	4.12	2.9	30	1210	1240	58
Sta. 3	1230	6.52	8.9	23	118	356	41

The DO saturation level at Station 3 in Kane'ohe Stream is quite high (150 percent) and likely results primarily from aquatic plant productivity upstream during the daylight hours. That pH is also high at this station (and exceeds the DOH WQ criterion; see Table 3) supports this contention, since the uptake of carbon dioxide in the photosynthetic process can significantly increase pH in fresh water environments. Note also that temperature is high at this station and is another factor that could accelerate the production of DO from aquatic photosynthesis. The high temperature, DO, and pH levels at Station 3 reflect the fact that this station is located just below a long concrete-lined section of Kane'ohe Stream. Removal of riparian habitat with trees to shade the water and spreading of the flow out over a concrete floor results in increased solar heating of the water. Algae on the concrete surface contribute oxygen during daylight hours. We can compare the temperature, DO, and pH at Station 3 with a monitoring station located some 800 m downstream (*AECOS*, 1996) which gave average wet season[3] values of 22.4 °C, 8.44 mg/L, and 7.99 respectively.

Conductivity levels are somewhat elevated in the unnamed tributary (Station 1 and 2), but within the State WQ criterion (Table 3) of 300 µmhos/cm. The conductivity level of 190 µmhos/cm at Station 3 on Kaneohe Stream is more typical of flowing stream waters in Hawaii. There were no evident trends in the distribution of particulate matter; i.e., turbidity and TSS, in these samples.

Table 3. State of Hawaii water quality criteria for streams (HAR §11-54-05.2)

Parameter	Geometric Mean value not to exceed this value	Value not to be exceeded more than 10% of the time	Value not to be exceeded more than 2% of the time
Total Nitrogen (µg N/l)	250.0 *160.0*	520.0 *350.0*	800.0 *600.0*
Nitrate + Nitrite (µg N/l)	70.0 *30.0*	180.0 *90.0*	300.0 *170.0*
Total Phosphorus (µg P/l)	50.0 *30.0*	100.0 *60.0*	150.0 *50.0*
Total Suspended Solids (mg/l)	20.0 *10.0*	50.0 *30.0*	80.0 *55.0*
Turbidity (NTU)	5.0 *2.0*	15.0 *5.5*	25.0 *10.0*

Two values: upper, "wet" criteria apply during the rainy season (November 1 through April 30); lower, "dry" (italicized) criteria apply during the dry season (May 1 through October 31).
Other "standards":
- pH units shall not deviate more than 0.5 units from ambient conditions and shall not be lower than 5.5 nor higher than 8.0.
- Dissolved oxygen shall not decrease below 80% of saturation.
- Temperature shall not vary more than 1 C° from ambient conditions.
- Specific conductance shall not exceed 300 µmhos/cm.

Nitrate + nitrite levels in the unnamed tributary (Table 2) exceed the State's geometric mean WQ criterion by a factor of about 20. Interestingly, there is no organic nitrogen (i.e., total nitrogen minus ammonia and nitrate + nitrite) in the samples from either Station 1 or 2 — nitrate + nitrite and much smaller amount of ammonia account for all the nitrogen present. This is further evidence that this water has recently originated from a groundwater source where most of the chemically bound nitrogen has decomposed to soluble nitrate + nitrite. There is a slight improvement in water quality as regards all of the nutrients with distance downstream (uptake by aquatic plants); and concentrations are all lower in Kane'ohe Stream.

Aquatic Biota

A variety of aquatic plants and animals were observed at the Kaneohe Civic Center in the existing short segment of stream tributary to Kane'ohe Stream on April 26, 1999. A taxonomic listing of aquatic organisms observed and/or collected in this unnamed stream and the adjacent reach of Kane'ohe Stream is given as Table 4. This table also includes results reported for a survey in the same general area on Kane'ohe Stream by Timbol and Maciolek (1978). The summary of aquatic resources provided in the *Hawaii Stream Assessment* (Hawaii Cooperative Park Service Unit. 1990) indicates Kane'ohe Stream is surveyed relatively often by DLNR (last in 1989) and harbors 'o'opu nakea (*Awaous stamineus*), 6 "NG2" list species, and 6 "IG1" list species. The NG2 list is comprised of 7 native species that are relatively common in Island streams. The IG1 list includes 9

[3] Values from sampling in the months November through April inclusive.

introduced or non-native species widespread in Island streams. Most, although not all, of these species are listed in Table 4[1].

The upper pool is somewhat shaded, but supports a sparse growth of monochoria (*Monochoria vaginalis*), a somewhat rare emergent aquatic plant. This species is not native and sometimes appears as a pest in taro lo'i. The exposed pool near the bottom of the stream harbors an abundance of a green alga (*Spyrogyra* sp.) and the aquatic plant formerly known as elodea (*Egeria densa*).

The presence of the introduced atyid shrimp, *Neocaridina denticulata*, is of some concern because this species has the potential for displacing our native atyid ('opae kala'ole; *Atyoida bisulcata*) and was previously thought to be abundant only in the Maunawili Stream system (Kailua)(Guinther, 1998). However, Ron England (pers. comm.) related that he has been aware of this atyid in the Kane'ohe watershed for some time. Native 'opae kala'ole have been reported from the upper reaches of the Kane'ohe Stream system in the past, but the dam at Ho'omaluhia may be restricting upstream migration of this diadromous species. Two native species that are likely to inhabit Kane'ohe Stream below the concrete-lined segment are 'opae oeha'a (*Macrobrachium grandimanus*) and 'o'opu akupa (*Eleotris sandwicensis*).

All of the fishes observed during the field survey were introduced or non-native species. However, several native species are reported from Kane'ohe Stream system, even from the lower reach (Timbol and Maciolek, 1978). Without using more intrusive sampling methods, any 'o'opu (gobies) present in the upper pool on the small tributary at the Civic Center could well be missed because of poor water clarity.

[1] The *Hawaii Stream Assessment* does not list the species found in any particular stream, except those from the NGI (Nauve Group I) "group".

Table 4. Checklist of aquatic biota observed or reported from lower Kane'ohe Stream.

Species	Common name	Status	QC Code	Abundance
ALGAE				
RHODOPHYTA	(red algae)			
ACROCHAETIACEAE				
Audouinella sp.			20	R
CHLOROPHYTA	(green algae)			
CLADOPHORACEAE				
indet. nr. *Cladophora*			20	R
ZYGNEMATACEAE				
Spirogyra sp.			20	C
AQUATIC PLANTS				
SPERMATOPSIDA, DICOTYLEDONS				
MALVACEAE				
Hibiscus tiliaceus L.	*hau*	?ind.	10	U
ONAGRACEAE				
Ludwigia octovalvis (Jacq.) Raven	primrose willow	nat.	10	C
SPERMATOPSIDA, MONOCOTYLEDONS				
ARACEA				
Alocasia macrorrhiza (L.) Schott	*'ape*, elephant ear	pol.	10	U
Colocasia esculenta (L.) Schott	*kalo*, taro	pol.	10	U
COMMELINACEA				
Commelina diffusa N.L. Burm	*honohono*, day flower	nat.	10	A
HYDROCHARITACEAE				
Egeria densa Planch.	elodea	nat.	10	C
POACEAE				
Coix lachrymajobi L.	Job's tears	nat.	10	A
PONTEDERIACEAE				
Monochoria vaginalis (N.L. Burm) K. Presl	cordate monochoria	nat.	20	U
INVERTEBRATES				
MOLLUSCA, GASTROPODA	(mollusks)			
THIARIDAE				
Tarebia granifera Lam.		nat	10	P
ARTHROPODA, DECAPODA				
CAMBARIDAE				
Procambarus clarki (Girard)	American crayfish	nat	01	'78
ATYIDAE				
Neocaridina denticulata (de Haan)	shrimp	nat.	21	C

Table 3 (continued)

Species	Common name	Status	QC Code	Abundance
PALAEMONIDAE				
Macrobrachium grandimanus	`opae oeha`a	end.	01	'78
Microbrachium lar (Fabricius)	Pacific island prawn	nat	10	R
ARTHROPODA, INSECTA				
ODONATA, COENAGRIONIDAE				
Ischnura posita (Hagen)	damselfly, adult	nat.	10	P
Ischnura ramburi (Selys-Longchamps)	damselfly, adult	nat.	10	P
ODONATA, LIBULELLIDAE				
Pantala flavescens (Fabr.)	globe skimmer, adult	nat.	10	P
VERTEBRATES				
VERTEBRATA, PICES	(fishes)			
CICHLIDAE				
Cichlasoma nigrofasciatum	convict cichlid	nat.	10	U
?Oreochromis sp.	ukw. tilapia	nat	10	P
CLARIIDAE				
Clarius fuscus	Chinese catfish	nat.	01	'78
ELEOTRIDAE				
Eleotris sandwicensis (Vaillant & Sauvage)	`o`opu `akupa	end.	01	'78
GOBIIDAE				
Awaous stamineus (Eydoux & Souleyet)	`o`opu nakea	end.	01	'78
LORICARIIDAE				
?Hypostomus sp.	spiny armored catfish	nat.	10	C
POECILIIDAE				
Poecilia reticulata Peters	guppy	nat	10	P
Poecilia mexicana (Steindachner)	Mexican mollie	nat	10	A
Xiphophorus helleri Heckel	swordtail	nat	10	P
Xiphophorus maculatus (Gunther)	platy	nat	01	'78
VERTEBRATA, AMPHIBIA	(frogs & toads)			
BUFONIDAE				
Bufo marinus	marine toad, tadpole	nat.	10	C
RANIDAE				
Rana catesbeiana Shaw	American bullfrog, tadpole	nat.	10	P

Survey Effort: 110 man/min

KEY TO SYMBOLS USED.
Status:
nat. - naturalized. An introduced or exotic species.
Ind. - indigenous. A native species also found elsewhere in the Pacific.
end. - endemic - A native species found only in the Hawaiian Islands.

Table 3 (continued)

QC Code:
01 - Reported for this part of stream by others (e.g., Timbol & Maciolek, 1978).
10 - Observed and identified in the field on April 26, 1999.
20 - Collected; identified in the laboratory; specimen(s) not saved.
21 - Collected; identified in the laboratory; voucher specimen(s) saved.
Abundance at survey locations:
P - present; not common, but unable to assess abundance.
L - common or even abundant, but over a limited area.
R - rare; only one or two individuals seen.
U - uncommon; several individuals seen, in some habitat places visited.
C - common; numerous individuals seen, or seen in most habitat places visited.
A - abundant; numerous in most habitat places visited

Conclusions

The small stream located at Kaneohe Civic Center (directly behind the Kaneohe Library) is a perennial stream, although its source(s) of water are uncertain and may be substantially derived from ground water and street runoff. The upper segment, a swale that runs more or less south between the library building and Kamehameha Highway, then turns east parallel with the back of the library parking lot to a pool fronting the large diversion culvert outlet, was without flowing water on our survey dates. A local area resident (Rodger Douglas) commented that he recalled a stream with flowing water in this area when he was a child. However, plans for the library (DAGS, 1961) show that the original stream here was diverted underground through the culvert system.

The perennial or constantly flowing part of this small stream between the culvert opening and the confluence with Kane`ohe Stream was found to harbor a diversity of aquatic plants and animals — all introduced (non-native) species. Nonetheless, some aquatic habitat of real or potential resource value is present on the property. Island-wide, community interest in preserving natural areas, particularly along streams in urban settings, is a factor that should be considered in designing this parking lot project.

We note that Scheme 1 entails covering essentially all but the tributary stream mouth (i.e., that portion below an existing crossing structure that provides maintenance access to Kane`ohe Stream) with a parking lot providing 77 stalls. Scheme 2 involves minimal destruction of stream habitat and the parking lot itself (~28 stalls) is only about one-third as large as that proposed by Scheme 1. Finally, Scheme 3 involves burying only the segment running parallel and adjacent to the existing library parking lot to obtain 47 parking stalls. As noted, this segment is essentially a drainage swale and therefore of no particular aquatic resource value. However, even this feature has riparian and open space values that may be worth preserving.
From the perspective of minimizing impacts to aquatic and riparian habitats, Scheme 2 is clearly preferable. The three options, representing layouts for parking varying between 28 and 77 stalls,

all avoid use of a previously graded "storage" area at the expense of loss of stream/riparian habitats. This approach may be inconsistent with City and County development policy (City & County of Honolulu, 1999). Although presently mostly hidden from public view, long-term planning for the property must consider that a *de facto* base-yard storage area is inappropriate for a Civic Center. The storage site is actually little used, supporting a sparse and somewhat eclectic mix of construction and stream-bed-clearing debris and a camping area for some of Kaneohe's homeless population.

The project site presents an opportunity for satisfying several local community needs - specifically 1) parking for the library and adjacent athletic field, 2) open space (such as a park beyond the soccer fields that occupy all of the present-day Kaneohe Civic Park in central Kane'ohe, and 3) riparian protection of water quality for Kane'ohe Stream. Clearly, taken as a whole, the parcel between the library and Kane'ohe Stream can serve all three of these functions, but can do so adequately only if use of a significant portion of the property as a debris storage area is curtailed.

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APPENDIX E

Archaeological Inventory Survey by Cultural Surveys Hawaii, Inc.

AN ARCHAEOLOGICAL INVENTORY SURVEY
OF THE KĀNE'OHE CIVIC CENTER PLAYGROUND
PARKING LOT
(TMK 4-5-18:Por. 2,52)

by

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&
Hallett H. Hammatt, Ph.D.

Prepared for

Engineering Concepts Inc.

Cultural Surveys Hawai'i
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February 2000

ABSTRACT

The archaeological inventory survey of the proposed Kāne'ohe Civic Center Playground Parking Lot (TMK 4-5-18:por. 2,52) involved field survey, limited subsurface testing, and historic background research of the project area. The project area is located in the *ahupua'a* of Kāne'ohe, O'ahu and is bounded by Kāne'ohe Stream to the south, Kamehameha Highway to the west, Kāne'ohe Library to the north and soccer fields to the east.

The project area has been graded in the southeast portion along Kāne'ohe Stream and is covered in dense vegetation around the drainage canal. A soil profile taken within the vegetated area indicates that the soil is composed of fill and corresponds to the fill material observed along the bank cut of Kāne'ohe Stream. There are no prehistoric or historic structures visible on the project area and intensive land altering activities have significantly altered the original soil structure.

Based on background research and field inspection of the project area it is recommended that full-time archaeological monitoring is not appropriate during the construction of the proposed parking lot.

TABLE OF CONTENTS

LIST OF FIGURES

INTRODUCTION

This study presents the results of an archaeological inventory survey of the Kāne'ohe Civic Center Playground parking lot (TMK 4-5-18:por. 2,52) performed by Cultural Surveys Hawaii in March, 1999, at the request of Engineering Concepts, Inc. The proposed Kāne'ohe Civic Center Playground parking lot is located in the business district of Kāne'ohe town, bounded by Kāne'ohe Stream to the south and Kamehameha Highway to the west. Access to the proposed parking lot will extend beyond the existing library 'parking lot and will require crossing an existing drainageway which spills into Kāne'ohe Stream (Figures 1-6).

A. Scope of Work

The scope of work for the archaeological inventory survey included the following:

1. Background research consisting of examination of historic maps, archival documents including Land Commission Award documents, historical accounts, and previous archaeological research in the area. Also the files of the State Historic Preservation Division were consulted for previously recorded archaeological sites and possible historic buildings in the area.

2. Fieldwork consisting of 100% survey coverage of the project area to determine existing conditions and potential areas of archaeological and/or historic interest.

3. Preparation of a report to detail the results of the background research and fieldwork. This report will describe potential sensitive areas with preliminary suggestions for mitigation, if appropriate.

B. Project Area and Soil Description

The proposed parking lot project area, of approximately one acre, consists of a graded, gravel and crushed concrete surface, on the southwest portion of the project area and a dense canopy of vegetation surrounding the undeveloped portion of the drainageway. Inside the vegetation is an undulating surface with steep-sided banks down to the drainage canal.

The project area lies at about 40 ft. amsl in a highly populated urban context. Yearly rainfall ranges from 60-80 inches per year (Juvic and Juvic, 1998). The soil compositions are designated Lolekaa and Hanalei series (LoB and HnB respectively). The Lolekaa silty clay 3-8 percent slopes is generally located on terraces and fans with a representative profile of dark-brown silty clay about 10 inches thick. The subsoil extends down from about 46-70 inches with the upper portion being dark-brown silty clay with subangular blocky structure. The substratum is strongly weathered gravel. Permeability is moderately rapid with slow runoff and slight erosion hazard. This soil was generally used for pasture, homesites, truck crops, bananas and papayas (Foote, *et al.*, 1972). The Hanalei silty clay (HnB) with 2-6 percent slope are often poorly drained soils developed in alluvium derived from basic igneous rock. Runoff is slow and erosion hazard is slight. This type of soil was often used for sugarcane, taro and pasture (*ibid.*).

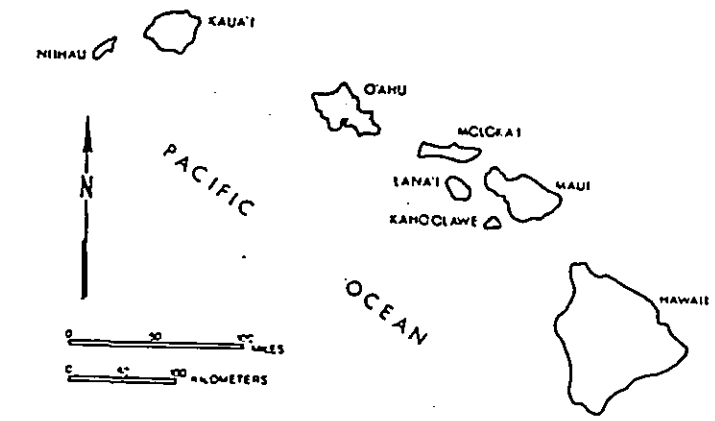


Figure 1 State of Hawai'i

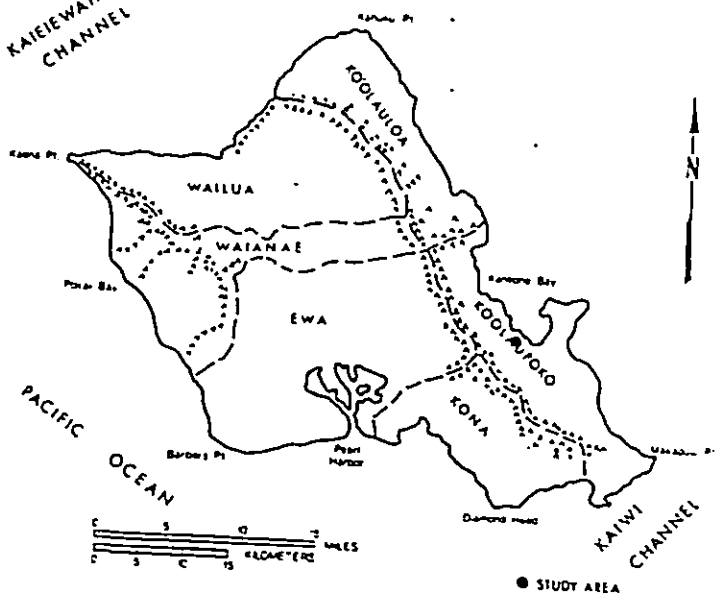


Figure 2 O'ahu Island Location Map

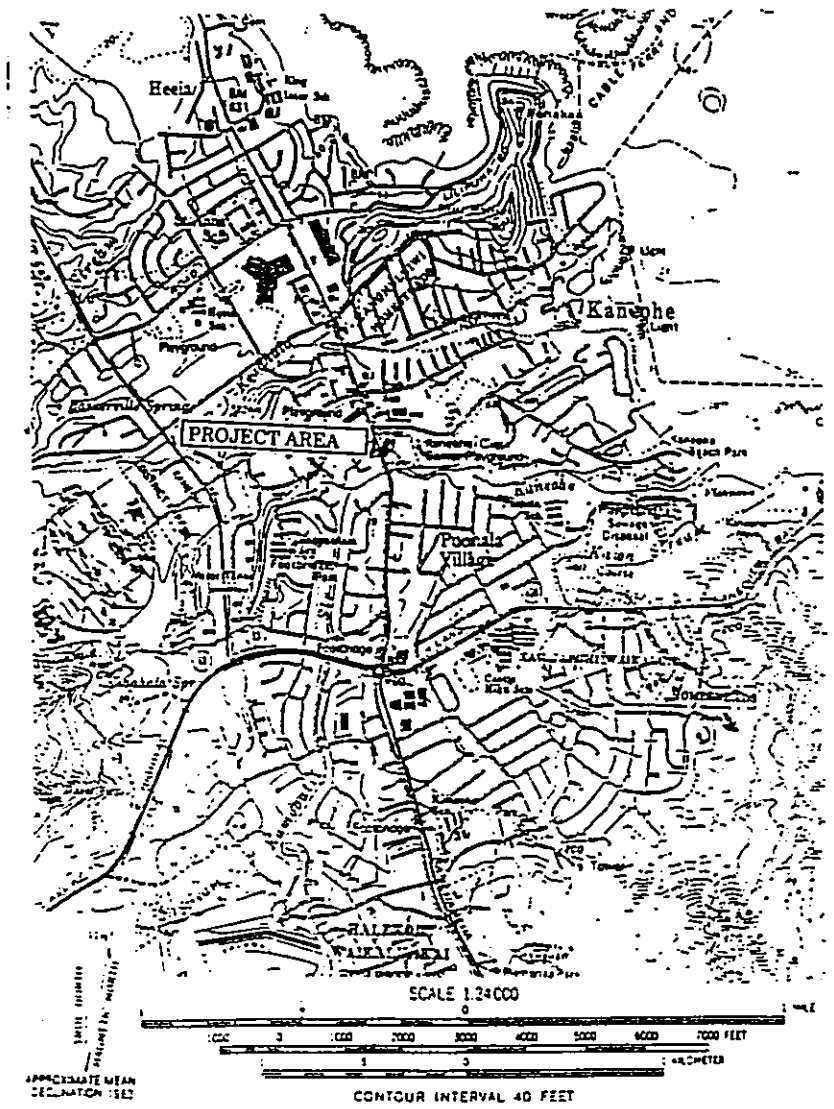


Figure 3 Portion of USGS 7.5 Minute Series Topographical Map, Kāne`ohe Quadrangle, showing study parcel

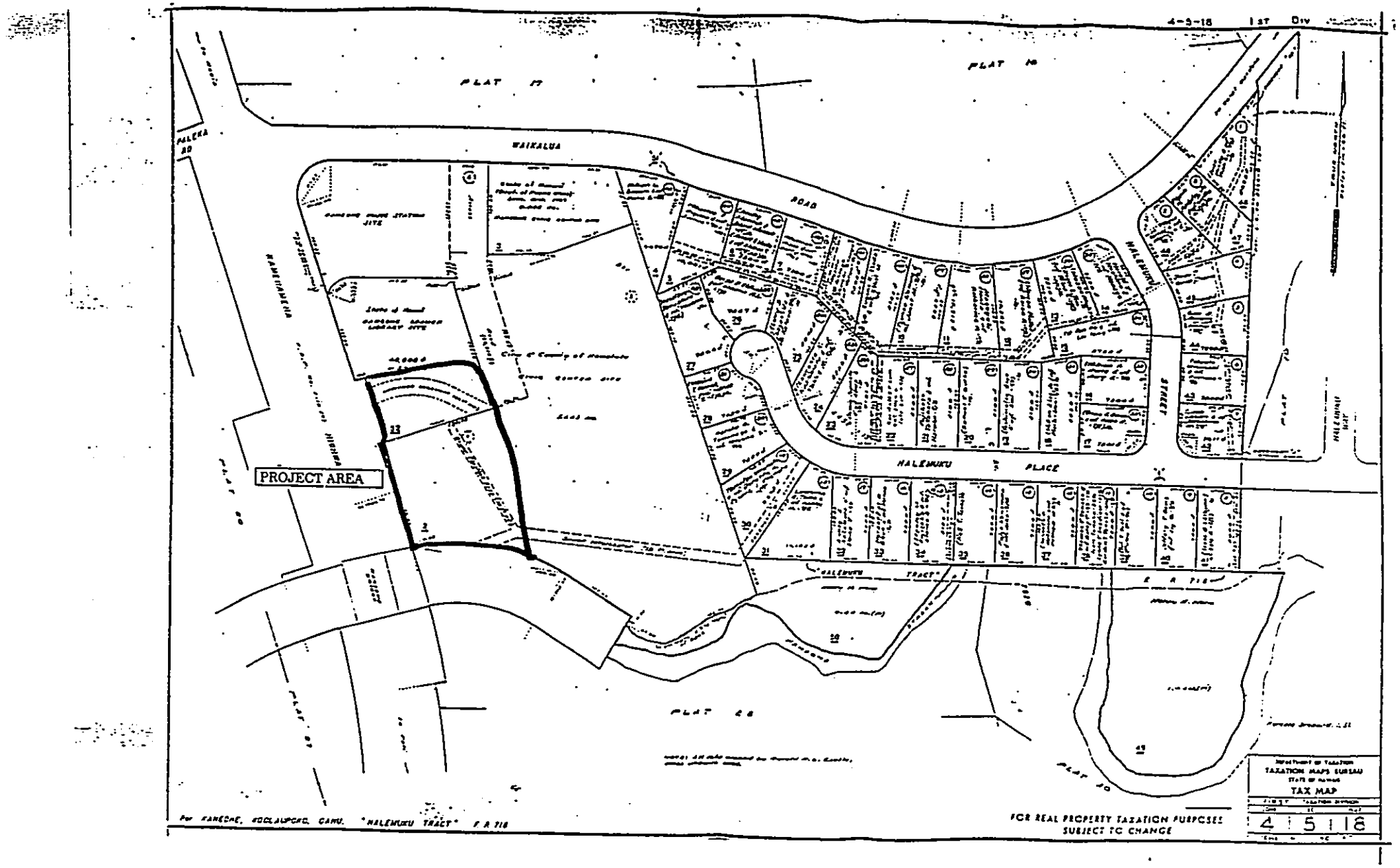


Figure 4 TMK Map 4-5-18:Por. 2,52 Showing Project Area

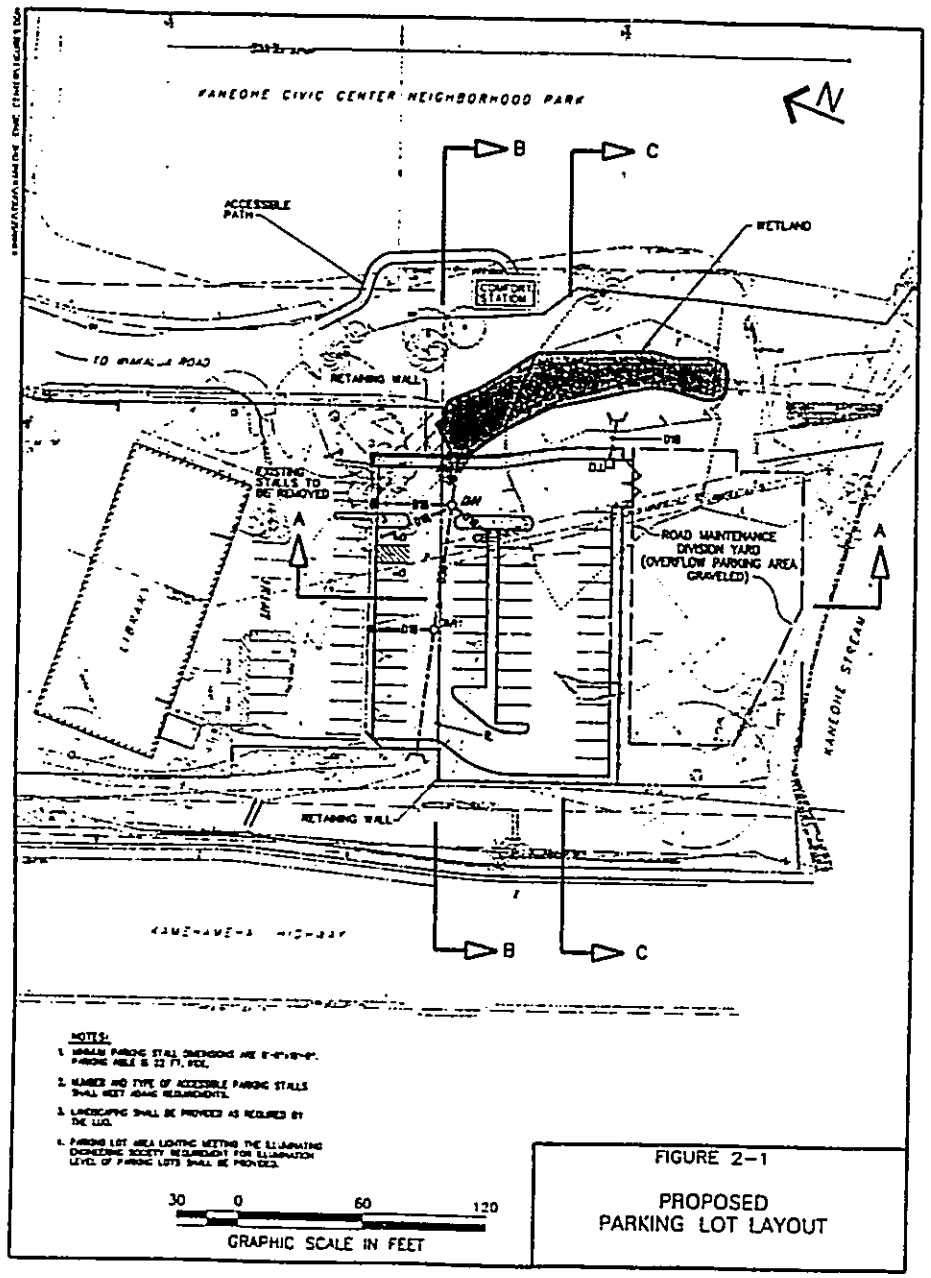


Figure 5 Proposed Parking Lot Layout (Provided by Engineering Concepts)

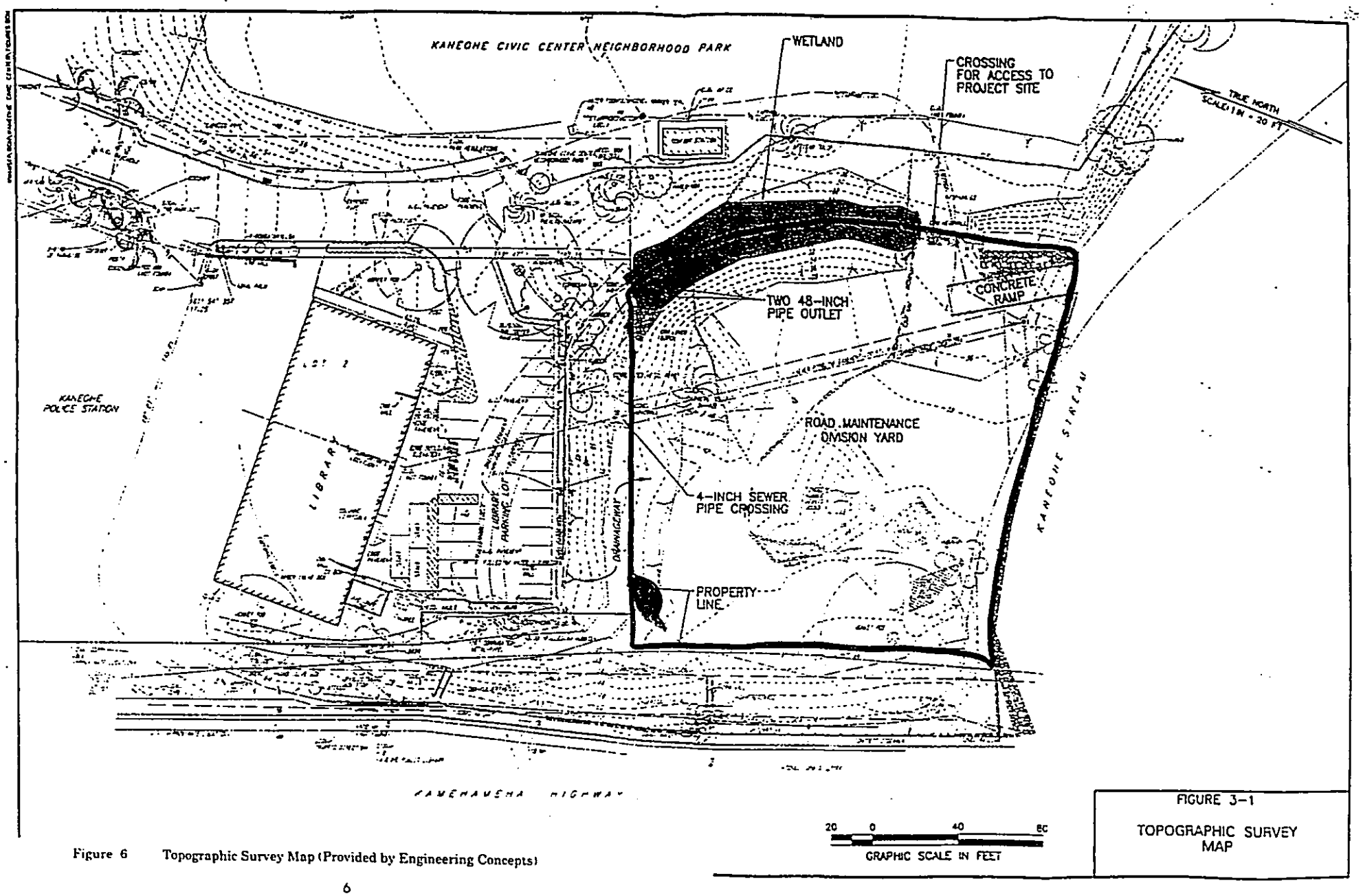


Figure 6 Topographic Survey Map (Provided by Engineering Concepts)

HISTORICAL BACKGROUND

The project area lies within the large *ahupua'a* (traditional land division) of Kāne'ohe, one of the eleven *ahupua'a* within the district of Ko'olaupoko, Island of O'ahu. Little is known of traditional land tenure. O'ahu was conquered by the Maui Chief Kahekili in 1783 and again by Kamehameha I in 1795 and it was the custom of ruling chiefs to disregard the land allocations of their defeated rivals. "Kamehameha I retained Kāne'ohe as his own personal property when he apportioned the conquered O'ahu lands in 1795 to his warrior chiefs and counsellors" (Devaney *et al.*, 1982:222). In an early account of Kamehameha I's land allocations on O'ahu ('I'i, 1959:69-70), the land divisions of Kāne'ohe and Kailua are not mentioned and thus it has been assumed (e.g. Shun et al., 1987:12) that Kamehameha I retained these lands for himself and his lineage.

In prehistoric times, the *ahupua'a* of Kāne'ohe offered fresh water from *mauka* (upland) springs and a well developed fishpond system making it both an agricultural and aquacultural center on O'ahu (Devaney,1982). Handy and Handy (1972) describe Kāne'ohe as "...an area of little hills with many small streams between them. In 1935 it was still one of the most active communities in planting commercial taro. A goodly proportion of its lowland lo'i, tucked away in pockets flanked and often hidden by low hills or near the town itself, was then still planted in taro by Hawaiians who owned the land and by Orientals who leased land or were hired to cultivate it" (*ibid.*:455). Prehistoric land use would have consisted mainly of wetland taro and sweet potato cultivation. Kāne'ohe Bay, with its numerous fishponds, was a bountiful source of fish.

Cordy (1977) made several cultural resource predictions based on habitat within a geographic area. The proposed project area would have been classified as lower valley with stream flats and slopes. Based on these key variables, irrigated agriculture would have been dominant in the stream flats with dry agriculture, housing , burials and *heiau* located on the adjacent slopes. These predictions seem to be supported by the data which have been recorded in historic maps and documents. The project area is situated in an area that was known for its extensive agricultural use. In the general vicinity of the project area Handy and Handy (1972) noted that some of the best terraces were "inland of the highway...irrigated by Keaahala; a large old terrace system extends downstream below the highway. An elaborate system of water rights prevailed in ancient times throughout these sections irrigated by Keaahala" (*ibid.*:455) (note: Keaahala Stream is located about .4 miles north of Kāne'ohe Stream where Kamehameha Highway intersects). Nettles (1992) notes that the area with the largest amount of irrigated taro fields is the area between the Kawa and Kāne'ohe Streams where a slight slope is indicated.

A personal testimony recorded by students from Castle High School in 1976 indicates that Kāne'ohe Stream was quite different from its appearance today:

> The concrete bridge which now holds four lanes of traffic (near the Kāne'ohe Library) was then (1950) an old two-lane wooden bridge. There was a river under the bridge, approximately 15-20 feet deep. When the rainy season passed, elephant grass would cover the river path and grow up to ten feet high. (Recorded by E. Liu)

Lyons' map of Kāne'ohe (1876) (figure 7) shows 250 acres of canefields at Puohala with swampland present downslope of the scarp which is downstream of the project area.

Also noted on the Lyons map is the Chimney Mill, approximately 150 meters southeast from the proposed site. This mill was used for processing rice and from there which subsequently was transported to the bay. Personal testimony from Mrs. Polly Ching described how rice was moved from a mill to the bay (Devaney, 1982:52):

> From the rice mill to the warehouse there was a small track with a cart on it. The rice bags were put on the cart and a horse pulled it part way to the warehouse. When the cart came to a hill, the horse was taken off and the cart rolled down the hill to the warehouse.
> Sometimes we children went to watch the men load the rice on boats. A steamer came into Kaneohe Bay about twice a week. First it stopped at Heeia sugar plantation, then Kaneohe to pick up the rice, then to Kailua rice mill, and finally to Waimanalo to pick up sugar. They stretched a rope from the warehouse to the steamer. The men carried the bags of rice on their shoulders and put the rice into small boats. The boats were pulled to the steamer on the rope when the tide was high. When it was low tide, the men had to carry the rice bags out to the small boats, because it was too shallow for the boat to come close to the warehouse. When it was high tide, the small boats could come in closer.

During an interview on March 13, 1999 with Mrs. Eileen Root, a reference librarian at the Kāne'ohe Library, it was confirmed that a rice mill did exist in close proximity to the project area, though not in it. She also was unaware of any significant archaeological sites in the project area because of its history of being utilized chiefly for agriculture and grazing.

The Land Commission Awards (LCA's) in the vicinity of the project area, provide land use data ca.1850. One LCA #6111 (which was deferred) was in the *ili* of Halemuku which is where the project area lies, however there is no land use data specific to that parcel. Based on land use data of nearby LCA's taro lo'i in the Kāne'ohe stream flood plain, kula on dry land farming and house lots were the dominant forms of land use. Table 1 provides a synopsis of nearby LCA data and includes columns for LCA #, claimant, *ili* local, number of awards apana (on parcels), and land use. Figure 7 depicts the *ili* of Halemoku within which the project area lies and the locations of some LCA's listed in table 1.

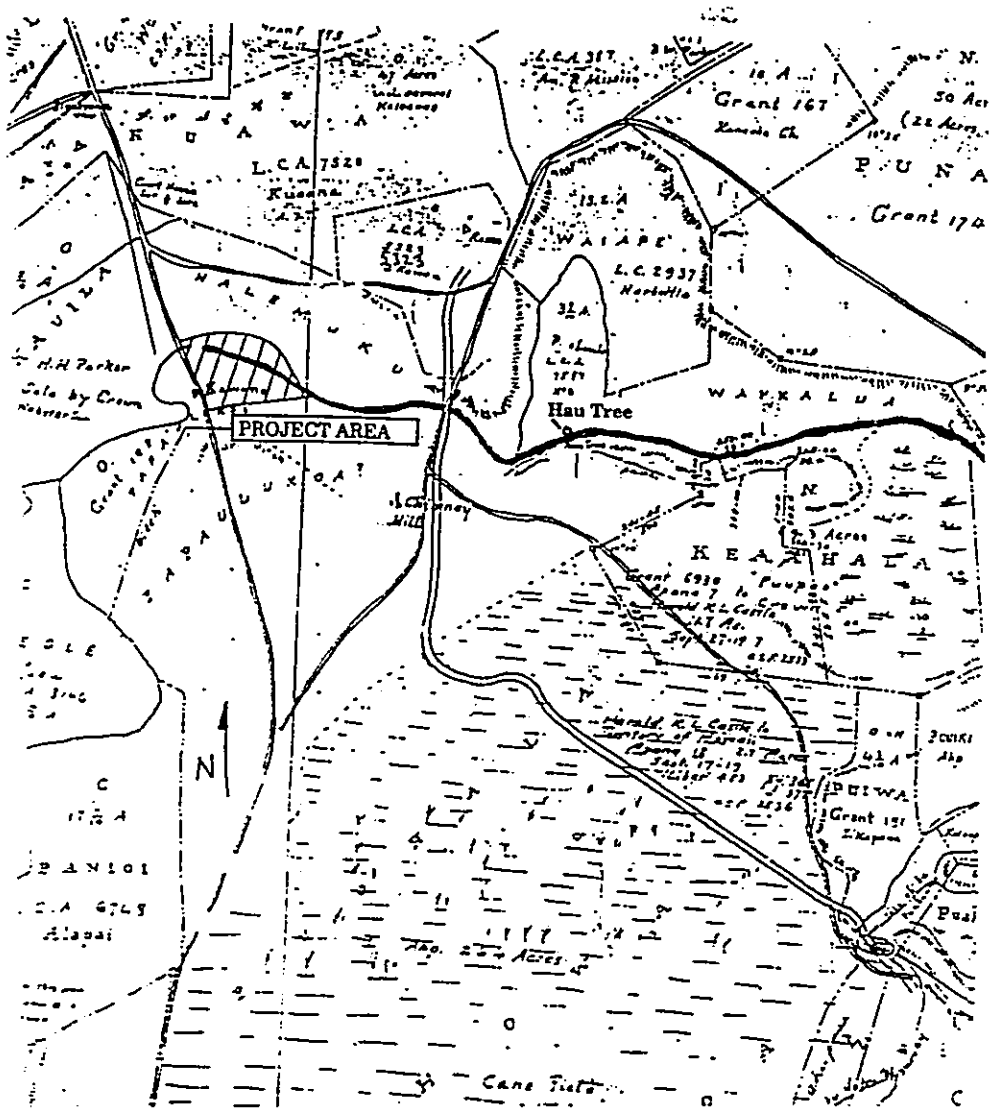


Figure 7 Portion of Lyons' 1876 Map Showing Project Area Halemuku *'Ili* in Relation to Adjacent LCA's and *'Ili*

Table 1 LCA's In or Near the *'Ili* of Halemuku

LCA#	Claimant	'Ili	Apana / Awarded	Land Use
1952 (not shown)	Kanakaole	Papaulukoa (shown)	not awarded	8 *lo'i*
2931 (shown as 2937)	Wm. Harbottle	Waiape	1	none given, claims *'ili*
5323 (shown as Grant 198)	Kawana	Kaluaahuawa	1	kula/pasture
5523 (shown)	Kawaa	Kaluaahuawa	1	2 houses
05829 (not shown)	Kanekohipuu	Kaluaahuawa	not awarded	5 *lo'i, kula*, 1 house lot
6111 (not shown)	Nenu	Halemuku	1, not awarded	none given
7520 (shown)	Kuaana	Kaluaahuawa	1	*kula*
8082 (not shown	Hokii	'Kahalekauila	1	3 *lo'i*, house
8083 (not shown	Haupu	Kahalekauila	1	5 *lo'i*

In addition, there is a reference to a hau tree in Nenu's deferred claim which is shown in Lyons' 1876 map of Kāne'ohe (see figure 7). Although there is little land use data specific to Halemuku in the Māhele claims, surrounding parcels list a number of *lo'i* (4-6), a *kula* and three list a house site on the property. Halemoku included Kāne'ohe stream frontage and higher ground also, thus based on similar land use patterns of nearby LCA, the parcel probably contained: lo'i along the stream banks, kula on dry land agriculture and a house site on the higher ground above the stream flood plain.

PREVIOUS ARCHAEOLOGICAL RESEARCH

The earliest systematic archaeological coverage of upland areas of Kāne'ohe was by J.G. McAllister (1933) who recorded major sites throughout O'ahu in the early 1930s. McAllister recorded a number of *heiau* and other sites in the Kāne'ohe area. The only sites he recorded near the project area are site 340, Kukuiokane Heiau; site 341, Kumukumu spring, which McAllister indicates as having been connected with the Kukuiokane Heiau; site 354, Kawaewae *Heiau*; site 355, an ancient *holua* slide destroyed when pineapples were planted in the area; site 356, Pu'u Makani *Heiau*; and site 357, the house site of Pakuanui.

The inventory survey for the then proposed Hawaii State Veterans Cemetery relocated a probable place for site 356, Pu'u Makani *Heiau* (matching McAllister's description). The area however was heavily modified and graded in recent times and no trace of the *heiau* was present (Hammatt and Shildeler 1989).

Sites 340 and 341 were located south of the project area. The *heiau* was located at the foot of the ridge above the banana fields and "was the largest and most important one in the region..."(McAllister, 1933). This *heiau*, however, was reported to have been destroyed by the Libby, McNeill & Libby Company in the planting of their pineapple fields. "The structure was said to be very large and if the many stones, some several feet in thickness, scattered throughout the area are any indication of the extent and importance of the former *heaiu*, the native conception is quite justified" (McAllister, 1933). Subsequent work relocated to H-3 has provided additional information on Kukuiokane (report in progress).

Site 357, the house site of Pakuanui is located just *makai* of Kamehameha Highway and is about 1.5 miles outside the project area. Pakuanui was a notorious Hawaiian who is said to have preyed upon and robbed weary travelers coming down the Pali Trail. It is not known if the site is still in existence.

Development in and around the project area was completed before many of the current mandates for archaeological assessments concerning cultural resources were put into place. Because of this, little archaeological work has been done in the immediate project area.

Recent archaeological surveys near the project area include a Bishop Museum survey team (Szabian and Landrum, 1989) who identified features along the Kawa Stream, which is about .5 miles east of the project area. These possible sites were reevaluated by Hammatt and Shideler (1989) and were interpreted with convincing evidence to be natural features and remnants of various phases of modern mechanical clearing for commercial planting. Prehistorically the land was probably used for dryland planting, but no traces of this former activity survive today.

Based on the previous research the probability of finding prehistoric surface remains is extremely low. The potential for subsurface cultural deposits within the project area is slight, but due to the lack of any research in the immediate project area, some concern is warranted.

GENERAL SETTLEMENT PATTERN FOR KĀNE'OHE

Starting off-shore and heading inland, Kāne'ohe's landscape in pre-contact times was typified by excellent fishing resources, enhanced by the many fish ponds that lined its shores. Inland from the fish ponds were the alluvial plains of Kawa, Kamoali'i and Kāne'ohe Streams, which were extensively planted in wetland taro fields (*lo'i*). Farther inland the valley slopes were terraced for both dryland and *lo'i* cultivation.

The documentation of land use in Kāne'ohe O'ahu at the time of the Māhele (ca. 1848), indicates the preponderance of *lo'i*. There were 215 claims made in the Māhele for lands in Kāne'ohe. Of these claims 121 were awarded and included 298 *apana* (or parcels) with 1,044 *lo'i*, 78 house sites, 53 *kula*, 19 potato plots, 7 *loko* and 18 *lokoia*, 5 salt lands, 13 hala trees or groves of trees, 6 plots of gourds, 2 coconut trees, 1 *wauke* plot, 1 orange tree, and 1 pig pen. The array of items of land use shows the variety which characterized the wealth of Kāne'ohe as a major food production center at the time of the Māhele. While some claimants had more than 50 *lo'i*, the average is still about 20 per claimant. It is safe to assume that resources shown in this settlement pattern of the Māhele period were even more plentiful in pre-contact Kāne'ohe, when rich agricultural lands were the predominant form of wealth and health.

We know of many changes that took place around the project area in historic times as urban Kāne'ohe developed. From the 1880s to the 1920s commercial rice plantations replaced the *lo'i* lands. Rice production was a Chinese concern, with the land leased form the Hawaiian (*kuleana*) owners. Straddling this period (1870-1917) the Harris/Rice/Castle Estate began and continued to purchase all the *kuleana* holdings until the Estate owned most of them by 1920. Taro made a short-lived recovery, as rice production declined between the 1920s and 1950s.

On the 1876 Lyons and the 1918 (Wall Territorial Map R.P. 1897) the adjoining parcel was the Court House, and the 1918 maps also notes a jail on the same property. In 1925, the land was deeded by H.H. Parker to the Territory of Hawaii for a School Lot (present-day Benjamin Parker Elementary School lot). With the same urbanization processes at work, the Halemuku lot became government land, and now contains the police station, branch library, and playground.

If not for major urban projects the subject parcel might still contain remnants of past land use. However, with the construction and reconfiguration of Kamehameha Highway, and associated bridge, construction of the police station, branch library, playing field, present parking lot, drainage channels and the channelization of Kāne'ohe Stream, few, if any remnants of the past are anticipated.

ARCHAEOLOGICAL FIELD FINDINGS

The archaeological field assessment was accomplished on March 8, 1999, by two Cultural Surveys Hawaii archaeologists who viewed and photographed the full extent of the proposed parking lot addition. This involved gaining access through the existing library parking lot (north boundary), along the playground fence(east boundary), along the Kāne'ohe Stream fence line (south boundary), at the confluence of the drainage canal and stream (southeast corner) and within the heavily vegetated drainage canal. Photographs of several views of the project area are shown in figures 10-19 (Photo Appendix).

The southern portion of the project area is presently comprised of a graded and graveled surface currently used as a road maintenance yard. The graded surface covers approximately eighty percent of the project area with a large pile of broken concrete slab bordering the vegetated area to the north along the drainage canal. Figure 8 shows a map of the project area with the locations of the grubbed and graded surface and the vegetated drainage canal. Extensive grading and filling of the southeastern portion of the project area have considerably altered the surface topography. The subsurface stratigraphy in the southeast corner of the project area as observed in the southeast wall of the drainage canal where it enters Kāne'ohe Stream reveals over one meter of modern fill consisting of dark brown stony and gravellyclay loam overlying a layer of stream deposited pebbles. No cultural layers, midden or charcoal were observed along the extent of the drainage cut. Along the southern boundary a modern stone retaining wall has been built for the channeling of Kāne'ohe Stream which likely required additional grubbing and filling to achieve an even grade. The grading and filling of top soil materials would have significantly altered the original topography and the original stratigraphy in the areas as well as destroying any possible cultural remains.

Along the northern and western portions of the project area which border Kamehameha Highway and the library parking lot, the land surface consists of large undulating mounds (1+ meter in height) of soil likely associated with the rechanneling of the drainage canal and Kāne'ohe Stream as well as activities associated with the grading and grubbing of the southern portion of the project area. This area is heavily vegetated with some banana and taro still growing in the drainage canal basin. Within the canal are modern concrete aquaducts and retaining walls for the control of flow and reduction of erosion. Within the vegetated drainage area there are several sections of 1-meter plus diameter concrete drainage aquaducts indicating that this area had been used as a dumping area during the construction of the drainage canal.

The drainage canal area has been subject to many changes as seen in

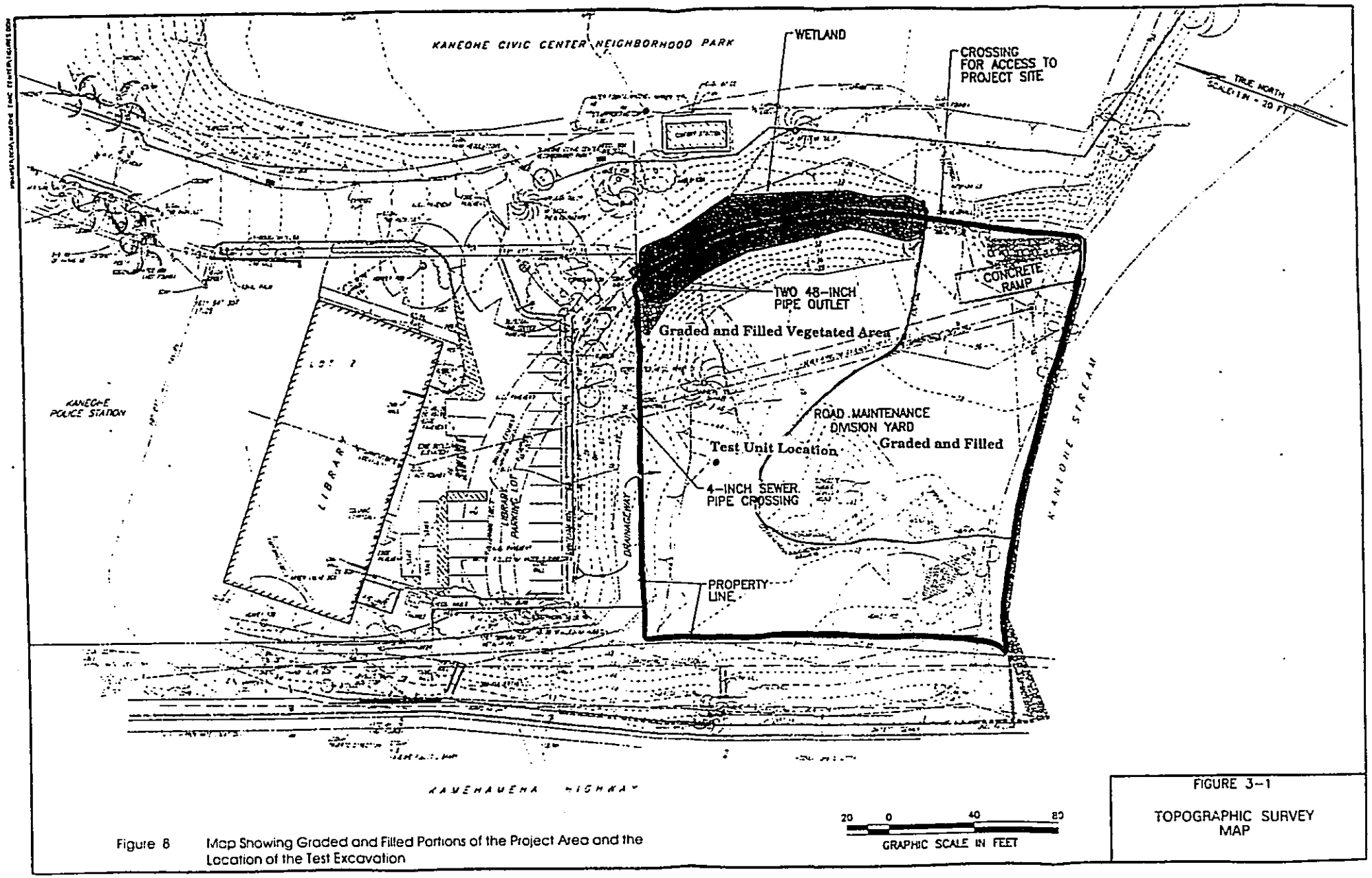


Figure 8 Map Showing Graded and Filled Portions of the Project Area and the Location of the Test Excavation

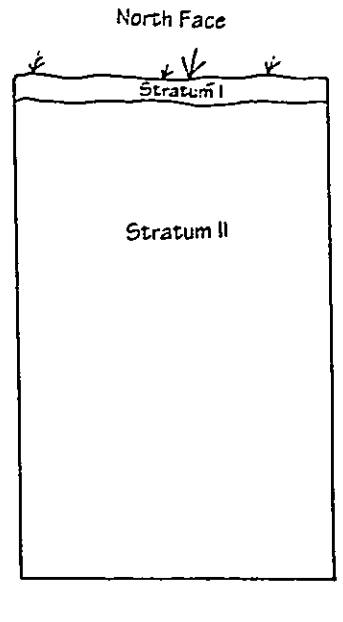
FIGURE 3-1

TOPOGRAPHIC SURVEY MAP

the 1983 U.S.G.S. topographic map (figure 3), TMK Map 4-5-18 (retraced in 1961, figure 4), and Lyons' 1876 map (figure 7). A test pit was excavated by hand within the vegetated area along the southern bank of the drainage canal to aid in determining the composition of the subsurface stratigraphy (figure 9). The test excavation was chosen as a general representation of this portion of the project area and intruded into a relatively flat surface between the large mounds along the upper portion of the drainage canal bank. The test pit was excavated to help determine the extent of the fill material and to possibly establish a correlation with the stratigraphy in the southern portion of the project area as seen the cut bank of the drainage canal as it enters Kāne'ohe Stream.

The stratigraphy of the test pit consisted of a 5 cm thick layer of dark brown loamy clay with abundant organic matter overlying stony clay loam to 80 cmbs similar to that seen in the southeaster portion of the project area. Within the test pit, historic trash (glass bottle and plastic cup) was found at a depth of 20 cm, with no visible change in soil layers down to a depth of 80 cmbs. The stratigraphy was similar to that seen in the drainage cut in the southeastern portion of the project area indicating that the soils were non-cultural, non-agricultural and had been subjected to ground disturbing activities as evidenced by the modern trash contained in Stratum II.

As expected, due to the extensive development within the project area, no traditional cultural layers or materials were observed or are predicted to be encountered during the construction of the proposed parking lot. The soil stratigraphy in the Kāne'ohe Stream bank cut and that observed in the test pit suggest that the fill material is deeply imbedded, extending to a depth of at least 80 cm. Due to the nature of the construction activities associated with the development of the parking lot, it is unlikely that any layers beneath the fill material will be impacted.



Stratum I: 7.5 YR 3/2 (dark brown), slightly compact, loamy clay containing abundant organic material and roots and rootlets, O-horizon
Stratum II: 5 YR 3/2 (dark reddish brown), clay loam containing modern trash abundant roots and rootlets

Figure 9 Soil Profile of Test Pit Excavated within Vegetated Portion of Project Area

SUMMARY AND RECOMMENDATIONS

The area around the project area played an important role in the cultivation of taro and rice in the *ahupua'a* of Kāne'ohe. However, within the project area itself and in the near vicinity, subsequent construction of the Kamehameha Highway, Kāne'ohe Public Library, alterations to Kāne'ohe Stream and the drainage ditch as well as the placement of a sewer pipeline have significantly altered the original soil structure and topography. It is unlikely that any ground disturbing activities associated with the construction of the proposed parking lot will impact any archaeological resources.

The present project area has been partially graded and covered with gravel in the southern portion along Kāne'ohe Stream while the portion surrounding the drainage canal has been subjected to filling and grading activities and is presently covered in thick vegetation. There are no historical or pre-historical archaeological structures visible and there has been intensive land altering activities within the project area.

Based on historical research of archival documents, maps, LCA's, historical accounts, previous archaeological research, and field investigations including limited subsurface testing, the archaeological inventory survey of the proposed parking lot indicates that the project area is free of any archaeological constraints. Therefore we recommend no further archaeological work. As always, in the unlikely event that human remains or significant cultural deposits are encountered, all work in the project area must be stopped and the State Historic Preservation Division should be notified immediately.

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PHOTO APPENDIX

Figure 10 View of Project Area from Across the Soccer Field Looking West

Figure 11 View from Kane ohe Stream Drainage Confluence Showing Drainage Outflow Looking North

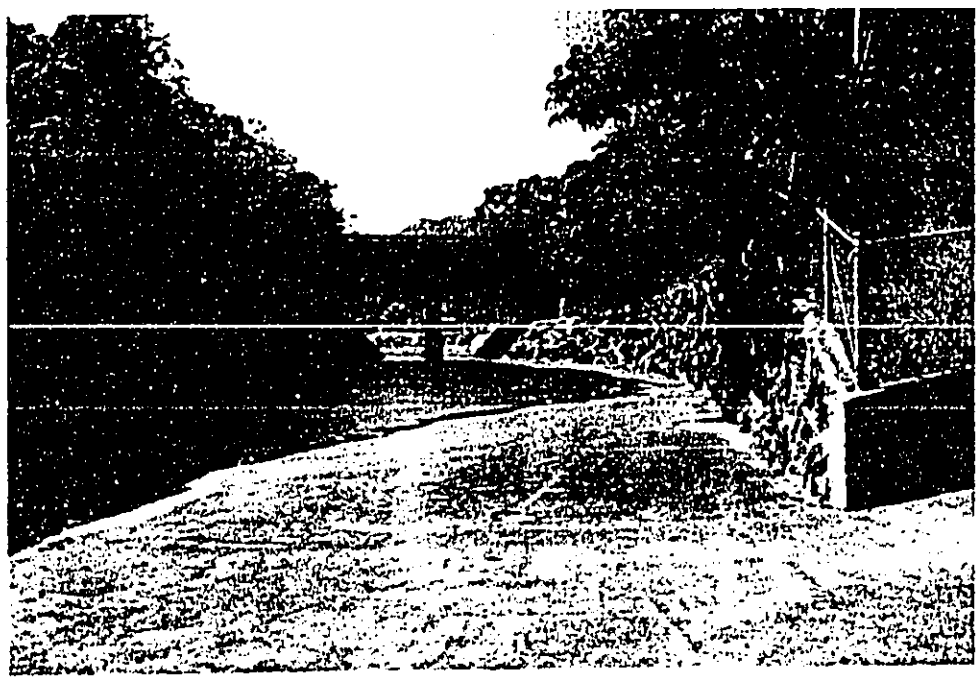

Figure 12 View showing Kāne`ohe Stream and Retaining Wall Looking West towards Kamehameha Highway

Figure 13 View from Erosion caused by Drainage Outflow Looking East

Figure 14 View of Southeast Corner of Project area Looking West to North and Vegetative Cover (note: concrete rubble pile)

Figure 15 View from atop Rubble Pile Showing Southeast Corner of Project Area (note: graded surface)

Figure 16 View of Drainage Canal Looking West (note: banana trees and taro in canal)

Figure 17 View from within Vegetation Looking Northeast towards Southeast Corner of Existing Parking Lot

Figure 18 View from Library Parking Lot of Drainage Canal Looking East towards Playground Fence and Restroom

Figure 19 View from Library Parking Lot Looking South over Drainage Canal

APPENDIX F

Traffic Impact Assessment
by Pacific Planning & Engineering, Inc.

TRAFFIC IMPACT ASSESSMENT REPORT

FOR

KANEOHE CIVIC CENTER
PARKING LOT

February 23, 2000

Honolulu, Oahu, Hawaii

Prepared for:

Engineering Concepts, Inc.

Prepared By:

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Honolulu, Hawaii 96814

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

APPENDICES

FOREWORD

The traffic forecasts shown within this report's figures and tables are the direct result of Pacific Planning & Engineering, Inc.'s proprietary analytical tools. For report editing and review purposes, some or all of the forecast values have been rounded to the nearest five vehicles from our mathematical results, although we do not imply this level of accuracy can exist in any forecast method. The rounded values, however, reasonably quantify the forecasted traffic volumes for the purposes of this study.

The findings and conclusions contained herein are based solely in terms of roadway capacity. No inference should be made from the conclusions regarding traffic safety.

EXECUTIVE SUMMARY

Pacific Planning & Engineering, Inc. (PP&E) was engaged to identify and assess future traffic impacts that would be caused by the proposed Kaneohe Civic Center Parking Lot located in Windward, Oahu, Hawaii.

Project Description

The City and County of Honolulu is proposing to provide additional parking for the Kaneohe Civic Center, located in Windward, Oahu, Hawaii. The project site is accessed via an existing driveway on Waikalua Road which also serves the Kaneohe Police Station and the Kaneohe State Library. Completion is expected to be by the year 2002. There are three possible parking lot schemes being proposed. They are as follows:

- Scheme 1 - 77 parking stalls
- Scheme 2 - 28 parking stalls
- Scheme 3 - 47 parking stalls

Methodology

Analysis was conducted for the intersection of Waikalua Road with the existing project driveway to determine the relative impact of the proposed Kaneohe Civic Center parking lot on the local roadway system.

Future traffic at the study intersections were forecast by evaluating and adding the following:

- Existing traffic volumes at the study intersection,

- The increase in traffic along Waikalua Road, based on population and employment data,
- Traffic generated by other nearby developments in the area that would impact the study intersections and
- Traffic generated by the project.

This study assesses the impact on each intersection by determining and comparing the level-of-service (LOS) traffic conditions for existing traffic, 2002 forecast without the project, and 2002 forecast with the project.

The time period analyzed was on a Saturday when AYSO soccer games were being played. This period was studied since traffic volumes on the surrounding roadways is anticipated to be the highest at this time.

Conclusions and Recommendations

As a general rule, parking lots do not generate trips, but merely services the traffic generated by the surrounding land uses. Therefore, many of the motorists who would be using the Kaneohe Civic Center parking lot are already on the roadways (i.e. drop-offs, parking at the elementary school and walking to the park).

Although the number of vehicles on Waikalua Road would likely not significantly change, the construction of a new parking lot would result in more turning movements (entering and exiting) due to Soccer participants. The increase in these turning movements would cause some increase in delays.

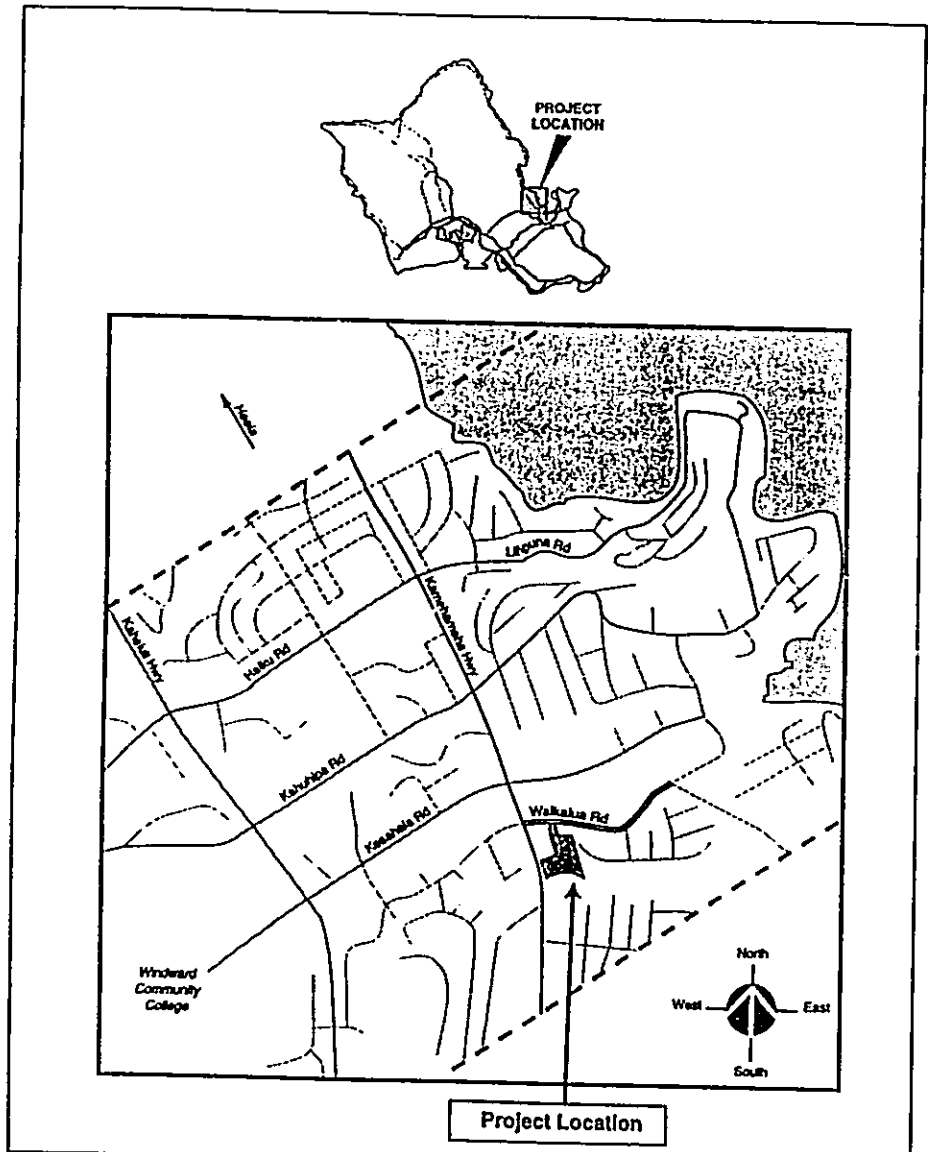
Traffic analysis shows that implementation of Schemes 2 or 3 would not change the level-of-service (LOS) for exiting vehicles at the Project driveway. Under Scheme 1, the LOS would drop from LOS "C" to "D" for exiting vehicles. However, LOS "D" conditions is still considered acceptable. Furthermore, the trip generation used in this study was conservative, therefore, the actual delays may be better than what is reported in this study.

PROJECT DESCRIPTION

The City and County of Honolulu is proposing to provide additional parking for the Kaneohe Civic Center, located in Windward, Oahu, Hawaii. The project site is accessed via an existing driveway on Waikalua Road which also serves the Kaneohe Police Station and the Kaneohe State Library. Completion is expected to be by the year 2002. There are three possible parking lot schemes being proposed. They are as follows:

- Scheme 1 - 77 parking stalls
- Scheme 2 - 28 parking stalls
- Scheme 3 - 47 parking stalls

Figure 1 shows the project location and roadway network.



PACIFIC PLANNING ENGINEERING, INC

Project Location & Roadway Network

Figure 1

EXISTING CONDITIONS

An inventory of existing conditions was conducted to ascertain the current traffic conditions in the area and to provide a basis for estimating the potential traffic impact of the proposed project. The review included the land uses in the area, roadway facilities, and existing traffic conditions.

Land Uses

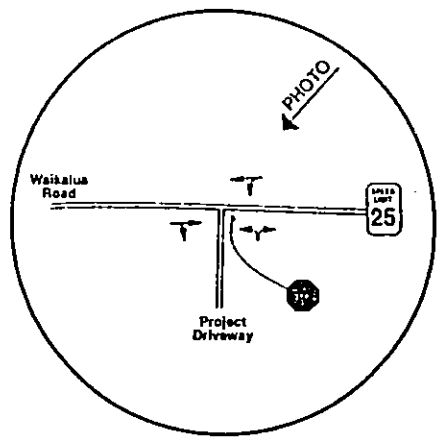
The land uses in the vicinity of the project consist primarily of residential uses and public facilities. Residential uses are generally located to the east along Waikalua Road. Across the project driveway along Waikalua Road is Benjamin Parker Elementary School.

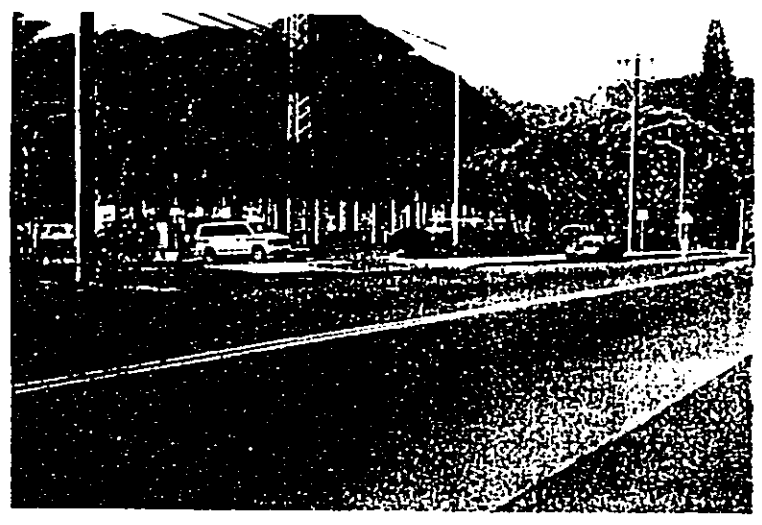
The existing project driveway is shared between the Kaneohe Police Station, the Kaneohe State Library and the Kaneohe Civic Center Park.

Roadway Facilities

Waikalua Road is a two-lane local road with a posted speed limit of 25 mph. In the vicinity of the project, on-street parking is not allowed. To the west of the project, Waikalua Road intersects with Kamehameha Highway at a signalized intersection.

Figure 2 shows the study intersection of Waikalua Road with the project driveway.





PACIFIC PLANNING	Waikalua Road with Project Driveway	Figure 2

Traffic Conditions

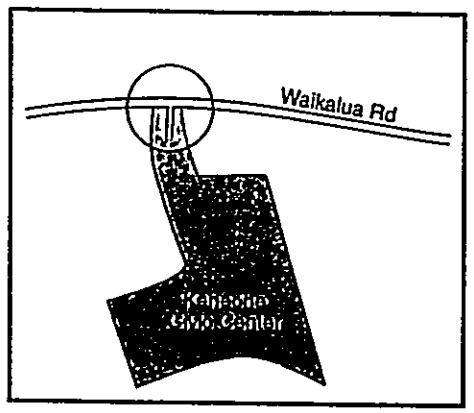
The project traffic is expected to impact the surrounding roads the most when a sporting event occurs and the Kaneohe State Library is in use. Manual traffic counts were taken at the intersections of Waikalua Road with the project driveway. The counts were taken on Saturday, April 24, 1999 (AYSO soccer game at park) from 9:00 A.M. To 11:00 P.M. These counts were used as the baseline condition upon which future estimated traffic volumes were added.

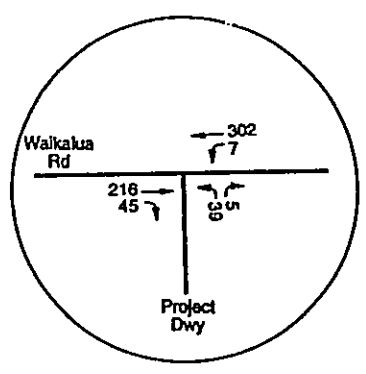
Manual counts were taken of passenger cars, trucks and buses by turning movements and approaches. During the field counts, the weather was sunny and the roadway pavement was dry. Figure 3 shows the present volume of traffic at the study intersections for the observed peak hours. The manual traffic count data is summarized in Appendix A.

Observations:

Intersection of Waikalua Road with existing project driveway.

- Through-traffic along Waikalua Road flowed smoothly during the observed study period.
- Several soccer participants parked in the library parking lot, despite signage indicating otherwise.
- Some soccer participants and fans parked at Benjamin Parker Elementary School which is located across the street.





PACIFIC PLANNING ENGINEERING INC	Existing Saturday Morning Peak Hour Traffic Volumes	Figure 3

FUTURE CONDITIONS

A survey was conducted of planned developments in the immediate area to estimate future traffic conditions at the study intersections.

Future Land Uses

The project site is located in a portion of Kaneohe where much of the surrounding area is already developed for residential use. The Oahu Regional Transportation Plan[1] (ORTP) projects low levels of growth in population and employment by the year 2020 for the Koolaupoko area which includes Kaneohe.

Future Roadway Facilities

There are no other known roadway improvements planned in the immediate vicinity of the project. The roadway patterns and study intersection laneages are expected to remain the same.

1 Oahu Regional Transportation Plan. Kaku & Associates, Inc., 1995.

PROJECTED TRAFFIC CONDITIONS

Future traffic conditions were forecast for scenarios without and with the Kaneohe Civic Center Parking Lot. Traffic forecasts were estimated for the year 2002 when the project is expected to be completed.

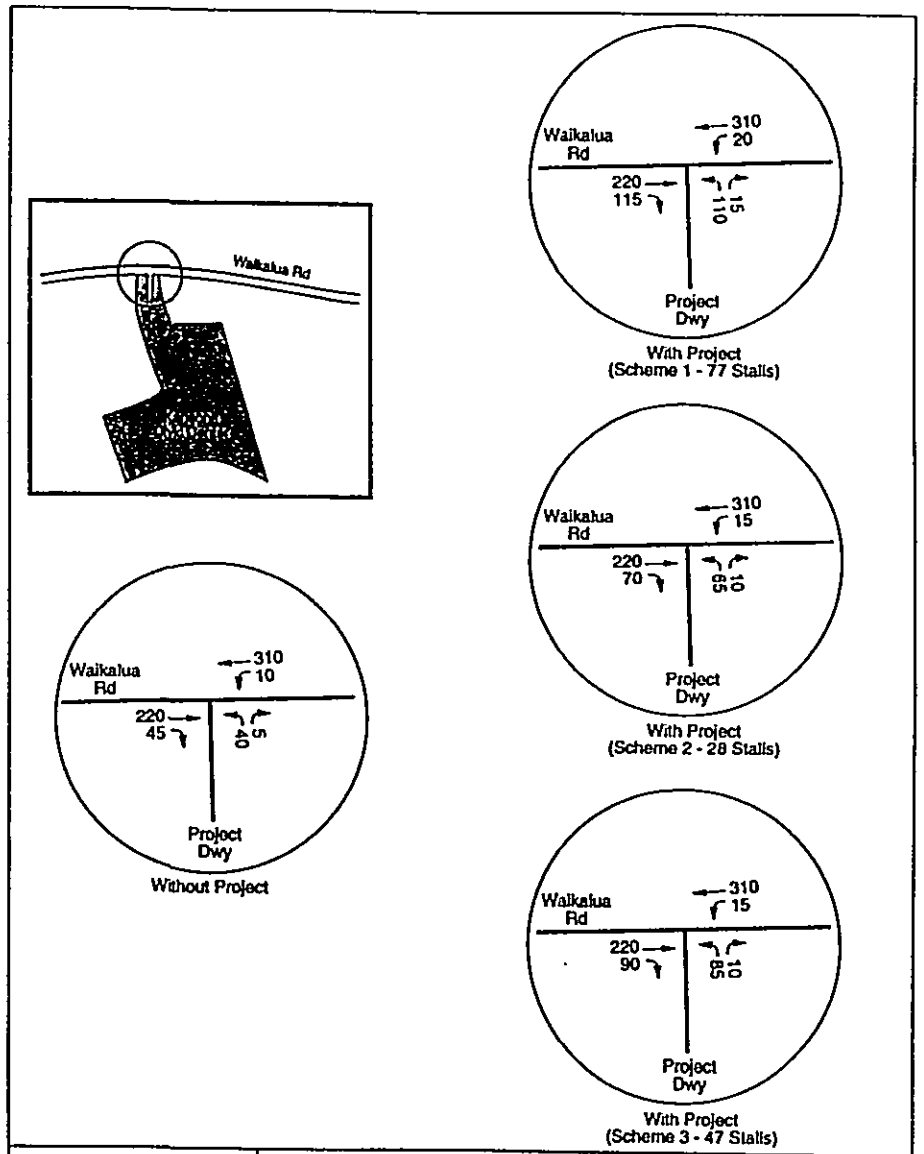
Future Traffic Without Project

Future traffic without the project was forecast by adding the following: 1) existing traffic volumes, 2) increase in traffic on the surrounding roadways based on data from the ORTP and (3) traffic from other proposed developments in the area. The resulting traffic volume forecasts at the study intersections for the traffic peak hours without the project in year 2002 are shown in Figure 4.

Traffic Growth on the Surrounding Roadways

As discussed previously, the project is located in a community that has already been substantially developed. The likelihood of further development is small and is reflected in the ORTP which does not indicate major traffic growth. Major screenline data near the study area indicates an annual growth rate of approximately 0.6% per year. Accordingly, the existing traffic volumes were increased by 2% (0.6% x 3 years) to the year 2002.

The growth rate also accounts for future conditions such as other planned developments outside of the project study area and other projects which have not been clearly defined yet.



PACIFIC PLANNING ENGINEERING, INC.	2002 Saturday Morning Peak Hour Traffic Volumes Without and With Project Conditions	Figure 4

Traffic From Other Developments

For the adjacent areas and for the foreseeable future (by year 2002), research indicates that there are no known significant developments within the vicinity of the proposed project. Thus, no increase in traffic would occur due to this condition.

Future Traffic With Project

Future traffic with the project was forecast by adding traffic generated by the Kaneohe Civic Center parking lot to the forecast traffic without the project. The resulting peak hour traffic volume forecasts with the project are shown in Figure 4.

The standard three-step procedure of trip generation, trip distribution, and traffic assignment was used to estimate peak hour traffic from the proposed project.

The trip generation step estimates the number of trips that would be generated by this project. As a general rule, parking lots do not generate trips, but merely services the traffic generated by the surrounding land uses. Therefore, many of the motorists who would be using the new parking lot would already be on the roadways. The number of trips was estimated based on the number of parking stalls and conservatively assumed a 100% turnover ratio. Table 1 shows the trip generation for each scheme.

Table 1. Project Trip Generation

	Enter	Exit
Scheme 1 (77 stalls)	77	77
Scheme 2 (28 stalls)	28	28
Scheme 3 (47 stalls)	47	47

The trip distribution step estimates the distribution of vehicle trips to their predicted destinations and origins. Since growth in the area is not expected to significantly change, trips were distributed for the year 2002 based on existing turning movement data at the project driveway.

The traffic assignment step assigns vehicle trips to specific routes on the roadway network that drivers would take from their trip origin to their destination. Traffic is generally assigned based on the estimated shortest path or travel time from origins to destinations. All project traffic was assigned to the study intersection.

TRAFFIC IMPACT ANALYSIS

Analyses was conducted for the study intersection of Waikalua Road with the project driveway to determine the relative impact of the project. Analyses were conducted for the existing, 2002 forecasts without project and 2002 forecast with project traffic conditions.

Analysis Methods

The study intersections were analyzed using procedures outlined in the Highway Capacity Manual[2]. The analysis methodology measures traffic operations using a Level-of-Service (LOS) rating, which ranges from "A" to "F", where LOS "A" is the best and LOS "F" is the worst. Appendix B provides detailed definitions of the LOS used in this study.

Unsignalized Intersection Analysis

The study intersection of Waikalua Road with the project driveway was analyzed using operational analysis for unsignalized intersections. Only the highest project traffic generation, Scheme 1, was analyzed since it would have the most impact.

The Level-of-Service (LOS) for unsignalized intersections is determined by the computed or measured control delay. Control delay includes the initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Control delay is defined for each minor movement (in this case, the right-turn movement) only and not for the intersection as whole. LOS for the minor movements is classified into six letter categories ranging from less than 10 seconds of average control delay per vehicle (LOS "A") to over 50 seconds of

2 Highway Capacity Manual, Special Report 209, by the Transportation Research Board, National Research Council, Third Edition 1997.

average control delay per vehicle (LOS "F"). Appendix B provides a more detailed description of the LOS used in this study.

Analysis Results

The results of the analysis for the critical movements at the study intersections are shown in Tables 2 and 3.

Table 2 - Level of Service Results

Left-Turn from Waikalua Road to Project Driveway	Level-of-Service (delay - sec/veh)		
	Existing	Without Project	With Project
Scheme 1 (77 stalls)	A (8)	A (8)	A (8)
Scheme 2 (28 stalls)			A (8)
Scheme 3 (47 stalls)			A (8)

Table 3 - Level of Service Results

Left-Turn/Through/Right-Turn from Project Driveway to Waikalua Road	Level-of-Service (delay - sec/veh)		
	Existing	Without Project	With Project
Scheme 1 (77 stalls)	C (17)	C (17)	D (27)
Scheme 2 (28 stalls)			C (20)
Scheme 3 (47 stalls)			C (22)

The results of the analysis show that under all schemes, motorists making left-turns from Waikalua Road to the project driveway would not experience any change in LOS.

Exiting motorists, under Schemes 2 or 3, would also not experience changes in LOS. Under Scheme 1, however, there would be a drop in LOS from "C" to "D".

CONCLUSIONS AND RECOMMENDATIONS

As a general rule, parking lots do not generate trips, but merely services the traffic generated by the surrounding land uses. Therefore, many of the motorists who would be using the Kaneohe Civic Center parking lot are already on the roadways (i.e. drop-offs, parking at the elementary school and walking to the park).

Although the number of vehicles on Waikalua Road would likely not significantly change, the construction of a new parking lot would result in more turning movements (entering and exiting) due to Soccer participants. The increase in these turning movements would cause some increase in delays.

Traffic analysis shows that implementation of Schemes 2 or 3 would not change the level-of-service (LOS) for exiting vehicles at the project driveway. Under Scheme 1, the LOS would drop from LOS "C" to "D" for exiting vehicles. However, LOS "D" conditions is still considered acceptable. Furthermore, the trip generation used in this study was conservative, therefore, the actual delays may be better than what is reported in this study.

APPENDIX A

TRAFFIC COUNT DATA

102.0 Data Count WITH Soccer Game

Project : 102.0 Kaneohe Parking Lot EA
Date: Saturday, April 23, 1999

NB STREET
Kaneohe Library DW

SB STREET

Start Time	NB-LT		NB-RT							
9:00 AM	9		2							
9:15 AM	4		2							
9:30 AM	6		2							
9:45 AM	6		1							
10:00 AM	19		2							
10:15 AM	8		0							
10:30 AM	19		2							
10:45 AM	12		1							
Totals	83	0	12	0	0	0	0	0	0	0

PEAK HOUR	NB-LT	NB-TH	NB-RT
9:30 AM	39	0	5
10:30 AM	TOTAL	44	

SB-LT	SB-TH	SB-RT
0	0	0
TOTAL	0	

WB STREET
Waikalua Road

EB STREET
Waikalua Road

Start Time	WB-LT	WB-TH				EB-LT	EB-TH	EB-RT			
9:00 AM	1	78					53	7			
9:15 AM	1	67					57	6			
9:30 AM	1	87					62	6			
9:45 AM	1	74					53	11			
10:00 AM	3	71					54	15			
10:15 AM	2	70					47	13			
10:30 AM	3	98					72	12			
10:45 AM	0	56					57	9			
Totals											

PEAK HOUR	WB-LT	WB-TH	WB-RT
9:30 AM	7	302	0
10:30 AM	TOTAL	309	

EB-LT	EB-TH	EB-RT
0	216	45
TOTAL	261	

APPENDIX B

LEVEL-OF-SERVICE DEFINITIONS

FOR

UNSIGNALIZED INTERSECTIONS

REFERENCE: Highway Capacity Manual (Special Report 209, 1997)

LEVEL-OF-SERVICE FOR UNSIGNALIZED INTERSECTIONS

The Level-of-Service (LOS) for an unsignalized intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS is not defined for the intersection as whole. LOS criteria are given in the following table. Control delay includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay.

LOS	Control Delay Per Vehicle (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	<35 and ≤ 50
F	>50

The proposed LOS criteria are somewhat different from the criteria for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, several driver behavior considerations combine to make delays at signalized intersections less onerous than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, whereas drivers on the minor approaches to unsignalized intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized than signalized intersections. For these reasons, it is considered that the control delay threshold for any given LOS is less for an unsignalized intersections than it would be for a signalized intersection.