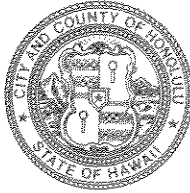


DEPARTMENT OF PLANNING AND PERMITTING  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET • HONOLULU, HAWAII 96813  
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MAYOR

JAN NAOE SULLIVAN  
DIRECTOR

LORETTA K.C. CHEE  
DEPUTY DIRECTOR

GW

August 10, 1999

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

REC'D  
QUALITY CONTROL  
99 AUG 10 P1:10  
R/S

Dear Ms. Salmonson:

Acceptance Notice for the Proposed Improvements to Hanauma Bay Nature Preserve,  
Koko Head Regional Park and Nature Preserve, Final Environmental Impact Statement

We are notifying you of our acceptance of the Final Environmental Impact Statement (EIS) for the proposed Improvements to Hanauma Bay Nature Preserve, Koko Head Regional Park and Nature Preserve as satisfactory fulfillment of the requirements of Chapter 343, Hawaii Revised Statutes.

Pursuant to Section 11-200-23(e), Chapter 200, Title 11 ("Environmental Impact Statement Rules") of the Administrative Rules, this Acceptance Notice should be published in the August 23, 1999 Environmental Notice.

We have attached our Acceptance Report for the Final EIS for the Koko Head Regional Park and Nature Preserve. Should you have any questions, please contact Gordon Wood of our staff at 527-6073.

Very truly yours,

A handwritten signature in black ink, appearing to read "Jan Naoe Sullivan".

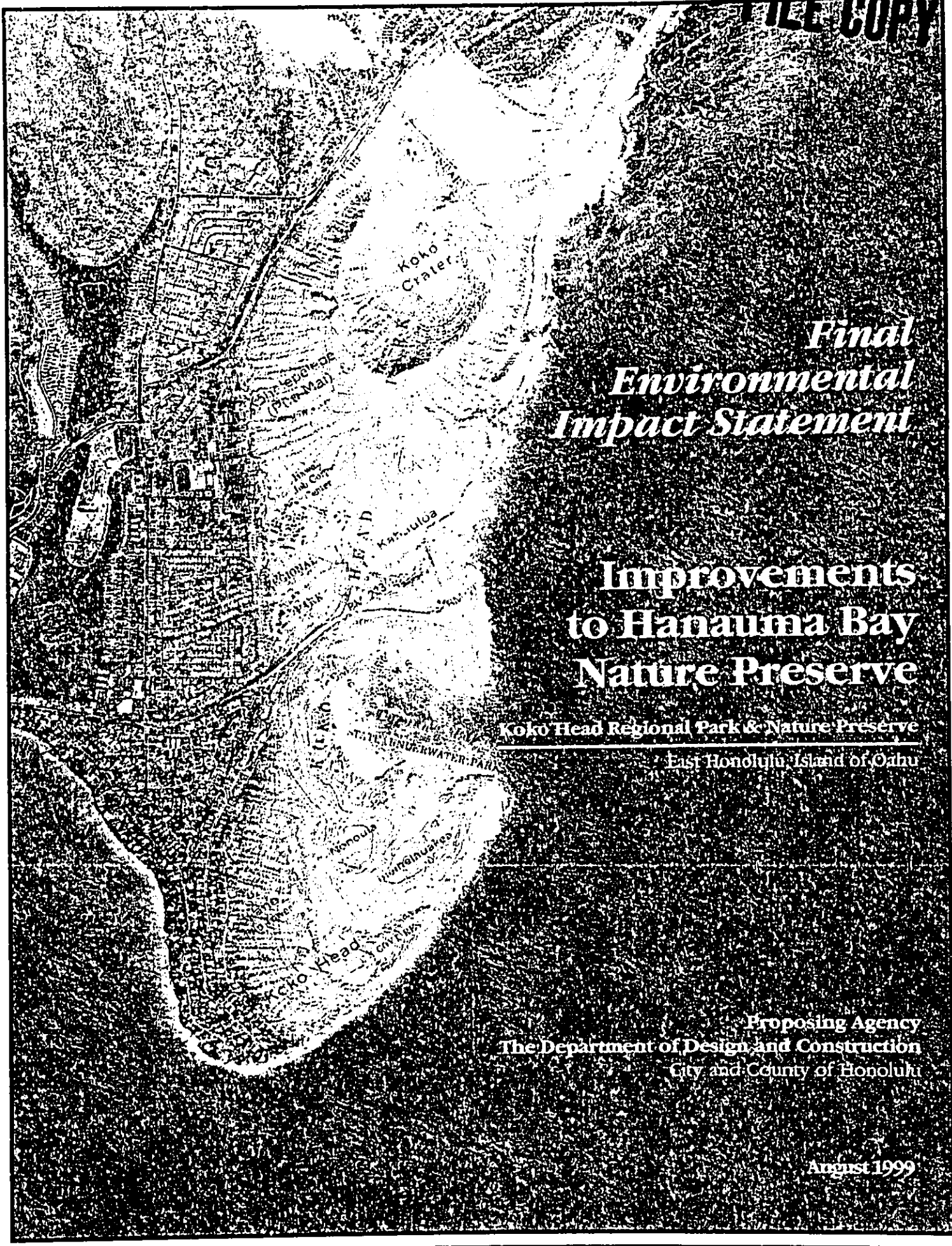
JAN NAOE SULLIVAN  
Director of Planning and Permitting

JNS:gw

Attachment

1999- Oahu - FEIS - Hanauma Bay

**FILE COPY**



*Final  
Environmental  
Impact Statement*

**Improvements  
to Hanauma Bay  
Nature Preserve**

Koko Head Regional Park & Nature Preserve  
East Honolulu, Island of Oahu

Proposing Agency  
The Department of Design and Construction  
City and County of Honolulu

August 1999

# Improvements to Hanauma Bay Nature Preserve

Koko Head Regional Park & Nature Preserve

East Honolulu, Island of Oahu

## Final Environmental Impact Statement

This environmental document is prepared pursuant to Chapter 200 of Title 11, Administrative Rules, Department of Health, "Environmental Impact Statement Rules."

### Proposing Agency:

Department of Design and Construction  
City and County of Honolulu

### Accepting Authority:

Department of Planning and Permitting  
City and County of Honolulu

The preparation of this document and all ancillary sections were under my direction.



\_\_\_\_\_  
Randall Fujiki, Director  
Department of Design and Construction

AUG 09 1999

\_\_\_\_\_  
Date

### Prepared By:

Group 70 International, Inc.  
Architecture • Planning • Interior Design • Environmental Services  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, HI 96813

August 1999

IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

• Final Environmental Impact Statement •

## REVISIONS TO THE FINAL ENVIRONMENTAL IMPACT STATEMENT

In response to comments received on the initially proposed project scope, as described in the Draft Environmental Impact Statement (DEIS), the new facilities that are planned as part of this project have been changed significantly. These changes involve only the deletion of several previously proposed improvements. No substantive new improvements have been added.

Extensive revisions to the DEIS have been necessary in order to accurately describe the revised project proposals and assess their potential environmental impacts in this Final Environment Impact Statement (FEIS). To facilitate the readers' ability to distinguish the revisions made to the EIS, substantive changes and additions to the text are shown as ~~shaded material~~. Non-substantive editing and corrections have not been highlighted, except in cases where DEIS comment letters made specific reference to the need for a correction. Where large blocks of text have been deleted, a notation is included that briefly describes the subject matter of the deleted material, and this notation is highlighted as follows: ~~subject of deleted material~~. Sections 2 and 3, which describe the purpose and scope of the proposed actions, have been completely rewritten and are presented without these notations.

It should be noted that plans for the retained new facilities and improvements are currently undergoing extensive community review and input. This process is expected to be ongoing throughout the City and State government's project review and approval processes. An integral part of these processes will be the review and approval of the Honolulu City Council in connection with the issuance of a Special Management Area Use Permit. These processes could potentially result in the modification or deletion of some of the improvements as currently planned and described in this FEIS.

The basic nature and extent of the revisions to the project scope are as follows:

**I. Former Hawaii Job Corps Site and Koko Crater**

**A. Deleted Improvements**

1. New Nature Learning Center and Snack Bar.
2. New Summit Funicular and Lookout.
3. New Central Parking Area.
4. Demolition of Goetas Memorial Ballfield (i.e., this existing ballfield will be retained).

**B. Retained Improvements**

1. Demolition of all existing buildings except those occupied by the Parks Department's East Honolulu District Maintenance Facility.



## Revisions to the Final Environmental Impact Statement

### II. Hanauma Bay Nature Preserve

#### A. Retained Improvements in the Upper Park Area

1. New Marine Education Center and Operations Support Facility.
2. New Snack Bar and Restroom Facility.
3. Reconfiguration and re-paving of adjoining Observation Plaza and pedestrian circulation areas.
4. Demolition of existing buildings on the site to be occupied by the above-described new facilities.
5. Landscaping of the new facilities area and the existing parking areas.
6. Reconstruction of the beach tram turnaround area.

#### Retained Improvements Between the Upper Park and Lower Beach Areas

1. Undergrounding of utilities within the Lower Beach Access Road.

#### Retained Improvements in the Lower Beach Area

1. Reconstruction of the beach tram turnaround.
2. Demolition and replacement of existing concession stand with a new Beach Activities Support Building.
3. Demolition and replacement of existing Comfort Station No. 1 with a new comfort station
4. Upgrade of existing and addition of new landscaping.

#### C. Deleted Improvements in the Upper Park Area

1. Demolition of existing parking areas and re-landscaping of the previously paved areas (i.e., the existing parking areas will be retained and landscaped).
2. Inclusion of a major live reef interpretive exhibit in the Marine Education Center.

### III. Transportation Facilities and Operational Practices

#### A. Retained Improvements

1. Beach tram service between the Hanauma Bay upper park and lower beach areas.
2. Existing parking and loading/unloading areas in the upper park area.
3. Construction of new beach tram turnarounds at both the lower beach area and upper park area ends of the tram route.

#### B. Deleted Improvements/Changes in Operational Practices

1. New Park Shuttle Transportation System -- both the "Main Shuttle Route" between the previously planned/now deleted Nature Learning Center and Hanauma Bay, and the "Scenic Shuttle Route" between the previously planned/now deleted Nature Learning Center and Koko Crater Botanical Garden.
2. Reconstruction/realignment of existing Kalaniana'ole Highway intersections with Koko Head Park Road and Hanauma Bay Road.
4. Improvements to existing Job Corps Site entry road ("Koko Head Park Road")
5. Prohibition against walking to the lower beach area, with a requirement that everyone instead use the beach tram.

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### TECHNICAL APPENDICES

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- B. Historical Documentary Research: Kawaihoa-Kuamo'okane Hanauma, and Kohelepelepe - The Koko Head Nature Preserve; Kumu Pono Associates (October 1998)
- C. Archaeological Field Inspection Survey Koko Head Regional Park: Koko Head Regional Park Resource Plan Project; Paul H. Rosendahl, Ph.D., Inc. (November 1988)
- D. Koko Crater Slope Burials, State Site No. 80-15-4194; State Department of Land and Natural Resources File Memorandum (December 14, 1989)
- E. Archaeological Inventory Survey of Eight Areas Within the Koko Head Regional Park, Maunalua Ahupua'a, Island of Oahu; Cultural Surveys Hawaii (November 1998)
- F. Botanical Study: Koko Head Regional Park & Nature Preserve, East Honolulu, Island of Oahu; Char & Associates (November 1998)
- G. Additional Botanical Studies: Koko Head Regional Park & Nature Preserve, East Honolulu, Oahu; Char & Associates (November 1998)
- H. Survey of The Avifauna and Feral Mammals at Koko Head and Koko Crater, Oahu, Hawaii; Phillip L. Bruner (May 1988)
- I. Investigation of the Marine Environment in the Vicinity of the Koko Head Regional Park and Nature Preserve, East Honolulu, Island of Oahu; Marine Research Consultants (November 1998)
- J. Traffic Impact Assessment Report for Koko Head Regional Park and Nature Preserve; Pacific Planning & Engineering, Inc. (December 1998)
- K. Supplemental Report on Traffic Issues, Koko Head Regional Park and Nature Preserve; Pacific Planning & Engineering, Inc. (July 28, 1999)
- L. Koko Head Regional Park & Nature Preserve - Utility Requirements; SSFM Engineers, Inc. (February 1999)
- M. Supplemental Report on Utility Requirements for Hanauma Bay Nature Preserve; SSFM Engineers, Inc. (August 7, 1999)



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**Section 1.0**

**Summary**

IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

• Final Environmental Impact Statement •

1.0 SUMMARY

1.1 PROJECT INFORMATION SUMMARY

Project Name: ~~Improvements to Hanauma Bay Nature Preserve~~

Applicant: Department of Design and Construction  
City and County of Honolulu  
650 S. King Street, 9<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Contact: Jim Nakasone, Project Manager

Accepting Authority: ~~Department of Planning and Permitting~~  
City and County of Honolulu

Planning/Environmental Consultant: Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Contact: Ralph Portmore, AICP  
(808) 523-5866, Ext. 106

Tax Map Keys/Land Area: 3-9-12: ~~Port 2, 10, 12, 14, and 16~~  
~~Approximately 70 acres~~

Location: East Honolulu, Oahu (Figure 1-1)

Ownership: City and County of Honolulu

Existing Uses: Hanauma Bay Nature Preserve & Underwater Marine  
Life Conservation District ~~[Other listed uses deleted]~~

Proposed Use: ~~Replacement and Upgrade of Existing Park Facilities~~

State Land Use District: Conservation

~~East Honolulu Sustainable Communities Plan~~  
~~Urban Land Use Map Designation: Major Parks and Golf Courses~~

~~East Honolulu Sustainable Communities Plan~~  
~~Open Space Map Designation: Regional, District and Beach Parks~~

~~East Honolulu Sustainable Communities Plan~~  
~~Public Facilities Map Designation: Major Parks and Golf Courses~~

City and County Zoning District: P-1 Restricted Preservation

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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### 1.2 PROPOSED ACTIONS

[Introductory paragraph, including primarily references to unifying, linking and integrating recreational uses and natural resources in Koko Head Regional Park, has been deleted.]

The proposed actions at Hanauma Bay Nature Preserve represent steps to implement the goals, objectives, policies and implementation recommendations of the Hanauma Bay Nature Park Master Plan (May 1992). The basic elements of the planned improvements addressed in this Environmental Impact Statement are listed below and described in greater detail in Section 3:

1. Former Hawaii Job Corps Center Site: Demolition of existing unoccupied and dilapidated buildings and related structures;

2. Hanauma Bay Nature Preserve - Upper Park Area: Replacement and upgrade of existing facilities through the construction of a new marine education center and snack bar; reconstruction of the beach tram loading area and turn-around; demolition of the existing visitor center buildings; construction of a new parking fee collection booth and upgrading the landscaping in the existing parking lots; and installation of a new landscape buffer at the scenic lookout adjoining the tour bus stopping area.

3. Hanauma Bay Nature Preserve - Lower Bay Area: Replacement and upgrade of existing facilities through the demolition of the existing snack bar/snorkel concession building; replacement and relocation to a more mako and less visible site of the snorkel rental facility; main comfort station and adjoining showers; provision of an attractively designed permanent information kiosk; construction of a new lifeguard safety equipment storage facility; repaving of the beach access road and replacement of the beach tram turn-around; and upgraded landscaping.

### 1.3 REASONS FOR PREPARING THIS ENVIRONMENTAL IMPACT STATEMENT

The proposed actions that are described in this Environmental Impact Statement (EIS) involve the use of County land and funding and the development in the Conservation District. Both of these actions trigger the application of Chapter 343, Hawaii Revised Statutes (HRS), and the Environmental Impact Statement Rules, Title 11, Chapter 200 of the Hawaii Administrative Rules (HAR). This EIS has been filed with the State of Hawaii's Office of Environmental Quality Control (OEQC) for publication in the Environmental Notice, and copies have been distributed to concerned and interested parties, as required under the EIS Rules.

### 1.4 SIGNIFICANT BENEFICIAL AND ADVERSE IMPACTS

The planned improvements are intended to improve both opportunities for users to experience and enjoy the Nature Preserve's special natural resources and scenic beauty, and management

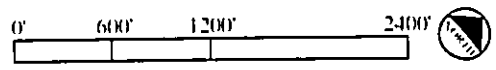
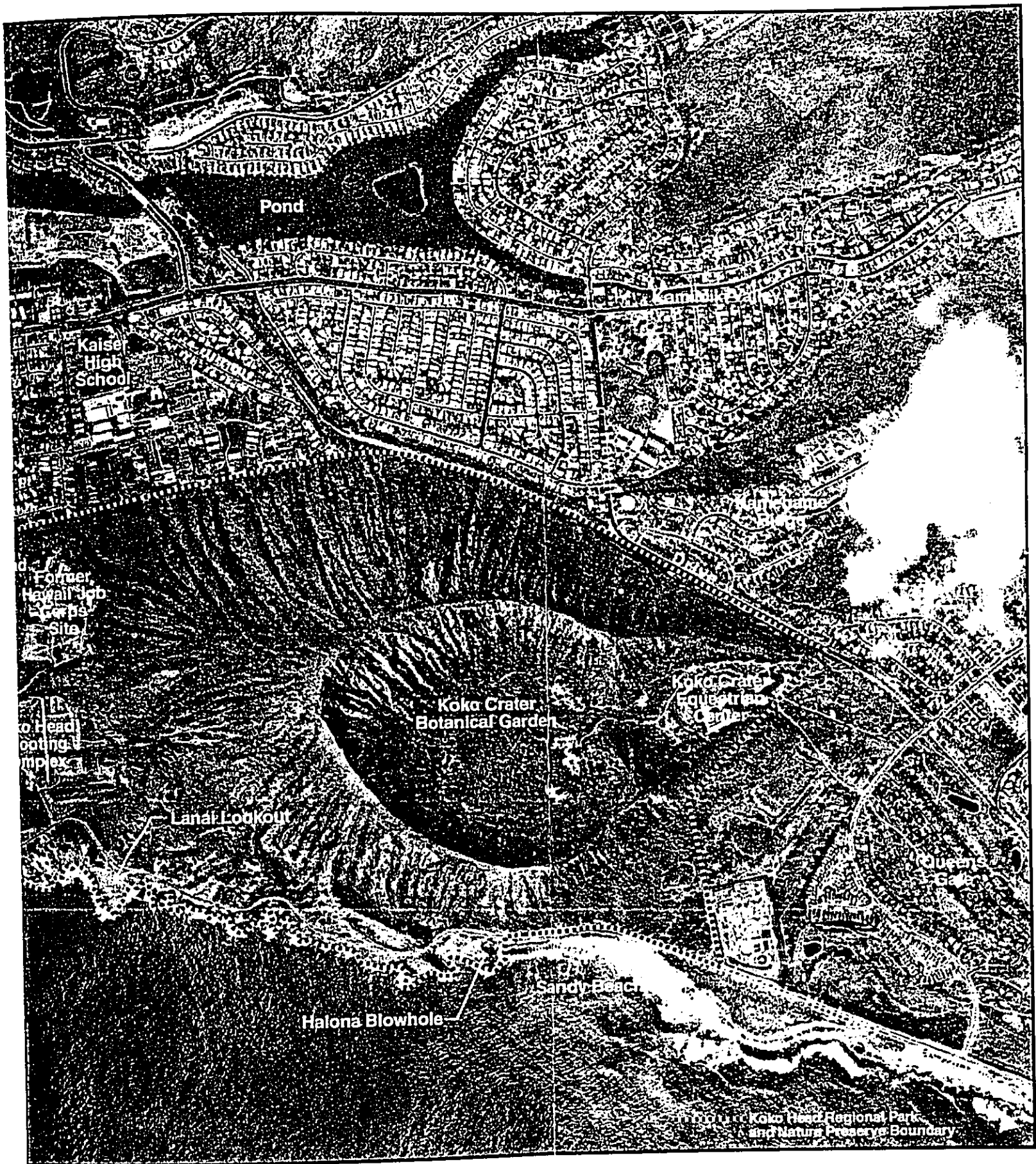
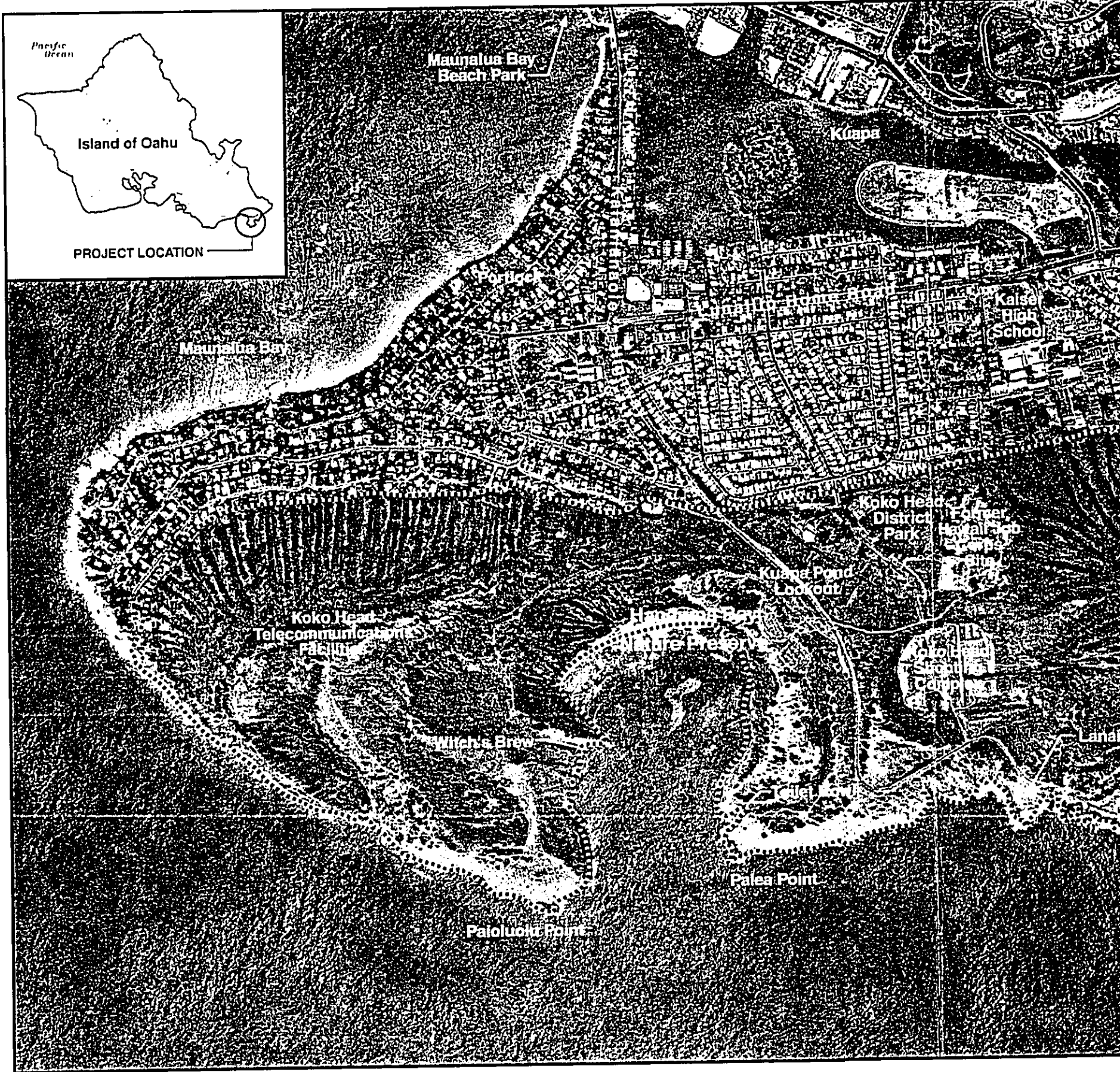


Figure 1-1





Location Map

Hanauma Bay Nature Preserve

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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practices and other measures aimed at preserving and protecting those resources. They will also be located, designed and operated in a manner that avoids any substantive impacts on previously undisturbed natural areas, and maintains usage of Hanauma Bay at substantially the current overall attendance levels.

As such, the significant impacts of these improvements will be overwhelmingly beneficial. These are briefly enumerated below. Also listed below are the few adverse impacts that are expected to occur. Relative to the benefits that will occur, the adverse impacts are not considered significant.

#### 1.4.1 Beneficial Impacts

- General public awareness of and appreciation for the value and importance of preserving the natural environment, and in particular, Hanauma Bay's marine ecosystem, will be heightened, primarily through a mandatory resource awareness training and expanded and improved educational exhibits and information materials.

• Adverse impacts of individuals on the natural environment will be directly and indirectly reduced, primarily as a result of changed behavior of park users who have completed the resource awareness training and/or taken advantage of other newly available education and information resources.

• Impacts of park facilities and other improvements on the Nature Preserve and Regional Park's natural setting and resources will be lessened, primarily through limiting new facilities to those that are needed or will benefit the environment, removing those facilities that are not needed, and better siting and design of those that are needed.

• Visitors' experiences of the Nature Preserve will be enhanced, primarily through the increased availability of enjoyable educational opportunities and information materials, and through the replacement of substandard facilities, and

• Public safety will be increased, primarily through the provision of needed new safety facilities and infrastructure upgrades.

#### 1.4.2 Adverse Impacts

- The ease and convenience of access to Hanauma Bay Nature Preserve will be slightly reduced for those wanting to go to the lower bay area, due to the requirement that they first complete a resource awareness training session.

• Use and enjoyment of Hanauma Bay Nature Preserve will be disrupted by construction activities.

• The public's tax burden will be increased by the general tax revenues, as opposed to Hanauma Bay Special fund receipts, are needed to pay off the bonds used to finance these improvements.



## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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### 1.5 PROPOSED MITIGATIVE MEASURES

As noted above, there will be few adverse impacts resulting from the planned improvements, and relative to the benefits that will occur, they are not considered significant. Mitigative measures that will be taken to minimize these impacts, as well to address and eliminate other potential adverse impacts, are as follows:

- New educational and information exhibits and resources will include a mandatory resource awareness training with the objective of reducing individual impacts on Hanauma Bay by changing behaviors through increased awareness, understanding and appreciation.
- Existing drainage patterns will not be disturbed, and impacted drainage retention basin capacity in the upper park area at Hanauma Bay Nature Preserve will be restored.
- The existing food concession on the beach at Hanauma Bay will be removed and several remaining park facilities will be moved more markedly to less visible and safer locations.
- Buildings will be designed to be compatible and blend in with the natural surroundings as much as possible.
- Dry-land landscaping materials will be used wherever possible to reduce the demand for irrigation.

### 1.6 ALTERNATIVES

Four alternatives were considered:

No Action – This alternative was rejected because it would have significantly less beneficial and relatively more adverse impacts than will the completion of the planned improvements.

Postponing Action Pending Further Study – This alternative was rejected because it would mean postponing the environmental benefits that will be achieved upon completion of the planned improvements. Completing them as soon as possible is not expected to foreclose any options for possible future facility or management improvements that may be recommended by the ongoing Hanauma Bay carrying capacity study or any other future studies.

Alternative Location for the Proposed Marine Education Center – Location elsewhere on Oahu was rejected because of the inherent importance of, and greater educational value gained by locating interpretive exhibits related to Hanauma Bay's marine ecosystems near where visitors can view the bay itself.

More Intensive Recreational Facilities Development – Increasing recreational facilities and use at Hanauma Bay was rejected because of the basic conflict with the goals of allowing only low-impact uses that are compatible with efforts to protect the Nature Preserve's natural resources and increase educational opportunities and environmental awareness for park users.

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### 1.7 UNRESOLVED ISSUES

Two unresolved issues have been identified:

Carrying Capacity at Hanauma Bay – An existing study is underway in an attempt to resolve outstanding issues about the bay's carrying capacity, but its completion is not anticipated until mid-2000. Despite this, the planned improvements and management changes should be completed as soon as possible because of the significant beneficial impacts they will have on the Bay's environment, and because they will not foreclose any future options for further changes that may be indicated by the results of the carrying capacity study.

Design for the Educational Exhibits and Programs to be Housed in the New Marine Education Center – These materials have not yet been developed and consequently there is no clear definition of the amount of space that will be required. However, educational exhibits and programs by their nature keep being refined and changed to remain relevant and interesting, therefore in a sense their space needs keep changing and flexibility in space design is the key. The reality is only basic and well understood parameters are used in designing the spaces and then the exhibits and programs are designed to fit the spaces that are intended for them. More than enough is known about the spaces that will be needed at Hanauma Bay Nature Preserve to proceed now with their construction. They will be ample in size and designed for maximum flexibility. To wait would only delay receiving the benefits that their completion will provide.

### 1.8 COMPATIBILITY WITH LAND USE POLICIES AND PLANS

The planned improvements are fully compatible with State and City and County land use policies, plans and regulations related to the natural environment and recreation, and to the management of coastal resources. They are consistent with and permitted by applicable land use designations and, as enumerated above and in Section 6 will contribute in a wide variety of ways to the implementation of stated goals, objectives and policies.

#### 1.9 REQUIRED APPROVALS AND PERMITS

Three major approvals and permits are required in order for this project to proceed:

• Acceptance of this Environmental Impact Statement by the City Department of Planning and Permitting

• Approval of a Special Management Area Use Permit by the Honolulu City Council

• Issuance of a Conservation District Use Permit by the State Board of Land and Natural Resources

**Section 2.0**

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**Purpose and Need for the Proposed Actions**

# IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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## 2.0 PURPOSE AND NEED FOR THE PROPOSED ACTIONS

~~Preparer's Note: This section has been completely rewritten. Highlighting of revised text (all of it) and specific references to deleted text have been omitted.~~

Hanauma Bay Nature Preserve is one of the most spectacular natural resources in the State of Hawaii, if not in the United States and the world. It has also been one of Oahu's most popular natural attractions, because visitors are offered a recreational and scenic viewing opportunity unlike any other.

It is this popularity that is considered by some to be a problem. It does at least present a challenge. The challenge is, how do you allow people to experience this awesome place without having it damage some of the key elements that make it so special? How do you let people "use" it now and at the same time maintain and protect the full range of its natural qualities for the enjoyment of future generations?

Prior to 1990, when rules regulating the use of Hanauma Bay were put into effect, the number of people going to the bay every day was pretty much getting out of hand. These rules have been effective in reducing attendance, which is now slightly over one million people per year compared to over 3-1/2 million visitors in 1988. However, there continued to be concerns related to the adequacy of the facilities at Hanauma Bay to support even the reduced visitor counts. Also, something needed to be done about the damage to the bay's marine ecosystem was still being done by visitors. It appeared that much of this could be prevented simply by providing bay users with some knowledge, awareness and understanding of safe and non-harmful way to enjoy themselves.

The 1992 "Hanauma Bay Nature Park Master Plan" was completed in 1992 to guide efforts to address these concerns. [The name was changed to "Hanauma Bay Nature Preserve" in 1995.] Three goals are included in the master plan. The first two were originally set forth in the 1977 "Hanauma Bay Beach Park Site Development Plan and Report" and were retained as valid and appropriate expressions of the City's vision for Hanauma Bay's long-term future. The third goal established a long-term theme for the Nature Preserve's usage. The goals are:

- A. Continue to preserve and enhance the natural qualities and opportunities unique to Hanauma Bay and its environs.
- B. Optimize the use of Hanauma Bay as an important recreational resource for the people of the State of Hawaii.
- C. Promote public education and appreciation of Hanauma Bay Nature Park's natural environment by providing opportunities for the safe enjoyment of park resources.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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This master plan also includes seven objectives and 20 policies that provide guidance on how the goals should be achieved. Most importantly, it spells out 19 specific implementing recommendations for making physical improvements, for changing existing or establishing new programs and rules, and for further studies

Many (just over one-half) of the recommended improvements, programs and studies have been implemented, but several still need to be done. A detailed discussion of what has been done and what remains to be done is provided in Section 5.3.2 of this EIS.

*The purposes of the proposed actions described in this EIS are twofold:*

*To make a significant contribution to implementation of the third goal of the master plan, which is to promote public education and awareness of Hanauma Bay Nature Preserve's natural environment; and*

*To complete six of the remaining implementation recommendations.*

The actions that are proposed, and the reasons for proposing them, are described in detail in Section 3.

**Section 3.0**  

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**Project Description**

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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### 3.0 PROJECT DESCRIPTION

**Preparer's Note: Because of the extensive changes and scaling back of the proposed project scope, this section has been completely rewritten. Highlighting of revised text (i.e. virtually the entire section) has been omitted.**

#### 3.1 INTRODUCTION

This section presents a discussion of the proposed demolition of existing structures at the former Hawaii Job Corps Center site, and proposed new facilities and improvements to Hanauma Bay Nature Preserve. It begins with a brief overview of Koko Head Regional Park and Nature Preserve, within which the two impacted areas are located. The information presented below to describe the proposed actions includes the following:

*For the former Hawaii Job Corps Center site:*

- A general description of the extent of the demolition activities, with particular reference to the existing facilities that will be retained, and to how the disturbed areas will be restored; and
- The projected costs and timetable for completion of this work.

*For Hanauma Bay Nature Preserve*

- A description of the purposes, siting and conceptual design of planned new construction;
- Proposed changes in available activities, programs and management practices and how they will impact access and the way people use the Nature Preserve;
- The projected costs and timetable for completion of anticipated construction activities.

#### 3.2 OVERVIEW

Koko Head Regional Park was established in 1928 following its acquisition by the City and County of Honolulu from the Estate of Bernice Pauahi Bishop. It is the largest City-owned park on Oahu. The park's two most prominent features, Koko Crater and Koko Head, stand as landmarks for much of Eastern Oahu. Hanauma Bay, located in between the slopes of the massive volcanic formations, is one of the most popular visitor destinations and scenic recreation areas on Oahu. The Regional Park's unique geological features, its beautiful and rugged coastline and its overall size comprise a valuable natural resource for the entire City and County of Honolulu, as well as for the neighboring Hawaii Kai community.

The original land purchase for Koko Head Regional Park encompassed 1,275.4 acres. (See Section 4.2 for a brief description of the Regional Park's history.) Within this original park site

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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purchase are three parcels totaling 1.0 acre that are now owned by AT&T/Hawaiian Telephone Company and occupied by telecommunications antennae, and two parcels totaling 2.6 acres that are owned by the Board of Water Supply and occupied by reservoirs. It also includes the Koko Head District Park, a 40-acre active recreation park established in 1975 to serve the Hawaii Kai community. Excluding the District Park and the AT&T and BWS properties, the total area of Koko Head Regional Park and Nature Preserve is 1,231.8 acres.

A figure of 50 acres is generally used to describe the size of Hanauma Bay Nature Preserve. However, this area has no formally established boundaries.

There are eight principal areas or uses located within the boundaries of the Regional Park:

- Koko Head, occupied by a telecommunication antennae complex and an endangered plant habitat.
- Hanauma Bay Nature Preserve, and Marine Life Conservation District.
- The former Hawaii Job Corps Center site, now mostly occupied by unused and dilapidated buildings, but also the site of Goeas Memorial Ballfield, a Parks Department baseyard, a Water Safety Division field office, and office space in one building that is used by the Honolulu Police Department (HPD).
- Koko Head Shooting Complex in Kahauloa Crater.
- Koko Crater Botanical Garden within Koko Crater.
- Koko Crater Stables at the entry to Koko Crater.
- Sandy Beach and Wawamalu Beach Park.
- The Kuapa Pond, Lanai, and Halona Blow Hole Lookouts alongside Kalaniana'ole Highway.

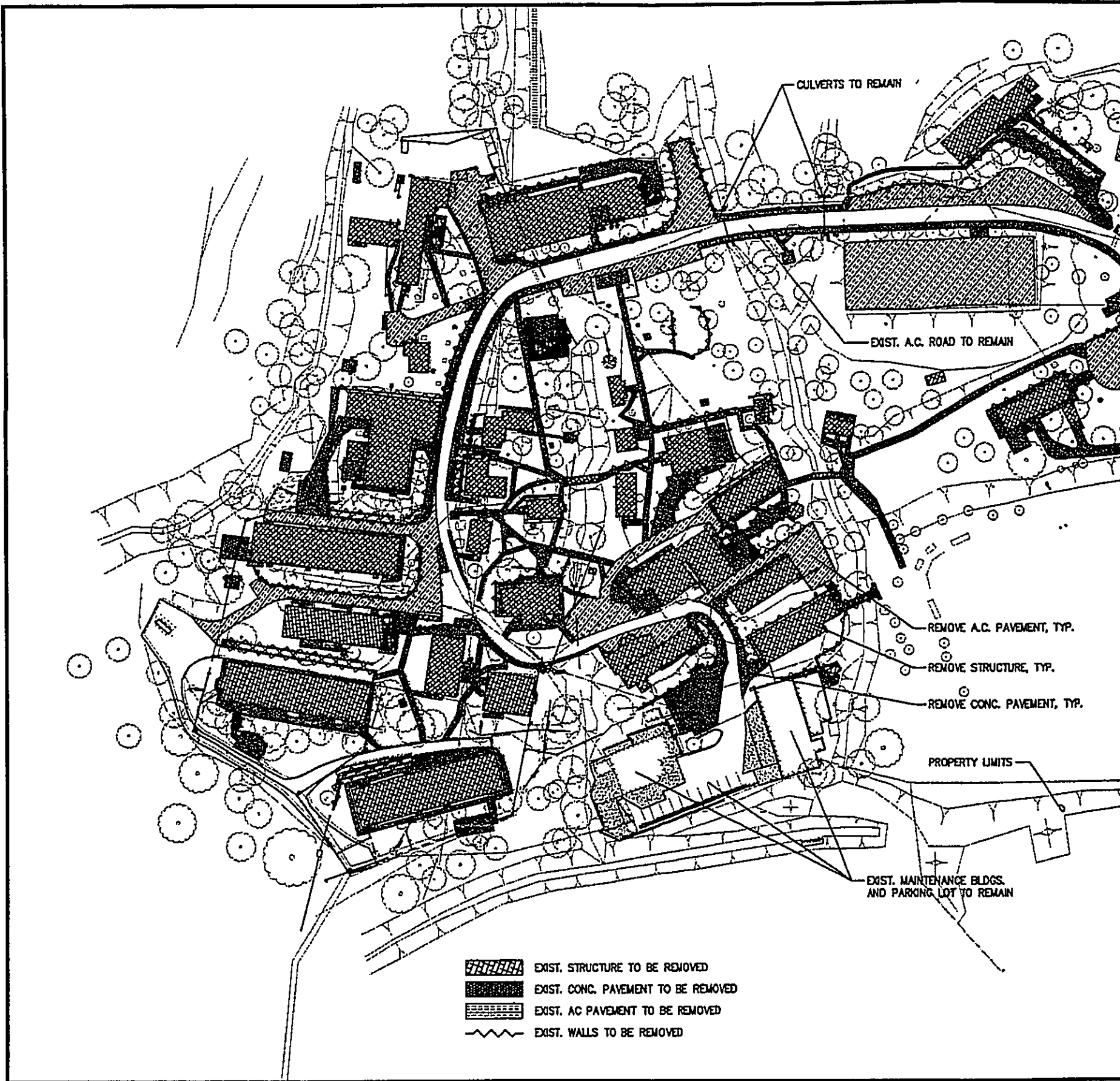
As noted, two of these elements - the former Hawaii Job Corps Center site and Hanauma Bay Nature Preserve - will be impacted by proposed actions. A detailed description of these improvements is provided in the following sections.

### 3.3 FORMER HAWAII JOB CORPS CENTER SITE

#### 3.3.1 Scope of the Proposed Demolition Activity

It is proposed that all improvements that were part of the Hawaii Job Corps Center facility, except for Goeas Memorial Field and the Parks Department's maintenance baseyard, be demolished. The purpose of this demolition is to remove structures that, because they are not being used or maintained, have become a potential hazard to public health and safety. Their removal will also facilitate the eventual re-use of this site for park purposes. The areas where demolition is proposed to occur are shown on Figure 3-1.





General Demolition Plan, Former Hawaii Job Corps Center Site

Hanauma Bay Nature Preserve

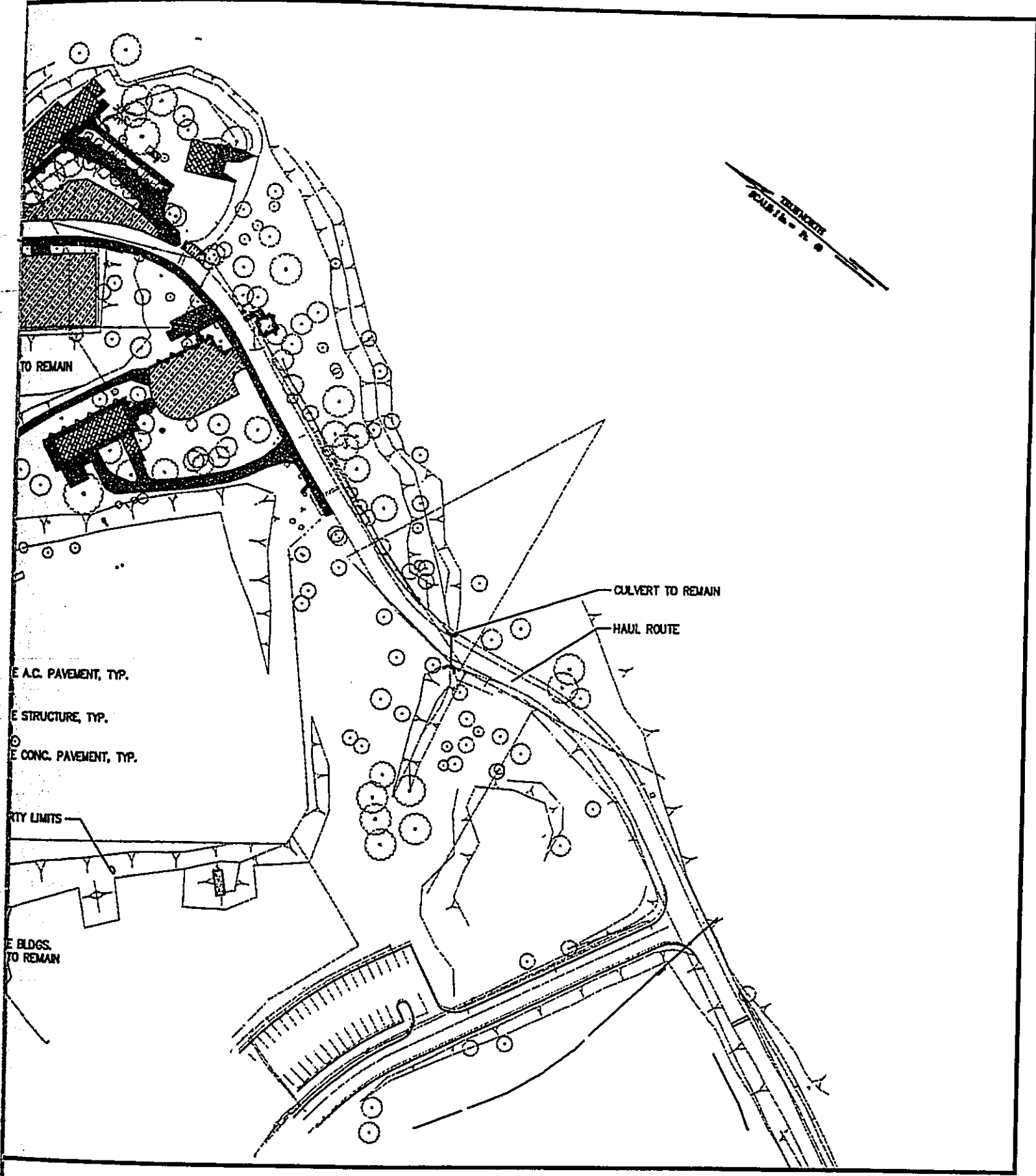


Figure 3-1

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Areas where buildings and other site improvements are removed will be regraded as necessary to provide an appropriate and safe transition to undisturbed areas, and they will be grassed. Existing trees within areas to be disturbed will be retained wherever possible.

As noted in Section 3.4.1.3, it is estimated that up to 2,000 cubic yards of fill material will be needed to establish the finished grade of the new marine education center site. Roughly another 1,500 cubic yards of soil will be needed for planting the grass on the mauka-side earth mounds and roofs of the planned new marine education center and snack bar. It is tentatively proposed that some of this material be borrowed from the Job Corps site.

However, the potential impacts of doing so on the future development and use of the Job Corps site for park purposes will first need to be assessed. It is anticipated that this will be done later this year, in connection with the upcoming master plan preparation programs for both Koko Head District Park and Koko Head Regional Park and Nature Preserve. A final decision on the source or areas from which this fill material would be taken need not be made until after this assessment is completed.

#### 3.3.2 Estimated Demolition Schedule and Costs

Demolition cannot begin until after all required permits are obtained and contracts are issued. This will not occur until March 2000 at the earliest. The total timetable for completion is estimated to be six months. This includes two months for hazards abatement, one month for demolition, and three months for regrading and landscaping.

The total estimated cost to complete this work is \$1.4 million.

#### 3.4 HANAUMA BAY NATURE PRESERVE

It is proposed that improvements be made to both the "upper park area" and "lower bay area" at Hanauma Bay Nature Preserve. They are described separately below.

These proposals include improvements that both replace existing facilities and add new facilities. Added facilities are limited primarily to spaces required for increasing public education and awareness of the value and fragility of this resource, and to a lesser degree to improvements related to public safety or public convenience. Replacement of some facilities is proposed in order to reduce impacts on the bay, improve the natural setting in the lower bay area, reduce or remove potential safety hazards, and/or upgrade substandard structures.

The overriding purpose of the proposed new facilities and improvements at Hanauma Bay is to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. Existing uses would continue to be permitted, and no changes are proposed that would significantly impact existing public access to this Nature Preserve.

No changes in the numbers of people who visit Hanauma Bay Nature Preserve, or in things they do while there, are expected. Daily attendance averages roughly 3,000 people per day, and ranges up to slightly over 5,000 on the busiest days. The existing 308-stall parking lots will be

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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maintained, and its landscaping would be upgraded. No changes in the existing \$1.00 parking fee and \$3.00 non-resident adult entry fee are proposed. Parking will also continue to be available without charge for bicycles, mopeds and motorcycles.

The principal change that will have some impact on the convenience of access is the proposal to require all visitors to Hanauma Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training.

In addition to meeting current needs, many of the proposed new facilities will facilitate the implementation of any future additional measures to protect the bay, should the results of the carrying capacity study or other future studies indicate that this would be appropriate. The proposed educational and awareness training facilities will be designed so they can be adapted to respond to changed conditions and needs. Their provision now should not be contrary to, impede or constrain efforts to implement further protective measures, whatever they might be, in the future.

#### 3.4.1 Proposed Upper Park Area Improvements

Existing site conditions in the upper park area are shown on Figure 3-2. Figure 3-3 provides a preliminary site plan for the proposed improvements.

There are seven basic elements to these proposed improvements:

- Provision of a new facility to conduct the "resource awareness training" that everyone going to the lower bay area will be required to attend.
- Replacement of the existing education/interpretive exhibit building (actually constructed to be a snack bar) with a new and expanded interpretive exhibit area and education center.
- Replacement of the existing administration and operations space and the lower bay entry pavilion with adequately sized and appropriately designed facilities.
- Construction of a new snack bar to replace the existing snack bar in the lower bay area.
- Upgraded landscaping and a new, permanent fee collection booth in the existing 308-stall parking lots.
- A new landscaped buffer at the tour bus stopping/lookout area.
- Demolition of the existing visitor center and re-landscaping of this area.

##### 3.4.1.1 New Marine Education Center and Snack Bar

The new "visitor center" for Hanauma Bay will consist of two buildings on either side of the central observation plaza. The first three new facilities described above would be consolidated into a single "marine education center" complex. The new snack bar would be located on the opposite side of the central plaza. Figure 3-4 provides a detailed site plan of the new visitor center area. A "longitudinal" (roughly paralleling the rim edge) and two "mauka-makai"

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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(perpendicular to the rim's edge) site sections are provided in Figures 3-5, 3-6 and 3-7, respectively. (The approximate locations of the sections are shown on Figure 3-3.)

It is proposed that the visitor center be relocated from its existing site to similarly situated site approximately 300 feet in the Makapuu direction. This new site is preferred for the following reasons:

- It is centrally located vis-à-vis the parking lots and thus is convenient to and reflective of the natural travel patterns of pedestrians flowing to the rim and lower bay area from both parked cars and the pedestrian path from Kalaniana'ole Highway. Safety will also be improved because people leaving the marine education center to walk down the beach access road to the beach will start on the makai side to the road and not have to cross the path used by the beach tram.
- The view of Hanauma Bay from the new central plaza in this location is more spectacular than at the existing location. People will have an excellent view of the beach area as well as a full panorama view of the bay itself.
- This location avoids the need to tear down the existing facilities before the new facilities are completed. Many serious and extended disruptions of park operations while the new facilities are being constructed will then be avoided.
- There would be no need to remove a significant part of the existing grove of mature kiawe trees in order to accommodate the new facilities at the existing visitor center site.

All existing walking paths along Hanauma Bay's rim will remain. The area where access to the rim view is restricted to those who have passed through the entrance to the lower bay will shift to the Makapuu side to the beach access road. However, major viewing points from both the mauka and Makapuu side of the bay will continue to be fully accessible to the public.

The existing commercial tour company van and bus turn-around and viewing areas located on the Ewa-side of the upper park area will remain. As described below, additional landscaping improvements adjoining the vehicle parking area are proposed to buffer and improve the setting for viewing Hanauma Bay from the observation plaza. The existing caretaker's residence on the far side of the commercial tour bus turn-around will remain.

*Marine Education Center* - The resource awareness training room will be approximately 1,000 square feet in size, and could accommodate up to 125 people at a training session. It is anticipated that the mandatory training will be in the form of a video that will be 5 to 7 minutes long. Each presentation "cycle" would take about 10 minutes, and up to 750 people could be accommodated per hour.

As noted, repeat visitors to Hanauma Bay would not have to go through the training session each time they come. Annual passes will be issued to those who complete the training that would allow them to proceed directly to the lower bay area. Attendance at a "refresher" training session would be required after 12 months.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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The interpretive exhibit area and "educational alcove" together encompass about 3,000 square feet of space. These spaces will essentially be open, without any permanent walls or partitions, to provide maximum flexibility of use. Some exhibits will need to be easily movable so that space can be created when appropriate for group educational sessions. This is considered preferable to a lecture-type room with fixed seats, since there would likely be many times when such a facility would not be used.

Approximately 1,400 square feet will be provided for park administration and operations staff, and for ticketing/cashier operations. With this new facility, it will be possible to provide a more secure space than currently exists for the handling of cash receipts.

The final activity proposed for the marine education center is a small museum bookstore/gift shop. It would occupy an area of about 500 square feet.

Public restrooms would require approximately 600 square feet of space, and storage, utility and exitway areas would take up roughly another 700 to 800 square feet.

Altogether, this preliminary plan includes a total of 7,000 to 7,500 square feet of space. This is based on a very concept-level understanding of proposed uses and space requirements. For this reason the floor areas provided in the final design may be slightly different from these estimates.

*Snack Bar* - This facility will be essentially the same size as the snack bar building that was built in the upper park area in 1995 to replace the existing one in the lower bay area. (It has never been operated as such because of insufficient outdoor plaza space to accommodate park entry, education and food concession functions.) The kitchen and serving counter area for this facility would occupy about 1,100 square feet. Another roughly 600 square feet will be covered open area for condiments and queues at the counter ordering and pick-up windows. Public restrooms and a custodial area will take up approximately 1,000 square feet.

The total interior building area is anticipated to be in the range of 2,100 square feet. As noted, an additional 600 square feet will be covered by the roof but open on the sides.

*Design Character* - Design of the marine education center and snack bar buildings represents an environmental approach to architecture. Their sloping grass-roofed forms gently will rise out of the physical environment on each side of a central observation plaza, drawing visitors towards the bay's rim and its spectacular view. The walls along the central observation plaza will be simulated volcanic tuff that is similar in appearance to the walls surrounding Hanauma Bay and lining the Honolulu side of the entrance road.

#### 3.4.1.2 New Beach Tram Turn-around

The turn-around at the upper park area end of the beach tram route will be rebuilt in order to allow the beach trams to reverse direction without having to back up. Studies of alternative routes for constructing a separate pedestrian path between the upper park area and the beach

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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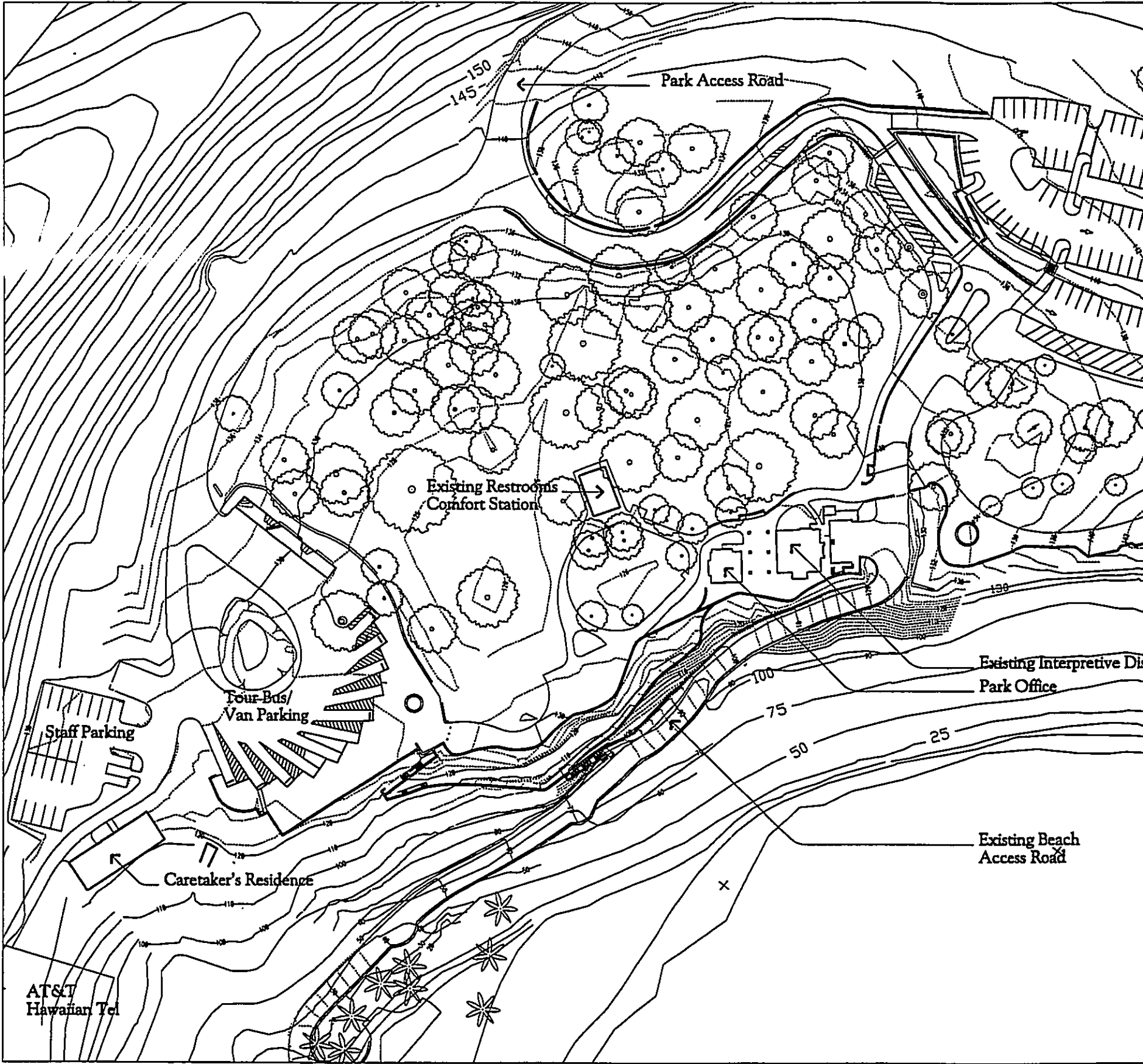
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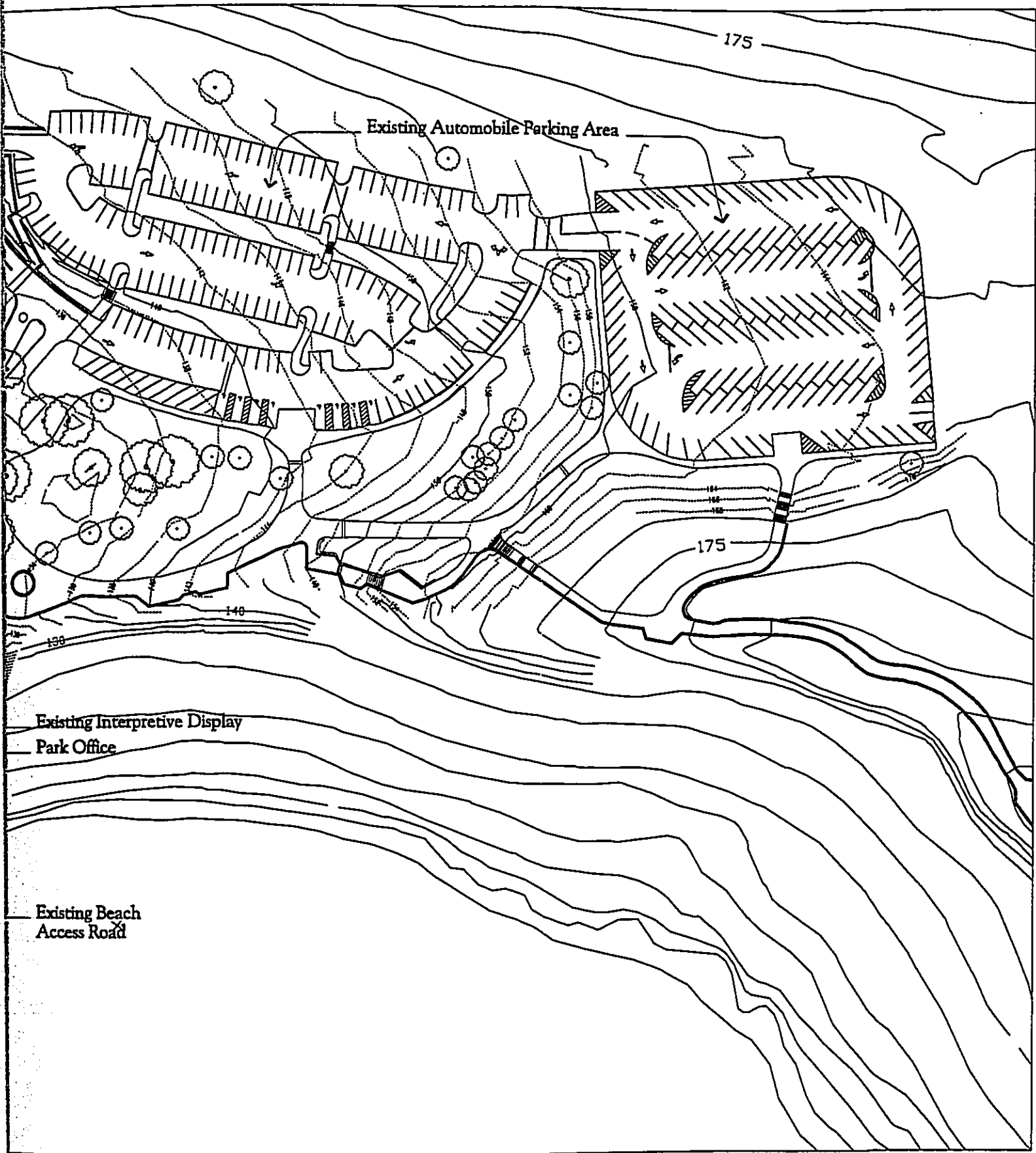
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Hanauma Bay Nature Preserve  
 Koko Head Regional Park and Nature Preserve  
 Department of Parks and Recreation  
 City and County of Honolulu

Upper Park Area Existing Conditions





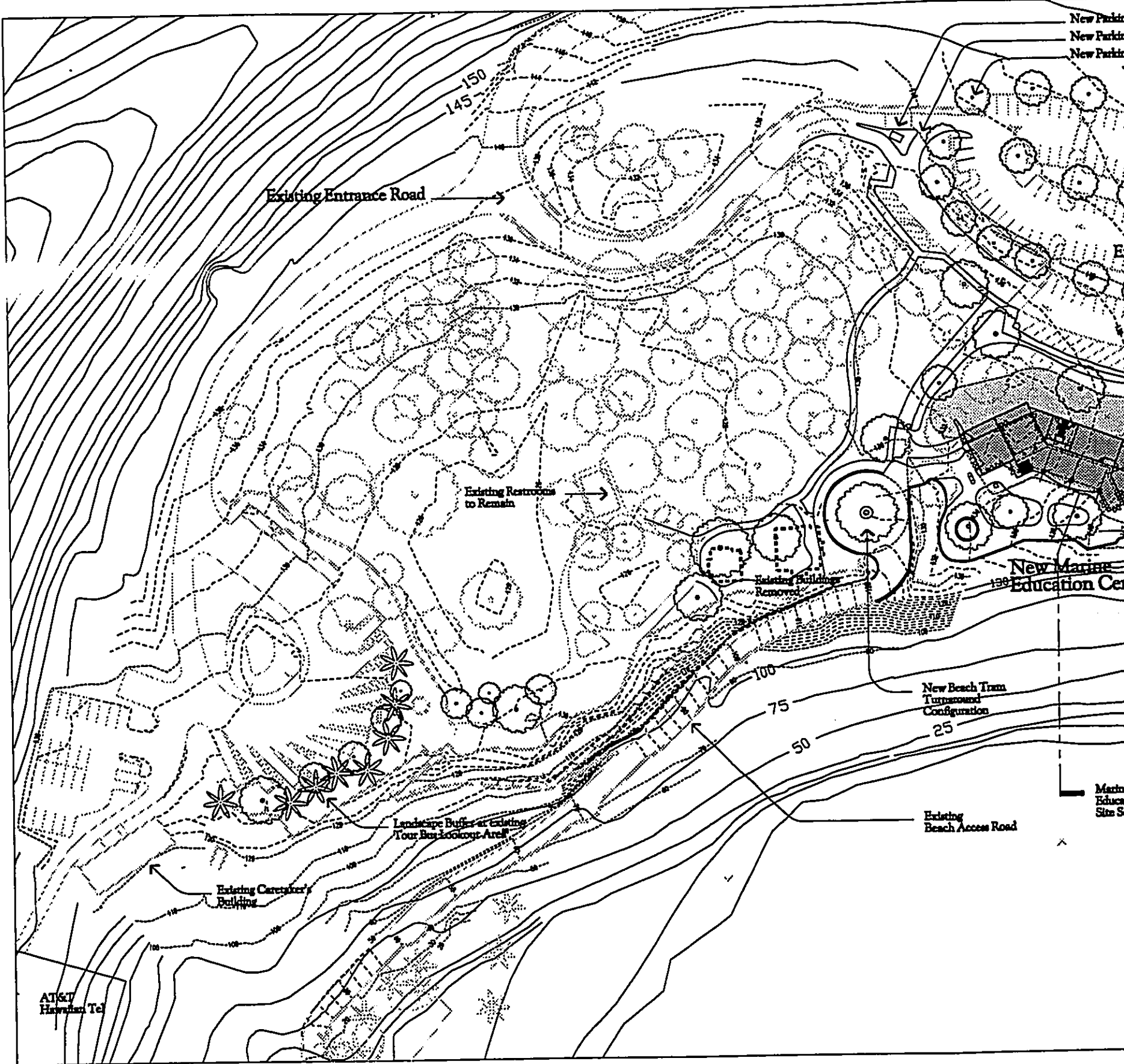
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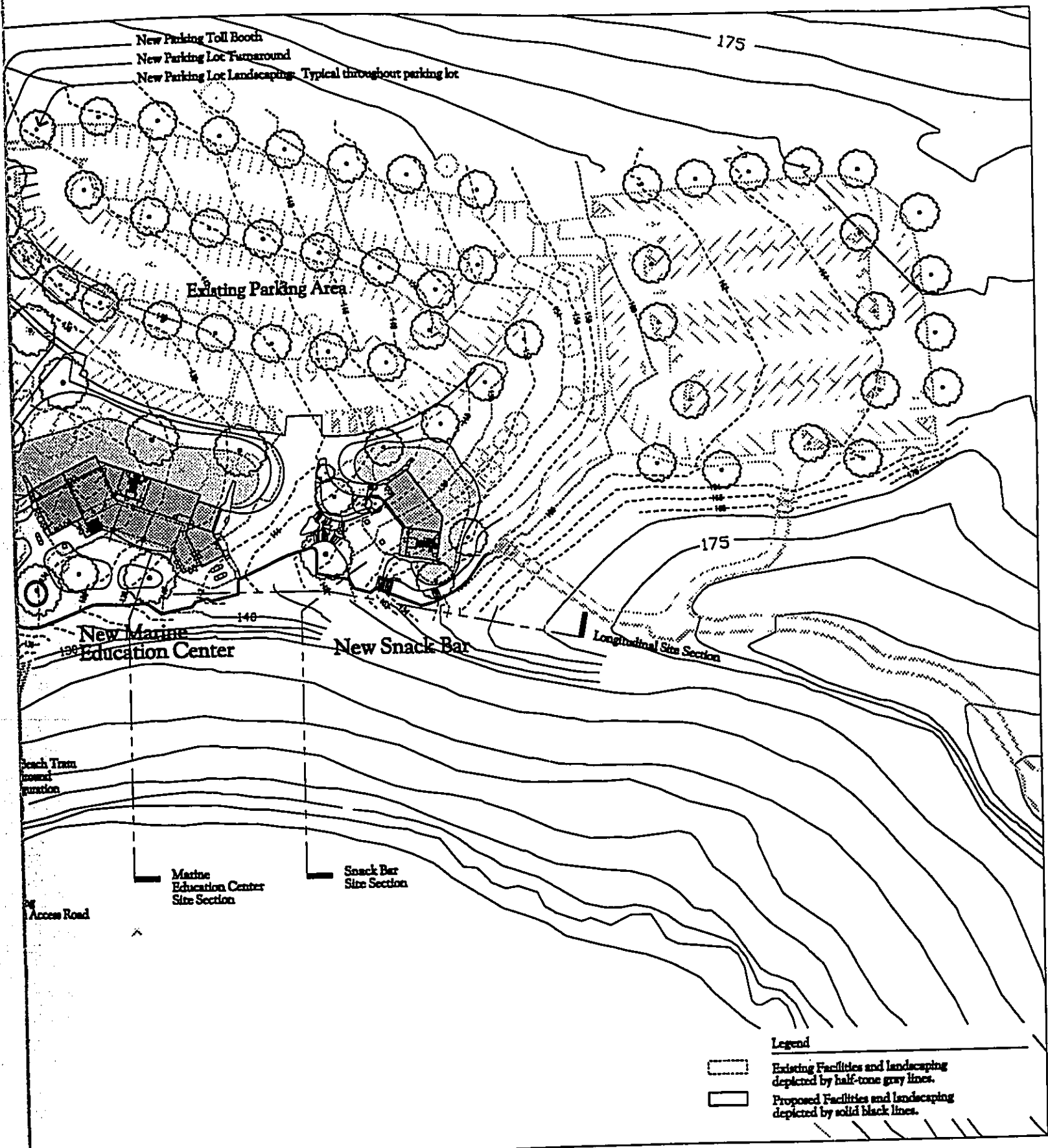
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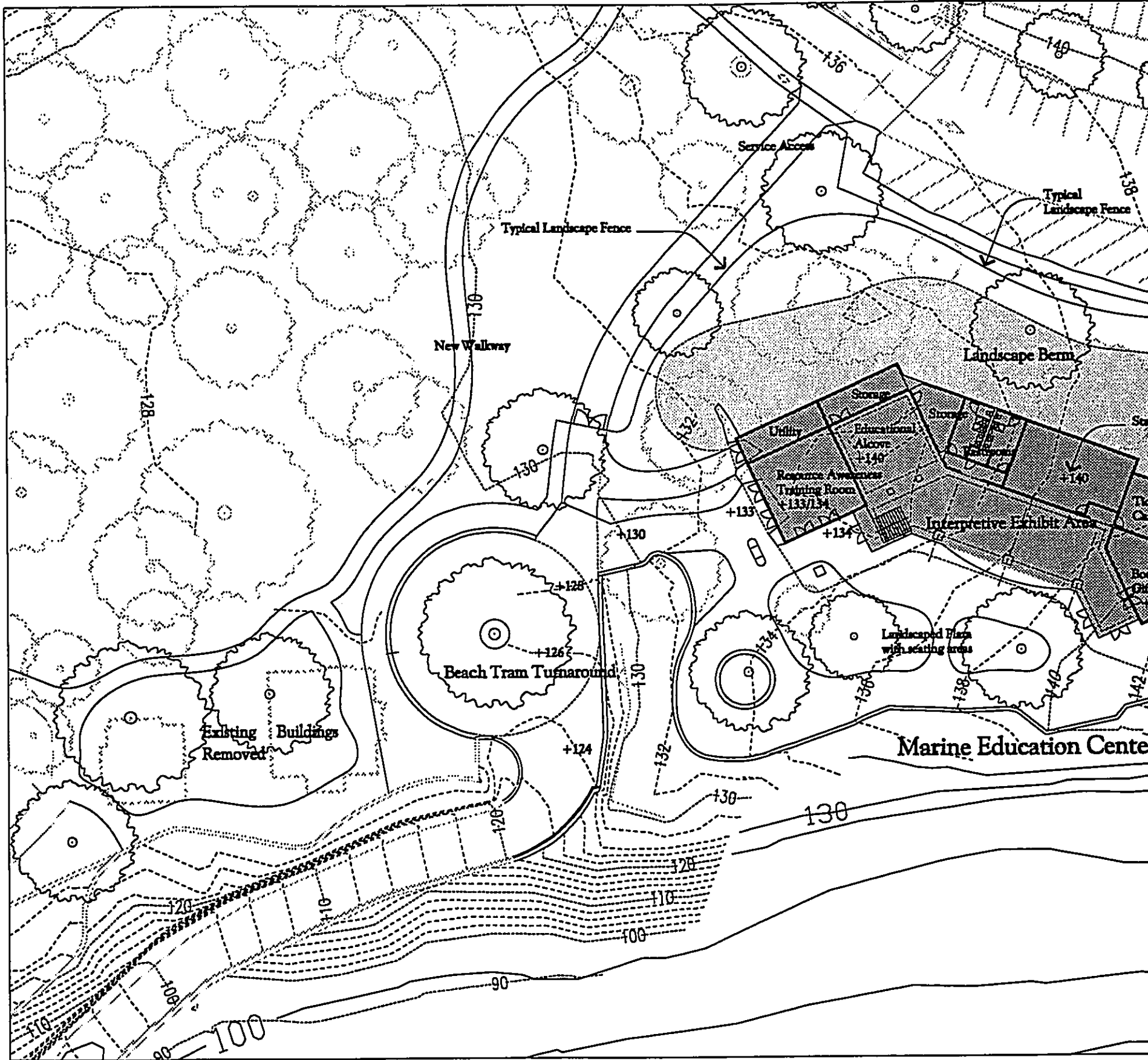


**Hanauma Bay Nature Preserve**  
**Koko Head Regional Park and Nature Preserve**  
 Department of Parks and Recreation  
 City and County of Honolulu

**Upper Park Proposed Site Plan**

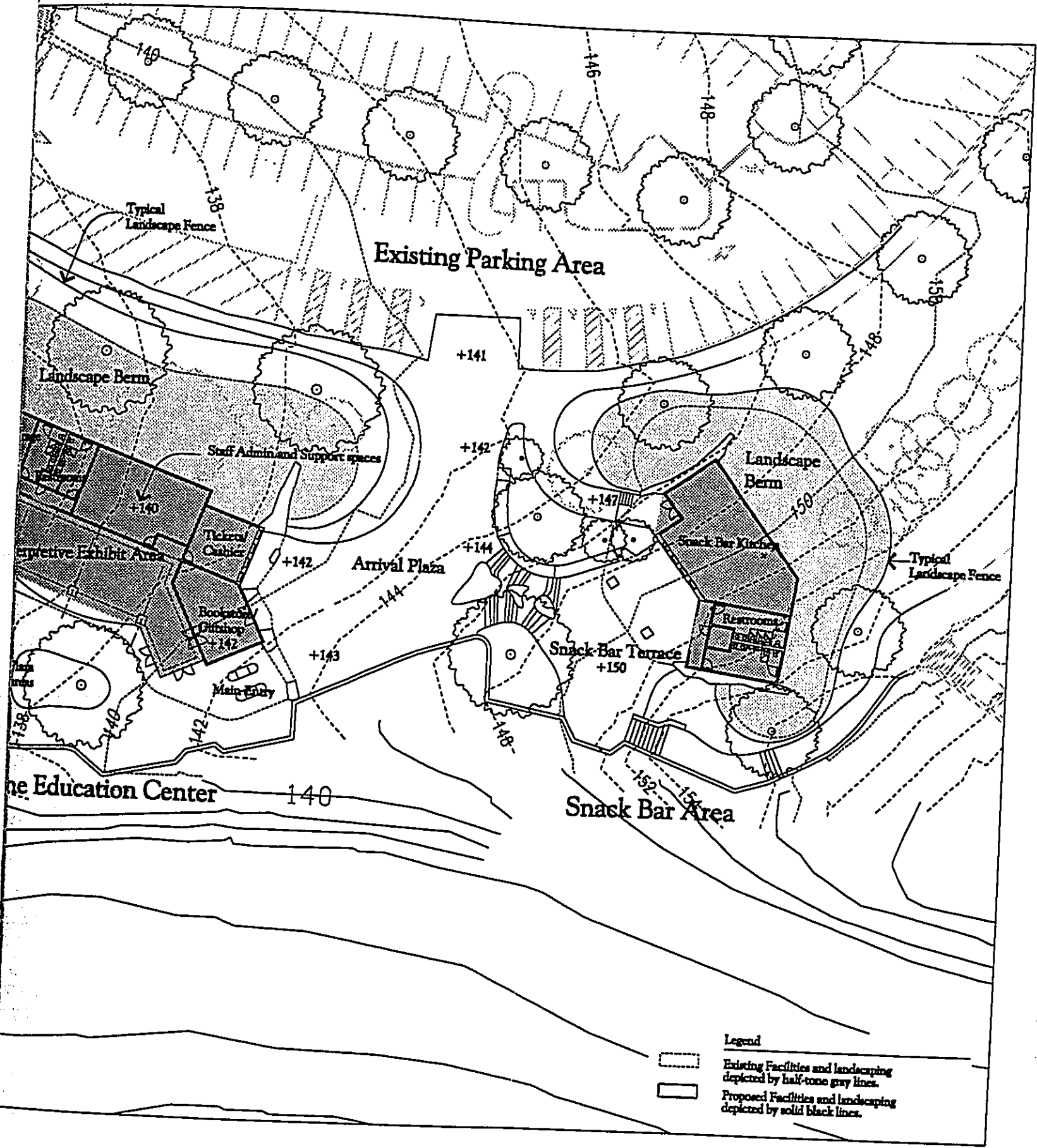


Proposed Site Plan

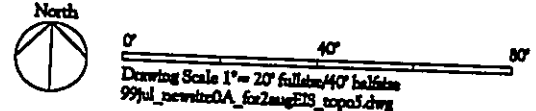


**Hanauma Bay Nature Preserve**  
**Koko Head Regional Park and Nature Preserve**  
 Department of Parks and Recreation  
 City and County of Honolulu

**Marine Education Center and Snack Bar**  
**Detailed Site Plan**

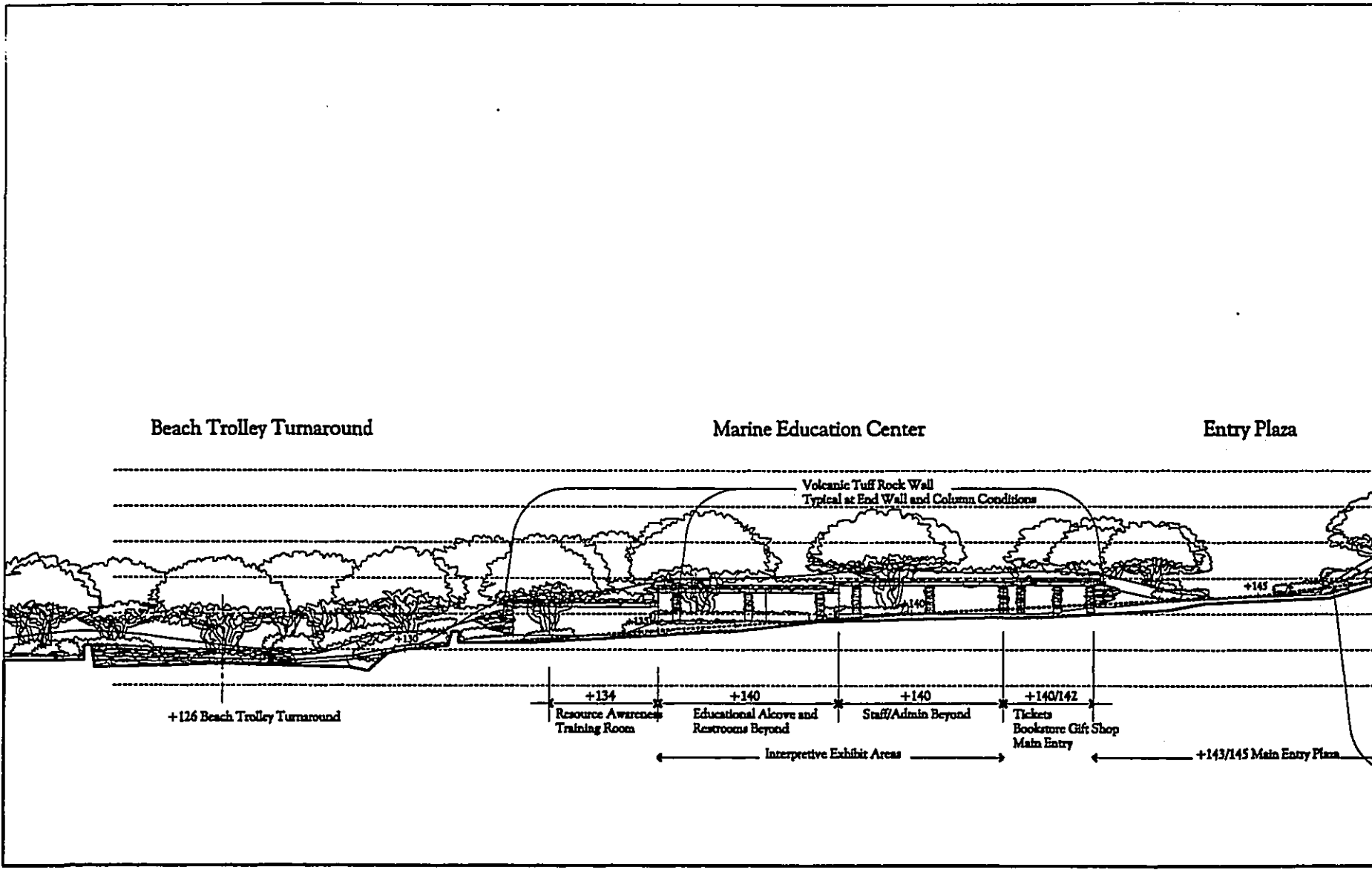


Center and Snack Bar  
Site Plan



**Legend**  
 Existing Facilities and landscaping depicted by half-tone gray lines.  
 Proposed Facilities and landscaping depicted by solid black lines.

**GROUP 70**  
 INTERNATIONAL  
 2 August 1999

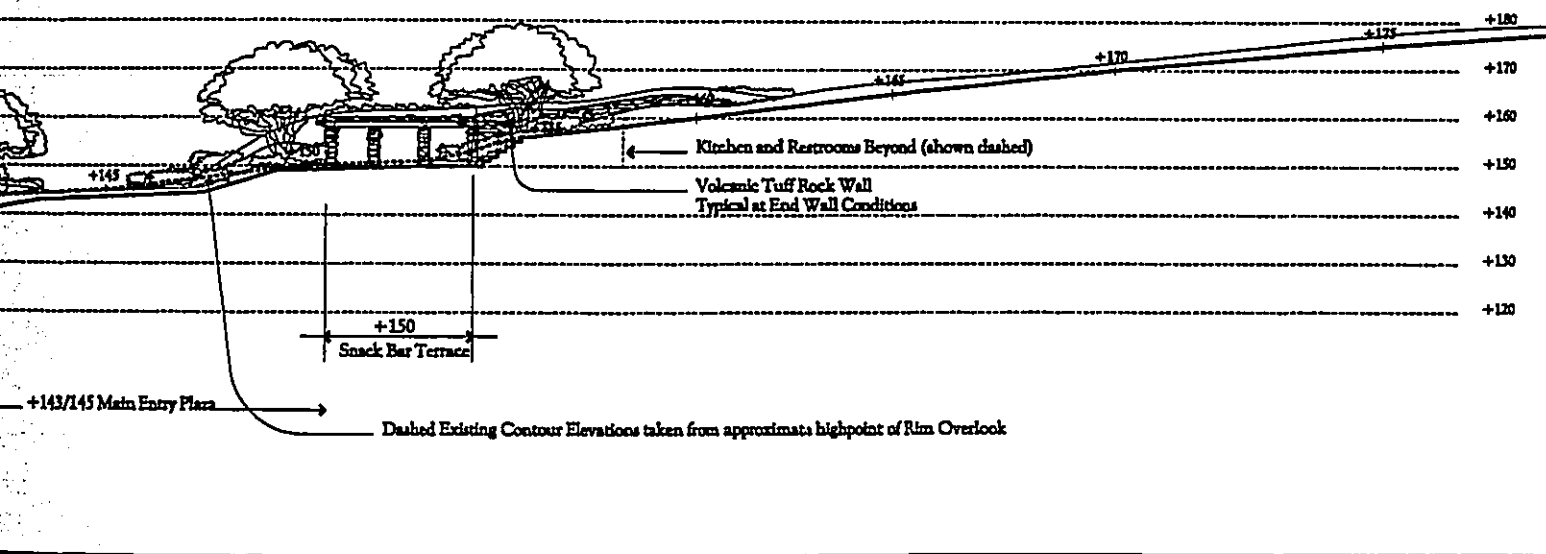


Hanauma Bay Nature Preserve  
 Koko Head Regional Park and Nature Preserve  
 Department of Parks and Recreation  
 City and County of Honolulu

Marine Education Center and Snack  
 Longitudinal Site Section

Entry Plaza

Snack Bar Area

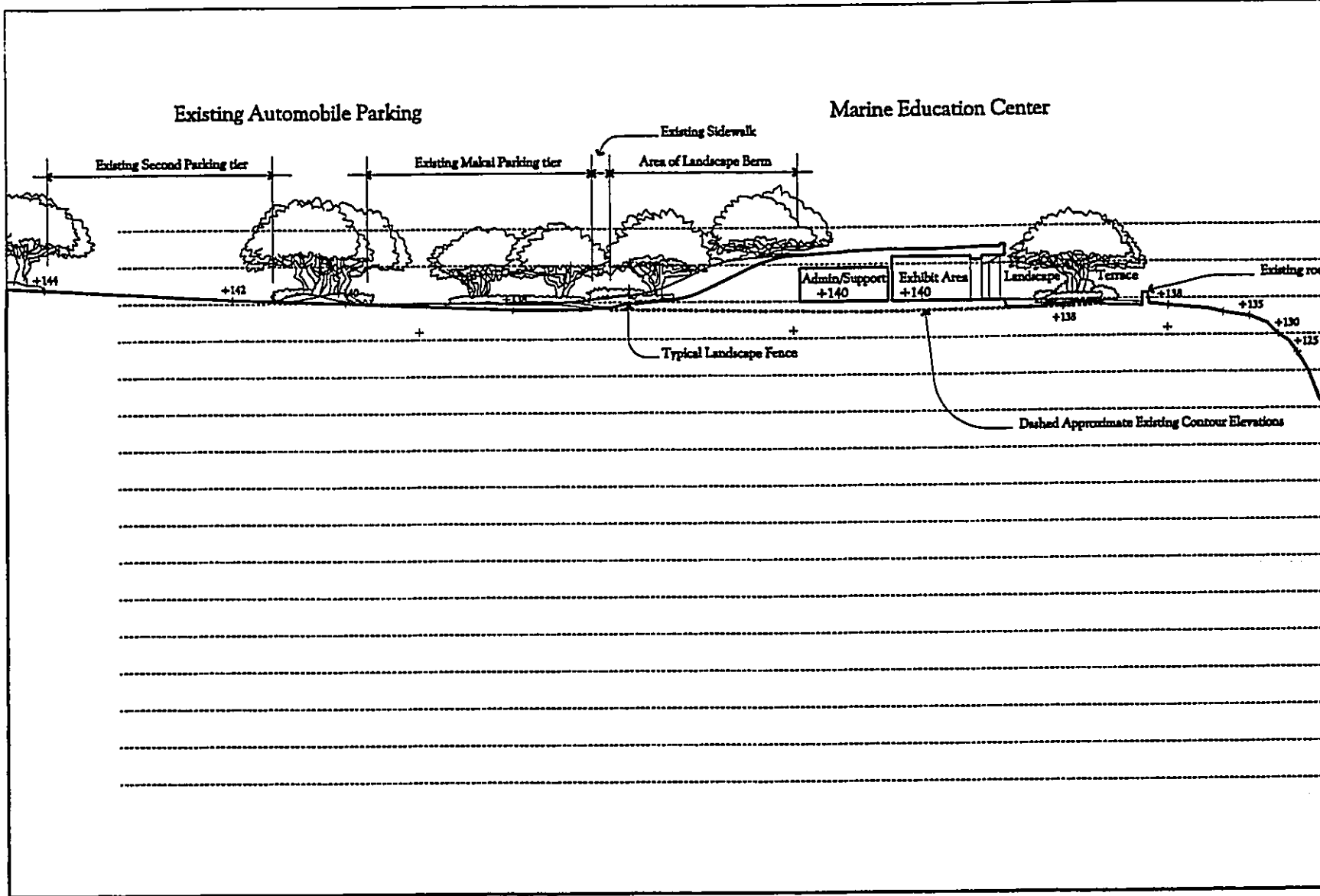


Entry Plaza and Snack Bar:  
Site Section

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**GROUP 70**  
INTERNATIONAL

2 August 1999



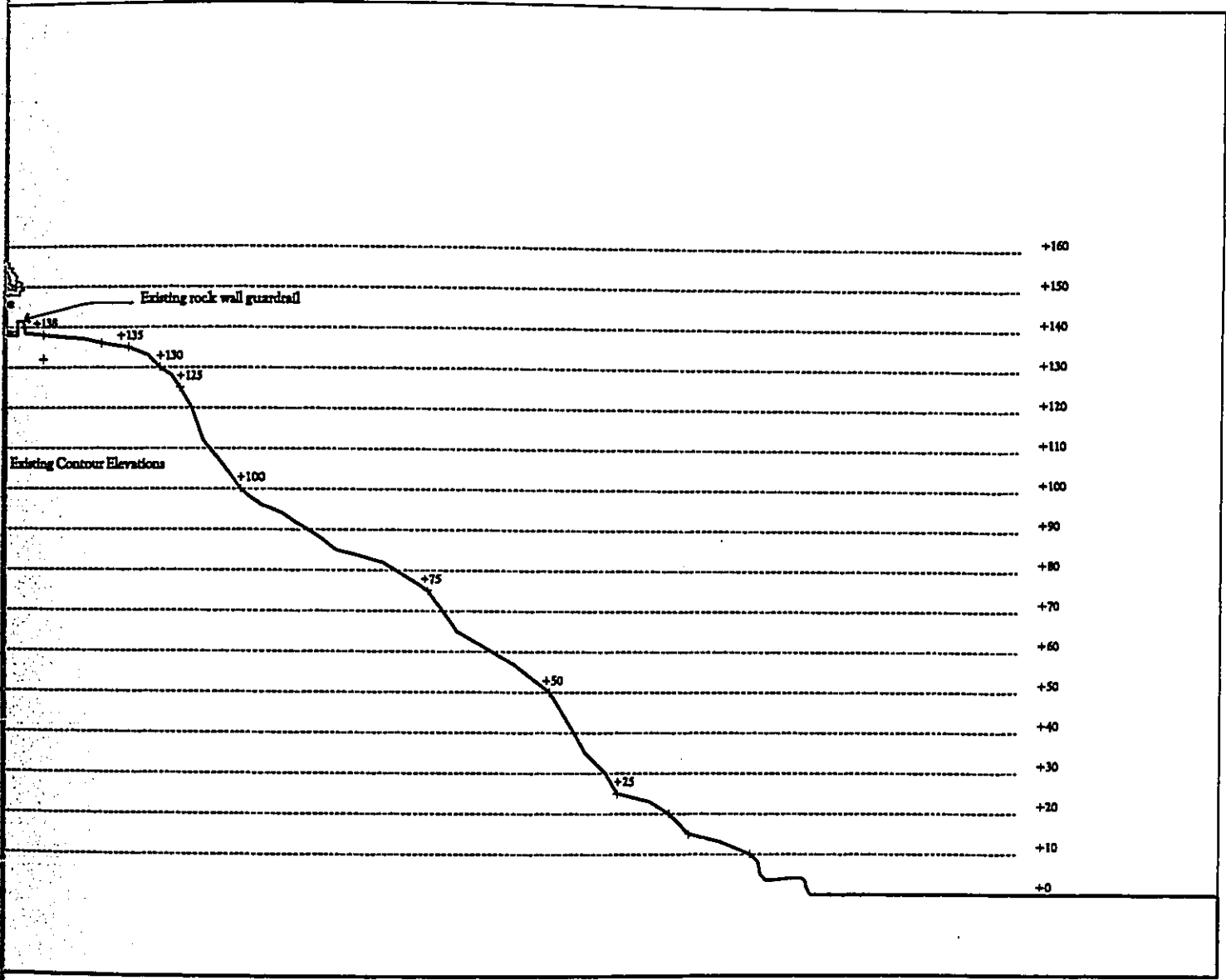
Hanauma Bay Nature Preserve

Koko Head Regional Park and Nature Preserve

Department of Parks and Recreation  
City and County of Honolulu

Marine Education Center  
Site Section

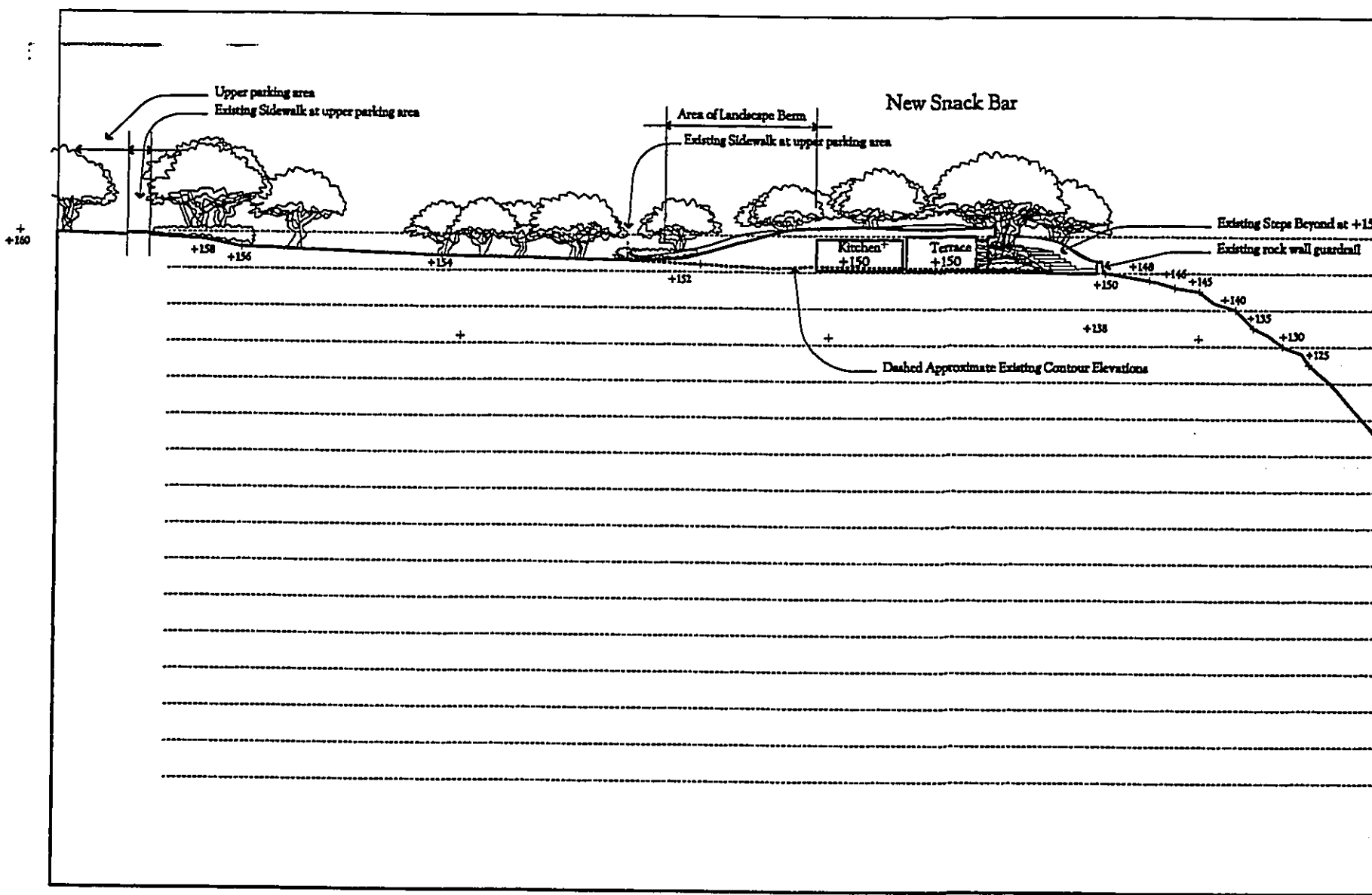




ation Center  
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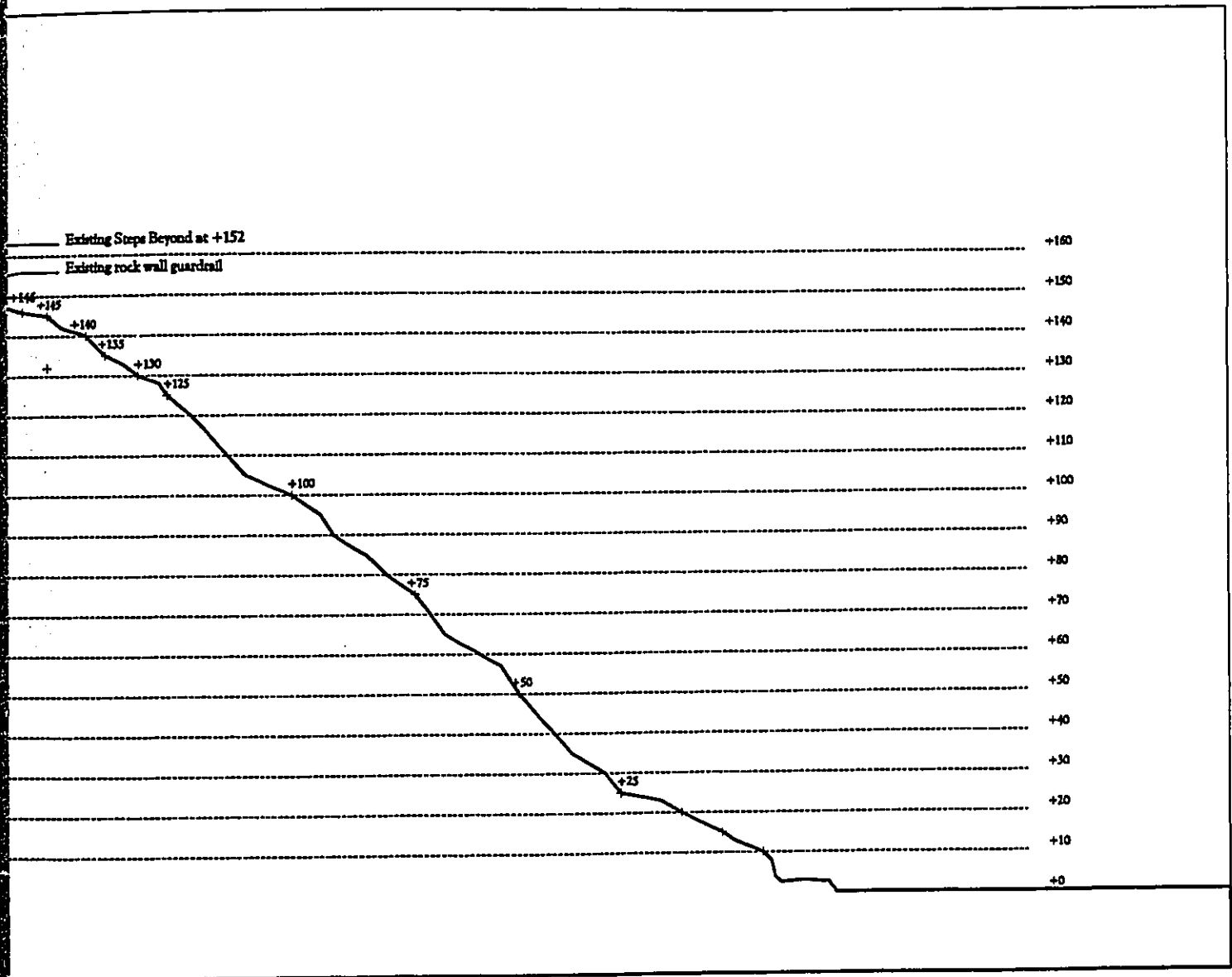
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**GROUP 70**  
INTERNATIONAL



Hanauma Bay Nature Preserve  
 Koko Head Regional Park and Nature Preserve  
 Department of Parks and Recreation  
 City and County of Honolulu

New Snack Bar  
 Site Section



ack Bar  
ection

0' 40' 80'

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## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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have indicated that this would require extensive excavation of the rim wall, and thus significantly alter its appearance. It would also be very costly. A primary purpose of reconstructing the turn-arounds at both ends of the beach tram route is to improve public safety while continuing to allow joint pedestrian and tram use of the beach access road. A further step that is being considered to improve safety is to replace the existing standard-truck-body-width vehicles with narrower vehicles designed specifically for use as a short-haul tram on routes that are not shared with other vehicular traffic.

### 3.4.1.3 Upgraded Landscaping

As indicated on Figure 3-3, new trees will be planted in random locations within and surrounding the new marine education center, snack bar and central plaza area, and in the area where the existing buildings will be demolished. Trees will also be provided throughout the parking lots, at the ends of and in-between the individual parking rows. Finally, a landscape strip will be established near the edge of the tour bus passenger lookout area, in order to provide some shade and a visual and noise buffer between the buses and the viewing area.

It is anticipated that the tree specimens to be used will include Tree Heliotrope, Milo, and Loulu Palm. St. Augustine Grass will be used on the earth mounds and roofs of the new buildings, and in other areas that require new grass cover. Native groundcovers such as 'Akia, 'Ilima papa, and Pohinahina will be planted to provide accent and color. Where appropriate, Naupaka will be planted to provide a low vegetative barrier against the wind.

### 3.4.1.4 Grading and Drainage

Existing landforms and drainage patterns will be substantially maintained. Roughly 1-3/4 to two acres will be disturbed by the proposed construction activities. The principal area is roughly 1-1/4 acres in size, where the new marine education center and snack bar will be built. The reconstruction of the upper park area beach tram turn-around and the demolition and re-landscaping of the existing visitor center will each involve up to a 1/4-acre area. The new parking fee booth and parking lot turn-around area is about 0.1 acre.

Most of this regrading will not involve any substantial alterations to existing grades, and will not change drainage patterns. However, it will be necessary to fill an existing drainage retention basin where it is proposed to locate the new marine education center. The cut-and-fill for the snack bar site will essentially balance out.

The existing grade in the marine education center area will be raised a maximum of six-to-seven feet above the existing retention basin bottom elevation, and will require up to 2,000 cubic yards of fill material. Drainage from this area will be routed into the much larger "main" retention basin to the west. This basin will also be enlarged to restore and maintain the existing overall storm water retention capacity in the upper park area. It is expected that most if not all of the excavated material from the expansion of the main retention basin will be used to fill the retention basin where the marine education center is to be built, and/or for the new buildings' earth mounds and roofs.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Approximately 1,500 cubic yards of fill material will be needed for the mauka-side earth mound walls and the roofs of the new marine education center and snack bar. As noted in Section 3.3.1, the possibility of obtaining additional required fill material from the former Hawaii Job Corps Center site will be investigated. However, no decisions on this have been made at this point.

There may be a need to remove some rock in connection with the construction of the new snack bar. It is not expected that rock drilling and blasting will be necessary to remove the volcanic tuff material that is likely to be encountered. However, requirements for any rock removal, and the need for drilling and blasting to remove it, will not be fully known until geotechnical investigations can be completed.

#### 3.4.1.5 Estimated Construction Timetable and Costs

Construction cannot begin until after all required permits are obtained and contracts are issued. This will not occur until March 2000 at the earliest. It is estimated that it will take approximately 12 months to complete all of the planned upper park area improvements.

There will be some disruption of existing park operations during the construction period, but this should be relatively minor. It is not expected that construction activities related to the upper park area improvements will themselves require the Nature Preserve to be closed to the public during the times when it is normally open, or that there will be any need to at times curtail the normal number of visitors allowed in the park. (See also Section 3.4.2.7.)

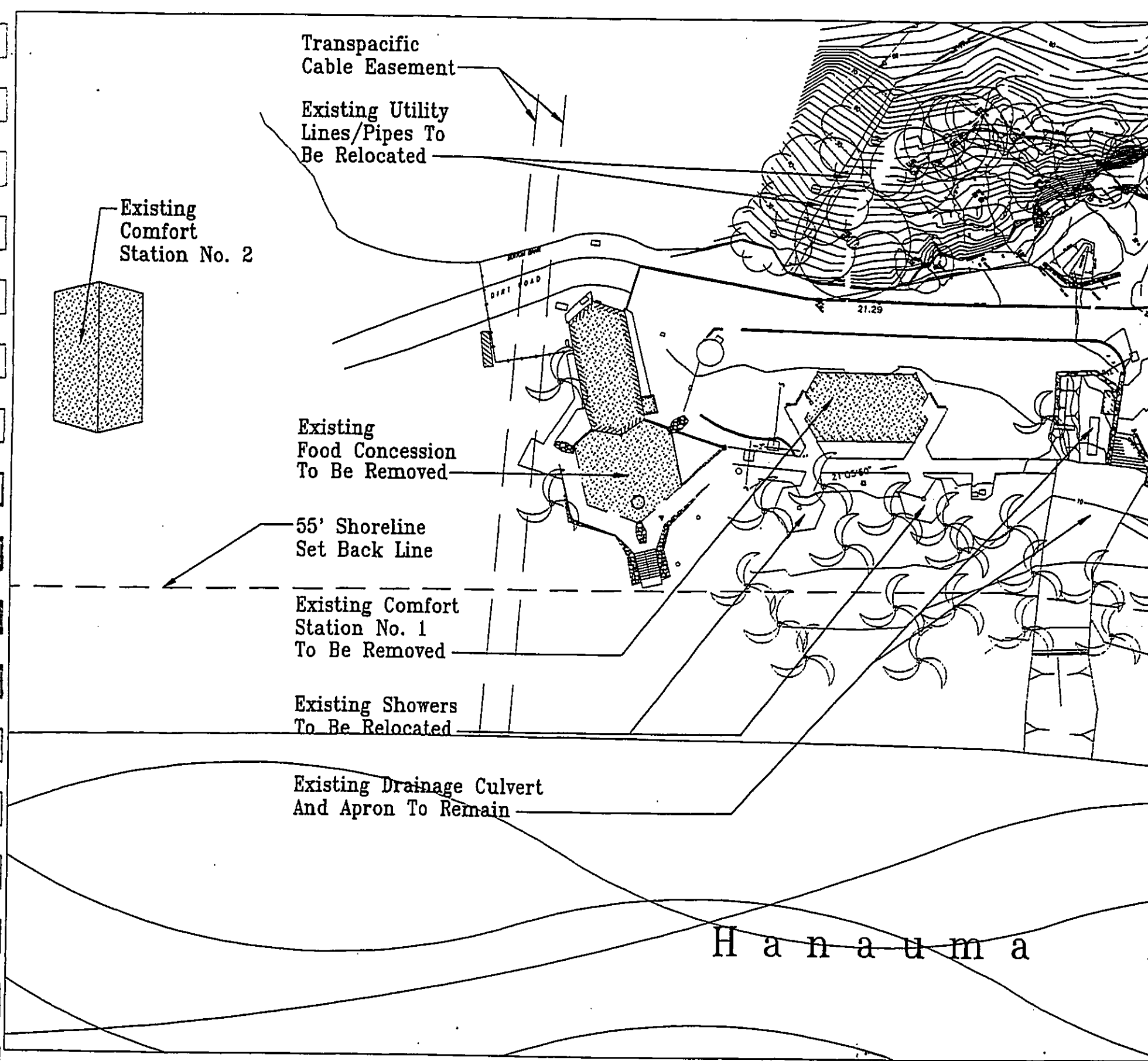
The total estimated cost to complete these improvements is \$5.5 million.

#### 3.4.2 Proposed Lower Bay Area Improvements

Existing site conditions in the upper park area are shown on Figure 3-8. Figure 3-9 provides a preliminary site plan for the proposed improvements.

There are seven basic elements to these proposed improvements:

- Repaving with concrete of the beach access road, and reconstruction of the turn-around at the lower bay area end of the beach tram route.
- Undergrounding existing water, wastewater and electrical utility lines to the lower bay area by placing them beneath the beach access road's new pavement.
- Construction of a new information kiosk adjoining the new beach tram turnaround.
- Demolition of the existing snack bar/snorkel rental building and the nearby comfort station and showers.
- Construction in a more mauka and less visible location of a new comfort station/snorkel rental building and showers to replace the demolished facilities.
- Construction of a new lifeguard safety equipment storage building.
- Upgraded landscaping in the areas impacted by the proposed construction activities.

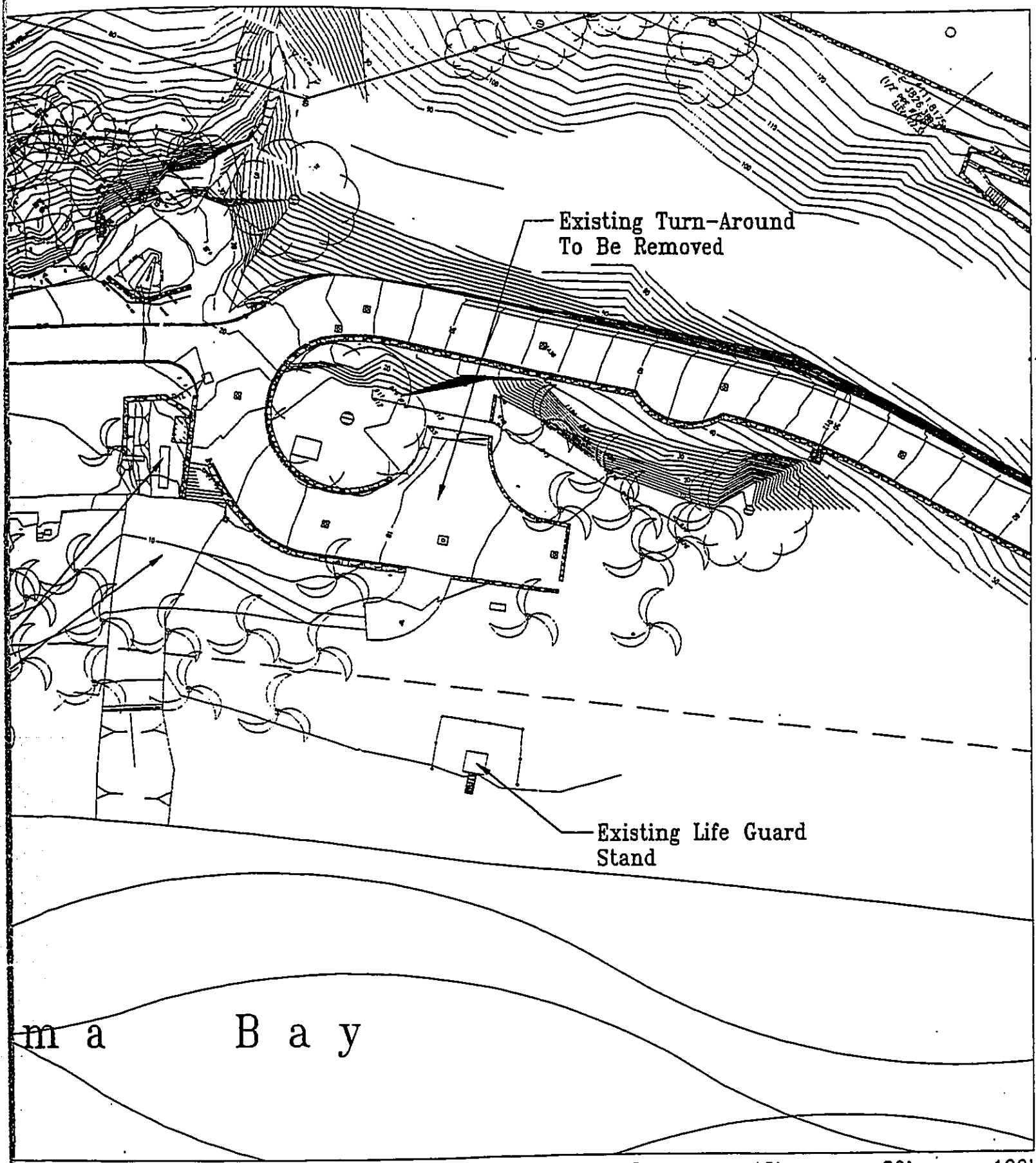


Hanauma Bay Nature Preserve

Koko Head Regional Park and Nature Preserve

Department of Parks and Recreation  
City and County of Honolulu

Lower Bay Area Existing Conditions

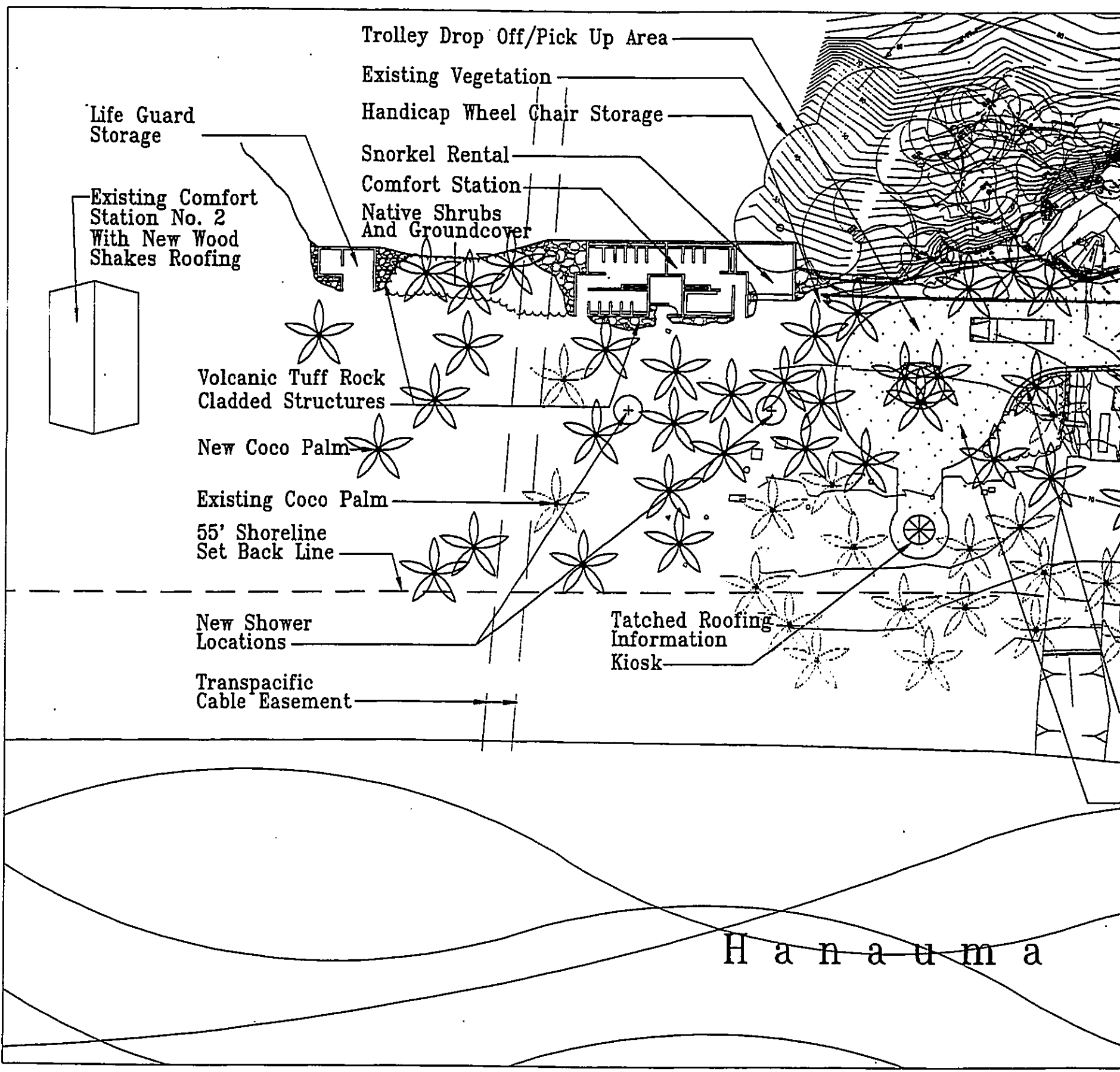


Existing Conditions



SCALE: 1" = 40'





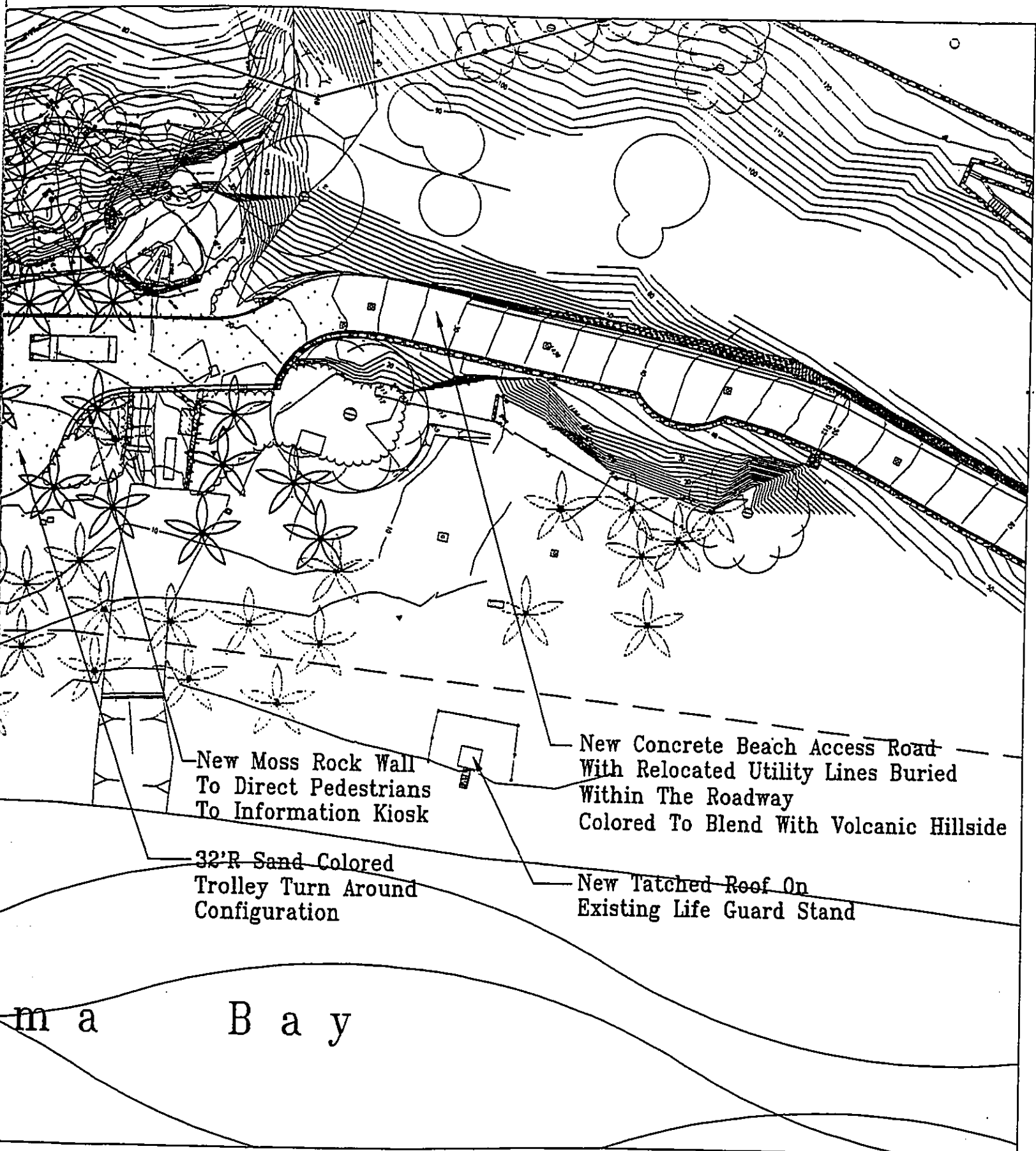
Hanauma Bay Nature Preserve

Koko Head Regional Park and Nature Preserve

Department of Parks and Recreation  
City and County of Honolulu

Lower Bay Area Proposed Site Plan





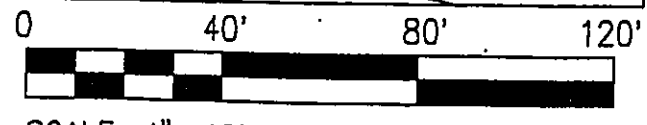
New Moss Rock Wall  
To Direct Pedestrians  
To Information Kiosk

New Concrete Beach Access Road  
With Relocated Utility Lines Buried  
Within The Roadway  
Colored To Blend With Volcanic Hillside

32'R Sand Colored  
Trolley Turn Around  
Configuration

New Thatched Roof On  
Existing Life Guard Stand

m a B a y



SCALE: 1" = 40'

Proposed Site Plan



## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Comfort Stations #2 and #3 will remain in their existing locations. The only planned change is to re-roof Comfort Station #2 with wood shakes. No improvements are planned to Comfort Station #3.

#### 3.4.2.1 Beach Access Road and Turn-around, and Undergrounding of Utilities

The existing beach access road is badly in need of resurfacing. Replacement of the existing asphalt surface with concrete is proposed for three reasons:

- It will significantly reduce the possibility of runoff from the road causing damage to the bay's marine ecosystem. Potentially harmful chemicals will leach from asphalt pavement into water that runs over it. This does not occur with concrete pavement.

This is a concern primarily with heavy runoff from intense storms, since at least some of it is likely to flow directly into the bay. However, water from the hosing down of the road, which needs to be done periodically to remove collected sand, could also leach into the bay after it percolates into the sandy beach area at the base of the road.

- Color and texturing can be incorporated into the pavement that will make its appearance much more reflective of the volcanic tuff walls lining the mauka side of the road.
- Concrete is a much more durable and longer-lasting surface, and the costs and disruption of the more frequent resurfacing that is required with asphalt can be avoided.

It will be cost effective to relocate the existing utility lines underground at the same time that the beach access road pavement is being replaced. This will remove the significant visual intrusion of the existing lines where they come down the cliff face from the upper park area, and will reduce maintenance costs and the potential for disruption of service.

The new turn-around will also be constructed with concrete and will be sand colored to blend better with the adjoining beach area. Its size will be kept to the minimum necessary - namely, a radius of 32 feet - to safely accommodate the beach tram and emergency vehicles.

#### 3.4.2.2 New Information Kiosk

This facility will replace the existing table-and-overhead-tarpaulin that is set up, staffed and taken down every day by Hanauma Bay Education Program staff and volunteers. Having trained and knowledgeable people with appropriate displays and pamphlets at such a central location to provide information and answer questions on the bay's marine environment has proven to be very beneficial in two ways:

- Damage done to the bay's ecosystem by swimmers and snorkelers can be reduced; and
- The enjoyment and meaning of the visitors' experience at Hanauma Bay is often enhanced.

A more permanent facility will make it much easier to open and operate this service, and will allow the use of better displays by provide more secure places to mount them and better protection from the elements. The total floor area will be only about 100 square feet. Including

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the surrounding sand-colored pavement and overhanging roof, the total site area will be approximately 400 square feet. The structure itself will be designed to look like a tropical beach hut.

#### 3.4.2.3 New Comfort Station/Snorkel Rental Building and Showers

The existing comfort station and food/snorkel concession building are probably the most prominent features in the view that greets people as they arrive at the beach alongside Hanauma Bay. The selling of food on the beach and the proximity of these two facilities to each other also causes many people to congregate in this area.

As described earlier, the relocation of the snack bar to the upper park area, as called for in the 1992 Hanauma Bay Nature Park Master Plan, is proposed as part of this project. Its relocation will have three benefits:

- It will help significantly to relieve the congestion in this area;
- It will create more open beach space.
- It will reduce litter and other problems associated with preparing and serving food so close to the bay's waters;
- It will remove what is now a major visual blight at the lower bay area entry, which should have much more of a natural beach area appearance; and
- It will enhance safety by reducing the number of delivery vehicles coming to the area.

The existing comfort station presents the same visual blight problems as the snack bar/snorkel rental building. It does not need to be right in the path of people arriving at the beach from the upper park area. The sizes of existing water closet stalls and change rooms, especially in the women's restroom, are also substandard. This plus a poor layout sometimes leads to long lines that would otherwise not occur as often.

Relocation of the comfort station to a site behind the existing, to-be-demolished concession building is proposed to resolve all of these problems and concerns. It will be placed as close to the rim face as possible so that it will be mostly out of the view of those arriving at the beach. It is also proposed that the replacement snorkel rental facility be attached to the comfort station. The total size of the building will be approximately 1,900 square feet, with the comfort station occupying 1,600 square feet and the snorkel rental space taking up about 300 square feet.

The design will blend in as much as possible with the appearance of the cliff face. Walls will simulate exposed volcanic tuff.

The option of excavating and placing this facility within the cliff, in order to remove it further from view, will also be considered. However, this would only be done if and after a thorough investigation indicates there would be no significant environmental problems or damage, and all structural and ventilation issues can be effectively addressed at a reasonable cost.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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The existing shower facilities will also be relocated next to the new comfort station.

#### 3.4.2.4 New Lifeguard Safety Equipment Storage Building

This facility is needed to provide a reasonably accessible and secure place for the bay's lifeguards to store their safety equipment and gear. This includes a jet ski and trailer, 12-foot rescue boards, first aid supplies and a storage locker. An enclosed, secure space of approximately 250 square feet will be needed.

This facility will be located near the new comfort station/snorkel rental building, and will likewise be sited as close to the cliff face as possible. Its design character will mirror that of the new comfort station. The same within-the-cliff siting option described above will also be investigated for this facility.

#### 3.4.2.5 Upgraded Landscaping

Proposals for improving the natural landscape character of the areas being disturbed include the planting of additional Coco Palms within and surrounding the new beach tram turn-around area, and surrounding the new information kiosk. The design intent is to create a strong sense of arrival within a coconut grove, and to lessen the impact of the new turn-around paving.

Coco Palms will also be used in the beach areas adjoining the new comfort station/snorkel rental facility and lifeguard equipment storage building. In addition, native Hawaiian and Polynesian introduced shrubs and groundcovers appropriate to the dry and windy coastal setting will be utilized around the proposed structures.

#### 3.4.2.6 Grading and Drainage

No major regrading or changes to existing drainage patterns will be required to complete these improvements. All new facilities and structures will be placed at or very close to existing grades. Any excess excavated material resulting from the construction of foundations will be re-used on site. The existing drainage culvert and apron that handles storm water runoff from the upper park area will remain as is.

Approximately two acres will be disturbed by the proposed construction activities. A major part of this is the beach access road, which occupies about one-half acre. The principal disturbed area in the lower bay area - where the new beach tram turn-around, information kiosk and related re-landscaping will be located - is roughly one acre in size. The area where the new comfort station/snorkel rental facility and lifeguard equipment storage building will be located, and the existing food concession will be demolished, is about a half acre in size.

The need for rock removal is not anticipated, unless the option of locating the new comfort station, snorkel rental and lifeguard equipment storage spaces within the cliff is pursued.

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Requirements for any rock removal, and the need for drilling and blasting to remove it, will not be fully known until geotechnical investigations can be completed.

### 3.4.2.7 Estimated Construction Timetable and Costs

Construction on any of these improvements cannot begin until after all required permits are obtained and contracts are issued. This will not occur until March 2000 at the earliest. Total construction time is estimated to take approximately 24 months or two years. This is because, while some projects could start as soon as permits can be obtained, others will need to wait until replacement facilities are completed.

Demolition of the existing food concession and comfort station are examples of improvements that will need to be phased. Construction of the new lower bay area turn-around will have to wait until the old comfort station can be demolished.

As with the upper park area, there will be some disruption of existing park operations during the construction period. It is expected that it will be necessary to close the Nature Preserve to the public for up to one week at a time on two separate occasions in order to install the underground utility lines and replace the beach access road pavement. (The two weeks will be scheduled with an intervening period when the Nature Preserve will be open.) Quick-setting concrete will be used to minimize this time. Otherwise, it is not expected that it will be necessary to close the Nature Preserve, or to significantly limit the number of visitors, during the construction period.

The total estimated cost to complete these improvements is \$3.0 million.

### 3.4.3 Landscape Irrigation Concept

The landscape irrigation concept is to promote the healthy growth of the plant material while conserving water. All of the plant materials specified require low watering levels. The irrigation system will be designed according to the limitations on the availability of water for irrigation. A combination of spray and drip irrigation may be used.

The automatic irrigation system will be separated according to grass and groundcover areas. This will ensure that plants requiring larger amounts of water can be sufficiently irrigated without over-watering those that require less water.

The sprinkler heads will be selected so their precipitation rates do not exceed the infiltration rate of the soil; this will conserve water by eliminating run-off. It will also prevent the leaching of nutrients, pesticides and fertilizers into the soil past the root zone. The layout of the sprinkler heads will be designed to provide a uniform distribution pattern. Attention will be given to avoid over-spraying walkways and roads. The irrigation run time will be scheduled to occur during the evening or early morning hours when it is less windy.

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### 3.5 COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT

All facilities will be designed to meet the requirements of the Americans With Disabilities Act Accessibility Guidelines and the requirements of Section 103-50 Hawaii Revised Statutes. Buildings, facilities and sites will also incorporate best design practices as noted in the most current recommendations of the U.S. Access Board's Regulatory Negotiation Committee on Access to Outdoor Developed Areas.

### 3.6 SUMMARY OF ESTIMATED PROJECT COSTS

The following table provides a summary of the total estimated constructions costs for the demolition of existing structures at the former Hawaii Job Corps Center site, and for completion of the planned improvements at Hanauma Bay Nature Preserve.

<b>COMPONENT</b>	<b>Estimated Cost</b>
1. Former Hawaii Job Corps Center Site Demolition	\$1,400,000
2. Hanauma Bay Upper Park Area Improvements	\$5,500,000
3. Hanauma Bay Lower Bay Area Improvements	\$3,000,000
<b>TOTAL ESTIMATED COSTS</b>	<b>\$9,900,000</b>

**Notes:**

1. Figures are approximate and are based on conceptual plans.
2. Estimates for Components #1 & #2 by Group 70 International, Rider Hunt, and SSFM Engineers.
3. Estimate for Component #3 by INK Architects, J. Uno & Associates, and Engineering Concepts.

**Section 4.0**

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**Environmental Setting**

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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### 4.0 ENVIRONMENTAL SETTING

This section describes the existing environmental setting and conditions within which the proposed actions would occur. Potential impacts of the proposed actions on this setting and recommended mitigative measures where impacts are expected to be adverse to the existing environment are discussed in Section 7.

#### 4.1 REGIONAL OVERVIEW

Hanauma Bay Nature Preserve is located within Koko Head Regional Park and Nature Preserve, which is located in East Honolulu, about 12.5 miles from downtown Honolulu (Figure 4-1). It is owned and operated by the City and County of Honolulu. The Hawaii Kai community virtually surrounds the Regional Park, with the bordering neighborhoods ranging from Portlock on the west to Queens Gate on the east. Other significant park resources in the area are the City and County's Sandy Beach Park and Wawamalu Beach, which border the Regional Park's east shoreline, and the new 354-acre Ka Iwi State Park just beyond Wawamalu Beach, on the southeastern tip of Oahu.

#### 4.2 HISTORICAL PERSPECTIVE

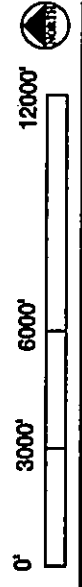
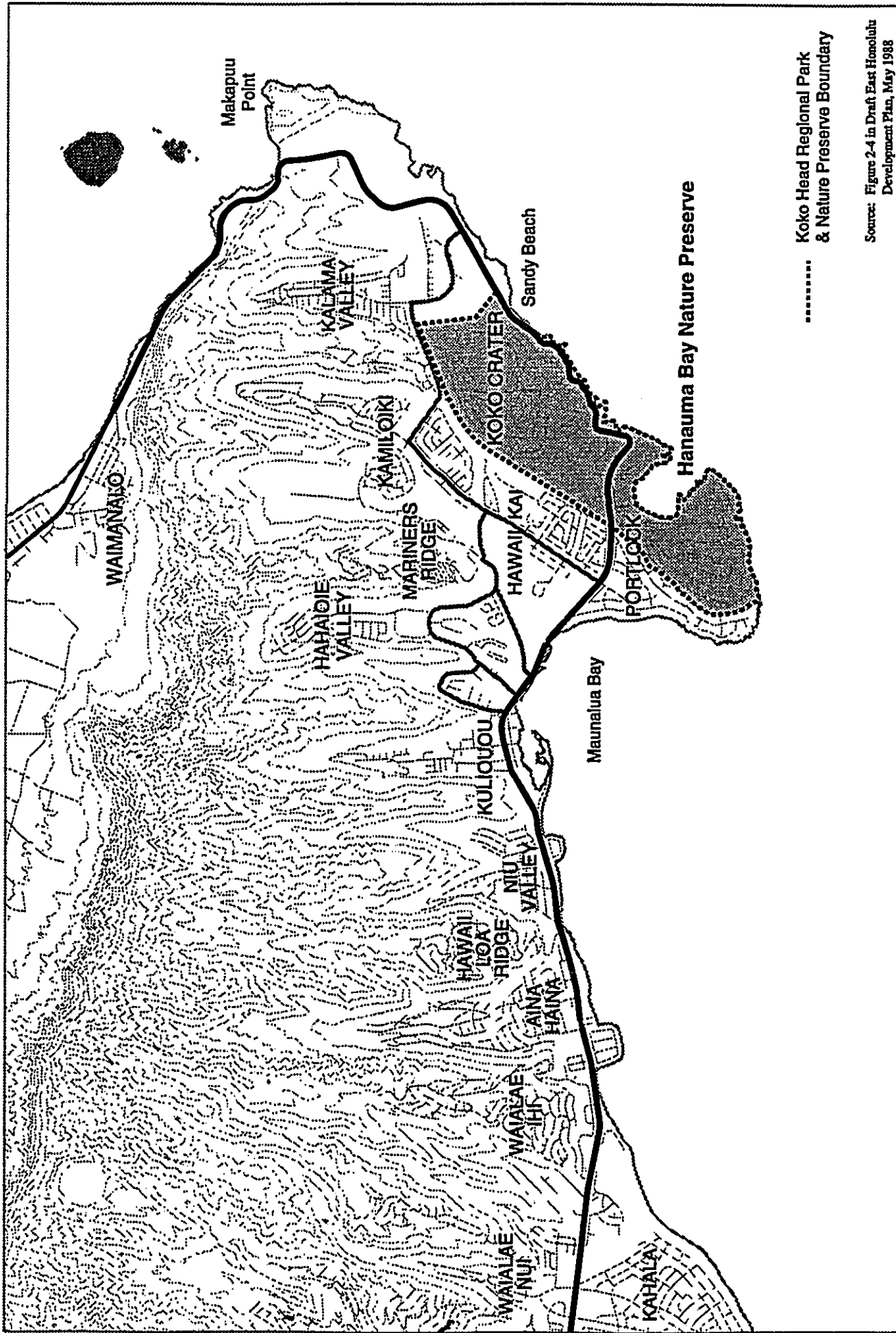
##### 4.2.1 Early History

According to ancient Hawaiian lore, Koko Crater figured in the cycle of myths involving Pele, the volcano goddess. One concerns the slope and contour of the Crater. Pele was living at Kalapana and was attacked by Kamapuaa (the half-man, half-pig demi-god). Kapo, Pele's sister, sent her Kohe Lele to distract Kamapuaa. He left in pursuit of Kapo's "charm" which landed on Koko Crater and made an impression in the hill known thereafter as Kohelepelepe.

After Kamehameha conquered Oahu in 1795, the lands became property of the king. In the Mahele of 1848, the lands were given to Victoria Kamamalu, a descendent of Kamehameha and future queen of the Hawaiian Islands. However, through her untimely death and subsequent passing of the lands through several heirs and claimants, the lands eventually came into the hands of Bernice Pauahi Bishop in 1883. After her death the following year, the lands were placed in her estate.

Records of early land use activities primarily refer to Kuapa Pond, to the west of the Park site in the center of what is now the Hawaii Kai community, and to the Sandy Beach and Wawamalu Beach area. Kuapa Fishpond was the largest on Oahu, being over 500 acres in size. The area inland of Sandys and Wawamalu Beach was a fairly well-populated Hawaiian community of fishermen and farmers before 1800. Called Wawamalu, or "shady valley", because of the heavily wooded forests of the nearby valleys, the area was renowned for the cultivation of yams and sweet potatoes. During the early 1800's, produce from Wawamalu was gathered for sale to whaling ships that anchored in the lee of Koko Head, outside of Hahaione Valley.





Regional Location Map

Koko Head Regional Park and Nature Preserve

Figure 4-1

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Hanauma, which means curved-bar or hand-wrestling-bay, was used as a sheltered haven for canoes since the earliest of settlements in the area. In ancient as well as modern times, Hanauma has also been praised as one of the famous natural features of Oahu.

### 4.2.2 Regional Park's Land Use History Since Acquisition for Park Purposes

General locations of existing uses in Koko Head Regional Park and Nature Preserve, and of significant prior uses in areas where past improvements still remain, are shown on Figure 4-11 (page 4-30) in Section 4.6.

Koko Head Regional Park was established in 1928 with the acquisition of the land by the City and County from the Estate of Bernice Pauahi Bishop for the price of \$1.00. The transfer of the land included a deed restriction that limited its use to public parks or rights-of-way. While for the most part the deed restriction has been observed, some non-recreational uses have been permitted, as described below, with the approval of the Bishop Estate Trustees.

The actual development of park facilities was not begun until 1945. However, a new highway along the eastern coast of Oahu (a portion of Kalaniana'ole Highway) was completed in December 1932. This opened the area to informal recreational use, especially fishing along the coastline. Sandy Beach was also a popular swimming and body surfing beach with servicemen during World War II, until it was declared off-limits to military personnel in July 1944 because of the large number of men who had drowned there. (This beach did not become a popular local body surfing and gathering place until the late 1950's and early 1960's.)

The turmoil of war in the Pacific had an immediate impact upon the Koko Head park area. Shortly after the attack on Pearl Harbor, coastal-watch facilities sprang up around the island of Oahu. A U.S. Coast Guard Fire Control and Search Light station had been previously established on Koko Head in the mid-1930's.

In 1943, a 23-acre quonset hut camp was constructed at the foot of Koko Crater by the U.S. Air Force with a railroad tramway extending up the steep slope to a radar station at the summit. Up to sixty men were stationed at the site, working in three shifts, and utilizing the tramway to move up and down the crater side. The radar control center was dug deep within the hillside during the early 1940's, and access was provided via a large tunnel.

After the war, radar operations were taken over by the Hawaii Air National Guard. Members of the 169<sup>th</sup> Aircraft Control & Warning Squadron (ACW) occupied the Koko Crater facility from 1956 until 1966. In addition to Hawaii Air National Guardsmen, civilian air traffic controllers employed by the Federal Aviation Administration also occupied the control center during the early 1960's.

In 1966, the Hawaii Job Corps Center was opened on a 19-acre portion of the former Hawaii Air National Guard facility. It remained in this location until 1995, when the Jobs Corps Program was relocated to a new facility in Waimanalo. Current activities occupying portions of this site include a field office for the Parks Department's Water Safety Division, maintenance facilities for Park District No. 1, a little league ballfield, and a Police Substation.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Major park improvements at Hanauma Bay were first made in 1950, when the City and County constructed a beach access road, lookout area and cliff trail to cater to a growing number of park visitors. In 1967, the State Department of Land and Natural Resources designated 101 acres of the bay's underwater basin as a Marine Life Conservation District and established the Hanauma Bay Underwater State Park. Special controls have been maintained to protect this resource, including restrictions on any form of fishing.

In the early 1980's over use of the park and bay became an increasing concern. This led to the establishment of new regulations controlling the use of the park in order to protect the bay. Other use limits that have been established include closing the park once a week for maintenance, and establishing and strictly enforcing controls on automobile parking, commercial vehicle and commercial tour access.

Koko Head District Park was established in 1975 to help meet the recreational needs of the rapidly developing Hawaii Kai community. It occupies about 40 acres and includes outdoor playing fields and courts, and recreation buildings including a gymnasium.

The City and County first established a rifle range in Kahauloa Crater in 1937, and it has remained in this general use since that time. The complex currently serves as an outdoor target range for recreational use by the general public and as a training facility for the Honolulu Police Department and other public safety and military agencies and organizations.

In 1957, the Parks Department dedicated the approximately 200 acres comprising the interior of Koko Crater to be developed as a City botanical garden. Initial plantings were begun soon after and the garden now contains over 1,000 species collected from throughout the world. The actual plant collection occupies approximately 65 acres within Koko Crater and part of the 45 acres of the outer crater.

A 10-acre portion of the Koko Crater Botanical Garden site located at the mouth of the crater was leased by the Parks Department in 1962 to a private contractor for the establishment of a horse stable and riding facility. The original lease was for 10 years, but while the particular nature of the equestrian activities has varied over time, a facility has continued to operate there up to the present.

#### **4.2.3 Cultural, Historic and Archaeological Resources**

An historical research study and two surveys of archaeological resources have been conducted in connection with past and current master planning programs for Koko Head Regional Park and Nature Preserve:

- Archival and historical documentary research completed in October 1998 by Kumu Pono Associates (KPA) of the ahupuaa of Maunalua, within which the Koko Head Regional Park and Nature Preserve is located.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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- A November 1988 archaeological field inspection survey by Paul H. Rosendahl, Ph.D., Inc. (PHRI) of most of the Park area; and
- November 1998 archaeological inventory survey by Cultural Surveys Hawaii (CSH) of eight areas that may be impacted by future improvements in Koko Head Regional Park and Nature Preserve being considered at the time the survey was requested.

The purpose and findings of each of these studies are summarized below.

#### 4.2.3.1 KPA Archival and Documentary Research

A copy of the full report documenting the KPA research is provided in Appendix B of this EIS. Included therein is an in-depth description of the cultural and historical context provided for the Park by the ahupuaa of Maunalua. This is very briefly summarized in Section 4.2.1 above.

Detailed accounts are also provided of several narratives written by early Hawaiian historians in the 19<sup>th</sup> and early 20<sup>th</sup> centuries of the sites and events that occurred within Maunalua, and of the history of land tenure and management in the area. Finally, a detailed summary of the findings made by J. Gilbert McAllister in his 1931 survey of Maunalua archaeological sites is provided. The findings with respect to the McAllister-identified sites within the Koko Head Regional Park and Nature Preserve are summarized in the description of the PHRI Survey Report that is provided in the next sub-section.

#### 4.2.3.2 PHRI Archaeological Field Inspection Survey

This survey was completed in connection with the preparation of the Koko Head Park Master Plan, which was published in January 1992. Appendix C provides a copy of the full report.

The basic purpose of this survey was to identify sites or features of possible archaeological significance that are located in the Regional Park area. (Excluded from the PHRI survey area were Koko Head District Park, Hanauma Bay Nature Preserve, Koko Crater Botanical Garden, Koko Head Shooting Complex in Kahauloa Crater, and inaccessible places such as the steep slopes of Koko Crater.)

Also included as part of this PHRI study was an extensive document review of previous surveys and archaeological findings. Most notable of these was the McAllister 1931 survey, which had identified five sites within the PHRI survey area. These were:

Site 50-80-15-25—Fishing shrine (ko'a). Apparently situated along the Sandy Beach area shoreline, this site was believed by Sterling and Summers (1978:263) to have been destroyed by the 1946 tidal wave.

Site 50-80-15-36—House site. This site was situated on a low ridge of Koko Crater, on the Makapuu side, and apparently in the general vicinity to the southeast of the present Koko Crater stables and to the northwest of the present sewage disposal facility.

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Site 50-80-15-37—Terraces. This site was situated on the northwest slope of Koko Crater, facing Kamiloiki Valley, and apparently in the general vicinity to the northwest of the present Koko Head Stables.

Site 50-80-15-44—Koko Head Petroglyphs. Situated in a small cave along the shoreline roughly midway between Halona Point and Hanauma Bay (Figures 4-2 and 4-3), this site consisted of numerous figures pecked into a thin lava layer atop a natural sandstone or volcanic tuff shelf within a small shoreline cave. Notes in the site file at DLNR-HSS indicate that the site has been extensively damaged in recent years both by natural causes and by collectors, who had cut away sections of the thin lava in which figures had been pecked, and removed panels with figures.

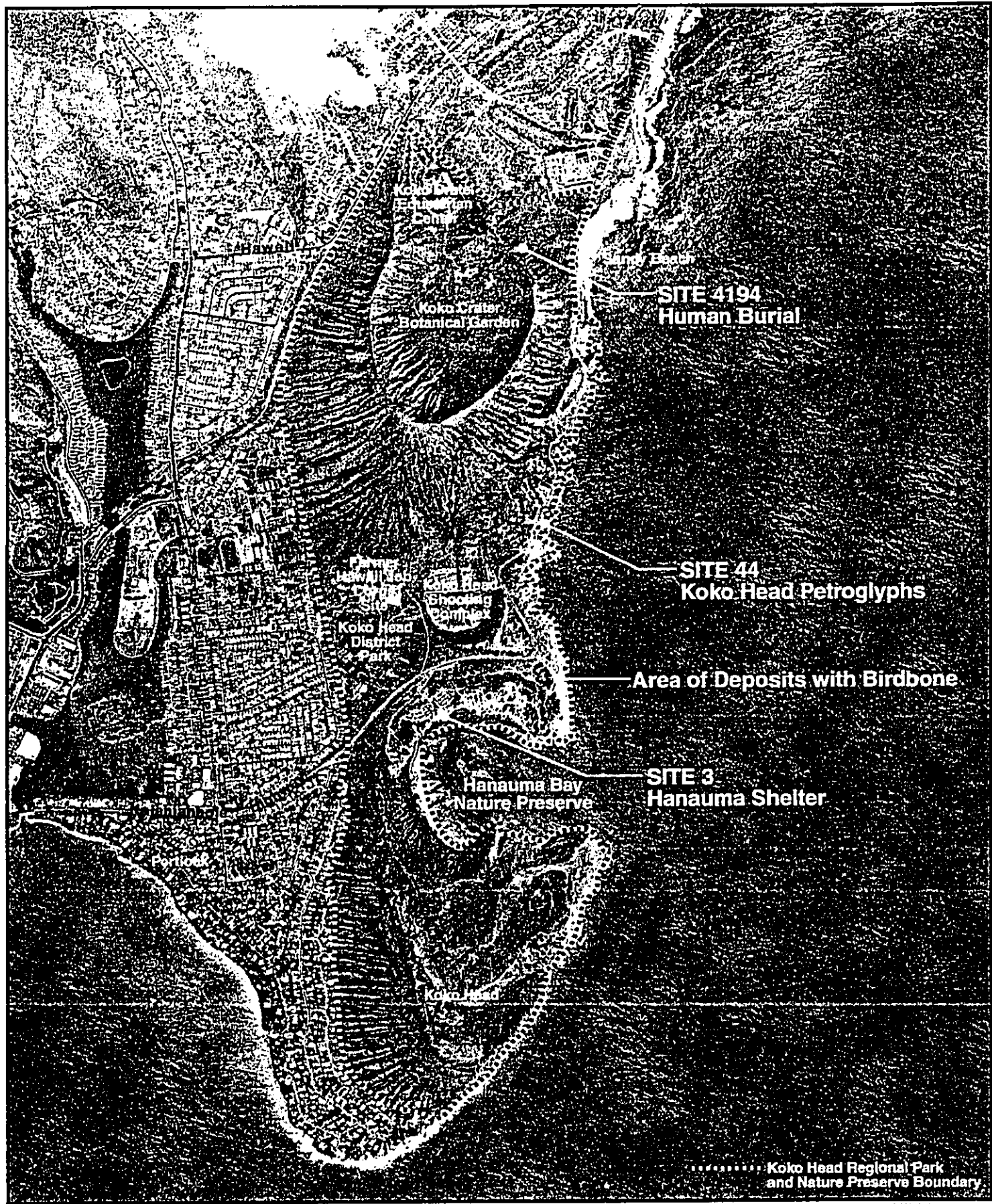
Site 50-80-15-45—Platform. This site was reported to McAllister as being situated on the side of Koko Crater facing into Kahauloa Crater, but McAllister never located the site.

A sixth major site in the Park area - Hanauma Shelter - was also found by McAllister in 1931. It still exists but was not inspected as part of the PHRI survey because it was located outside of their survey area. The PHRI survey report describes it as follows:

Site 3—Hanauma Shelter. Situated on the northeast side of the bay (Figure 4-2), this was a natural overhang shelter that had served as a prehistoric temporary habitation site. The site was identified and excavated in 1952 by a field team from Bishop Museum and the University of Hawaii. The excavations and recovered artifacts are described in Emory and Sinoto (1961), and the fishhooks were subsequently incorporated into a more detailed analysis by Emory, Bonk, and Sinoto (1968). Site file notes at DLNR-HSS indicate that very little of the site cultural deposit remained in 1970.

Of the five previously identified sites which apparently were situated within the PHRI survey area, only one site - Koko Head Petroglyphs (McAllister's Site 44) - was found again during their survey. Three other McAllister sites (Sites 25, 36 and 37) were searched for, but were not found. As mentioned previously, Site 25—a fishing shrine situated along the shoreline in the Sandy Beach area, was believed to have been destroyed by the 1946 tidal wave. Two other sites said to be situated on the lower north slopes of Koko Crater, Site 36 - a house site and Site 37, terraces - might easily have been destroyed by recent land modification activities noted in their apparent general vicinities. Alternatively, the sites might have gone unidentified in the dense vegetation covers also present in their apparent general vicinities. A fourth site, Site 45 - a platform said to be situated on the side of Koko Crater and facing into Kahauloa Crater, was not even searched for because of the current active use of the crater area as a public firearms range.

The present condition of the Koko Head Petroglyphs site, as indicated in Figure 4-3, does not appear to have changed substantially from the condition noted in 1976 and documented in the DLNR site file. However, it is obvious that the site has been extensively altered, by both natural causes (wave erosion) and collectors, who cut out several of the figures, in the



Significant Archaeological Sites

Koko Head Regional Park and Nature Preserve

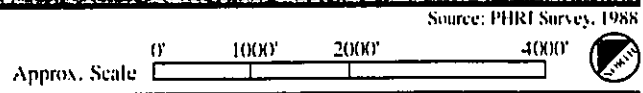
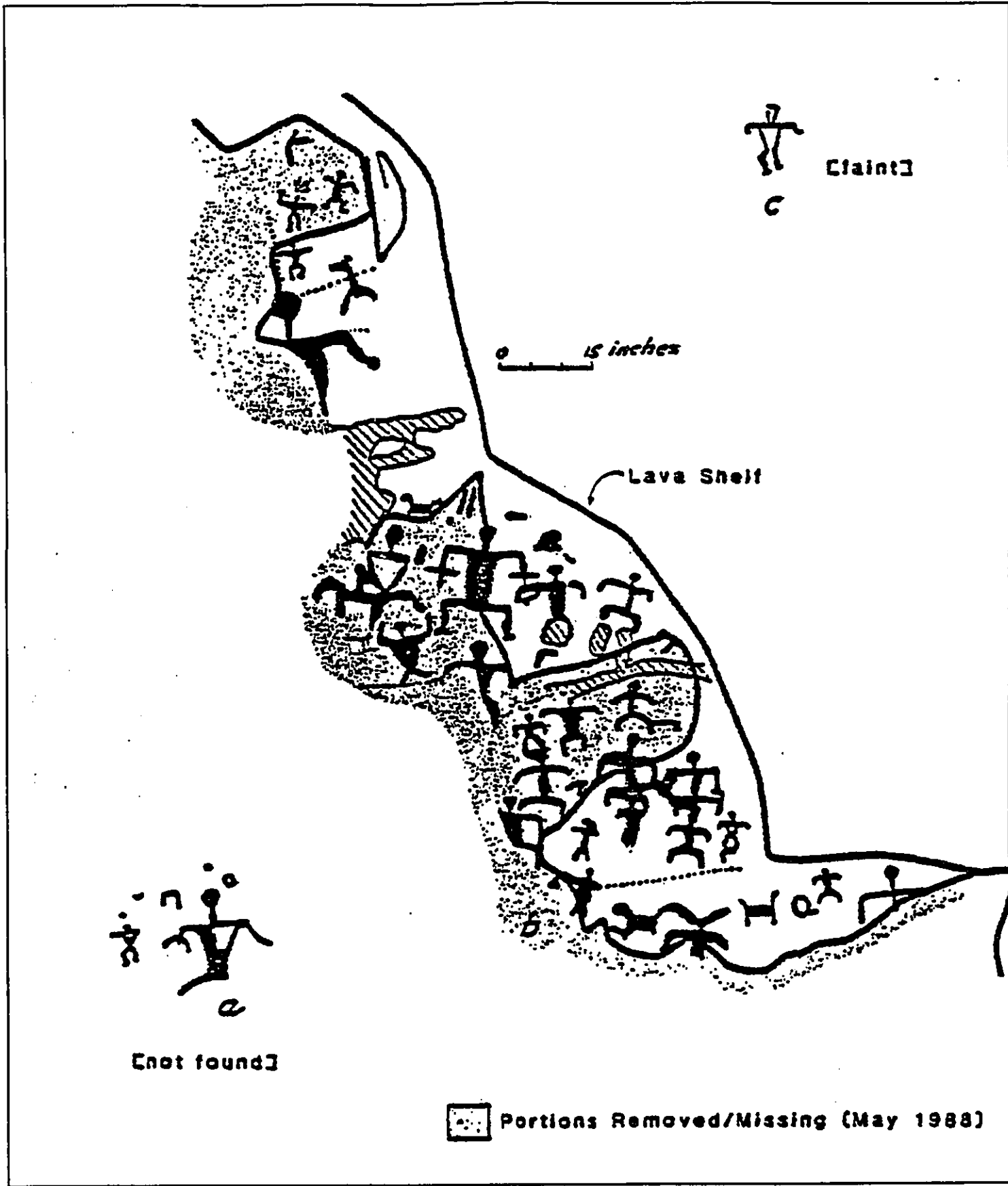


Figure 4-2



Note: (Based on Fig. 24 in McAllister (1933), and shaded to indicate portions noted as removed or missing as of May 1998)

Site 1128 - Koko Head Petroglyphs

Koko Head Regional Park and Nature Preserve

Figure 4-3



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intervening years since McAllister recorded the site in 1931. Even so, the site was assessed as being valuable - i.e., significant as an example of petroglyph art, which is rare on the Island of Oahu - by DLNR when the site was inventoried in 1970.

No new archaeological sites of any kind were identified during the 1988 PHRI field inspection survey. An additional site — Site 50-80-15-4194 (Figure 4-2) — was identified in 1989 by archaeologists with the State Historic Preservation Division, Department of Land and Natural Resources (Appendix D). It is a human burial site of undetermined age and is located on the southeast slope of Koko Crater.

~~brief paragraph related to Sandy Beach deleted~~

One interesting non-cultural site, a series of eroding soil hummocks containing abundant birdbone, was found on a high ridge overlooking Palea Point, situated on the northeast side of Hanauma Bay (Figure 4-2). A sample of diagnostic bones was collected and submitted to Zoological Consultant Dr. Alan C. Ziegler for identification (Ziegler 1988). According to Ziegler, the bones represented the medium-sized Wedge-tailed Shearwater and the smaller Bonin Petrel. Based on known archaeological contexts, both species apparently were relatively rare on the main Hawaiian Islands during early prehistoric period, becoming common during the late prehistoric period.

While the Wedge-tailed Shearwater has remained common on and around Oahu to the present, the Bonin Petrel has now become extinct on the Main Islands and apparently disappeared from Oahu before European contact. While the materials examined by Ziegler indicated "... an interesting deposit although not a substantially significant one in a scientific sense." It does appear that the deposit should be explored in greater detail for the possible presence of additional species and other information that might help explain the nature and origin of the deposit.

Dr. Ziegler, in his comments on the EIS Preparation Notice (11 October 1998), indicated that it would also be reasonable to expect to find bones of prehistorically extinct Hawaiian birds in the soil sediments partially filling both the Koko and Koko Head craters. He bases this expectation on the finding of a wealth of fossil bird remains in Ulupau Head on the Windward Mokapu Peninsula, which is of similar origin to Koko and Koko Head craters.

### 4.2.3.3 Cultural Surveys Hawaii Archaeological Inventory Survey

This survey was completed by Cultural Surveys Hawaii (CSH) in November 1998. As noted, it involved a surface survey of eight areas that could potentially be impacted by future improvements in Koko Head Regional Park and Nature Preserve being considered at the time the survey was requested. Its purpose was to locate and document any archaeological or historical sites in these areas. The surveys of each of the eight areas consisted of complete ground coverage by pedestrian sweeps. Thorough background research of all prior archaeological studies and other archival, museum and library reference materials was also conducted. The eight areas that were the focus of this survey are shown on Figure 4-4. Findings and recommendations are summarized below for ~~the two areas that could potentially be impacted by the planned improvements to Hanauma Bay Nature Preserve~~. The full report is provided in Appendix E.



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~~[findings and recommendations for CSH study areas 1 through 4 deleted]~~

*Site Area 5: Hanauma Bay Visitor Center and Parking Lot Area* – This area includes the modern visitor facility, parking lots and open landscaped areas above Hanauma Bay. These constructions and decades of visitor use have altered the area significantly. No archaeological or historical sites were observed, and no further work is recommended.

*Site Area 6: Portion of Hanauma Bay Beach Area Surrounding the Concession and Comfort Station at the Base of the Beach Access Road* — No structures in this study area are older than fifty years. Decades of public use of the bay have removed all traces of any surface sites than may have existed in the area. No further work is recommended.

### 4.3 CLIMATE

The climate at Hanauma Bay Nature Preserve is generally dry and warm. The southern exposure of the park ensures hot and clear days while its aridness and low relative humidity creates dry, cool and clear nights. Northeast tradewinds help to moderate temperature extremes for a given 24 hour period.

Rainfall averages approximately 25 to 36 inches per year, usually peaking in December and March of a given year. Koko Head's average annual temperature ranges from a low of approximately 70 degrees Fahrenheit (F), to a high of about 83 degrees F. The average mean temperature is 76.6 degrees F.

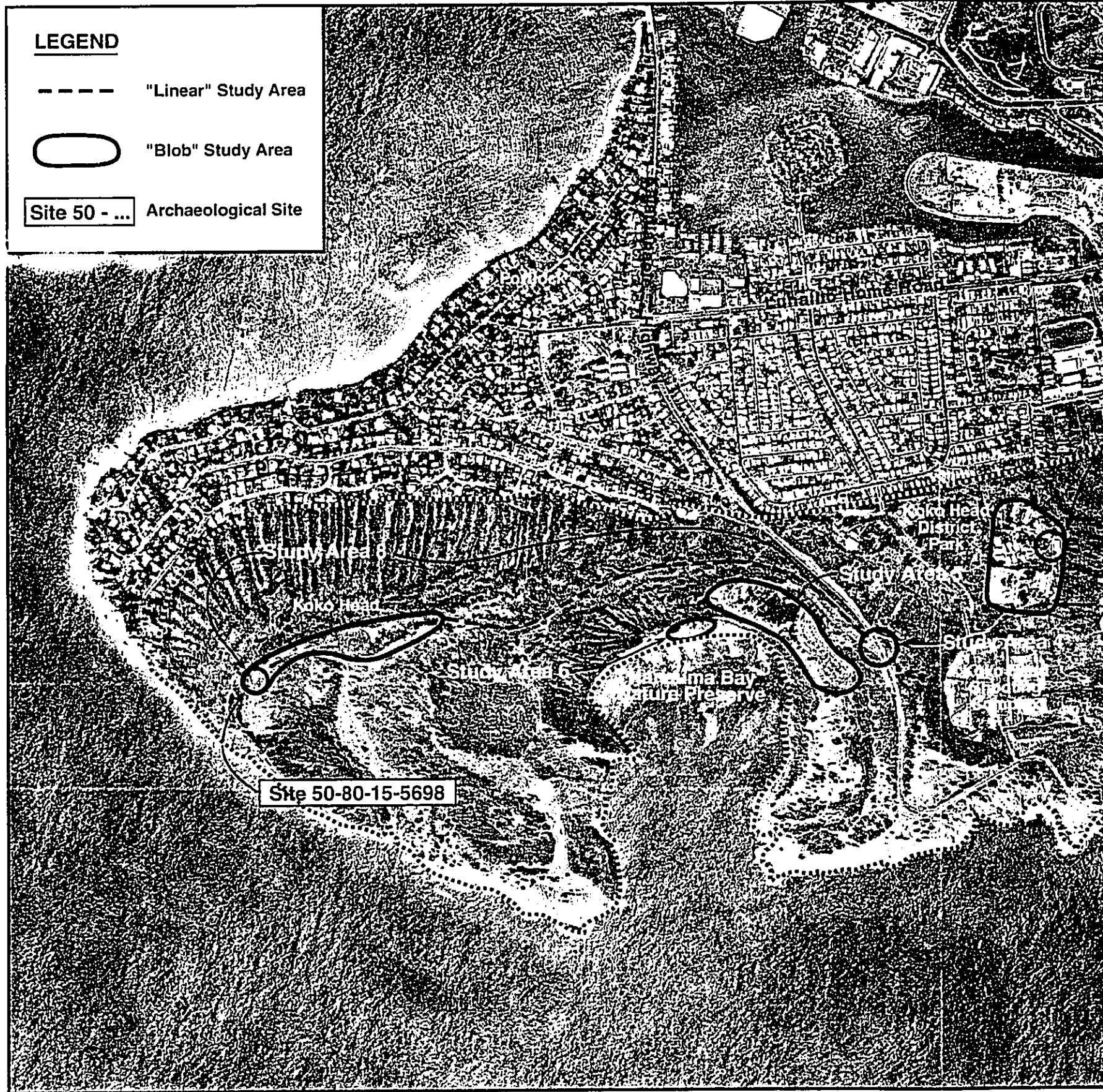
The summer, extending from about April to November, includes periods of strong northeast trade winds from approximately June to September and the transitional periods just preceding and following. During this time, winds range from northerly through easterly, and occasionally southerly, but mostly from the northeast quadrant. Wind speeds may range up to 35 or 45 m.p.h.; about 50 percent of the time the speeds exceed 12-15 m.p.h.

Winter is defined by a weakening of these northeast tradewinds and the appearance of westerly winds and frontal influences from the north temperate zone. These westerly winds are known locally as Kona storms, and are most typically represented by strong winds and high waves from the southwestern quadrant. The year to year variation in these "Kona" conditions is very large, some winters no Kona storms appear, in other years there may be four to five. Generally, during the winter months (December to March) winds from the southwestern quadrant are present 10 to 15 percent of the time.

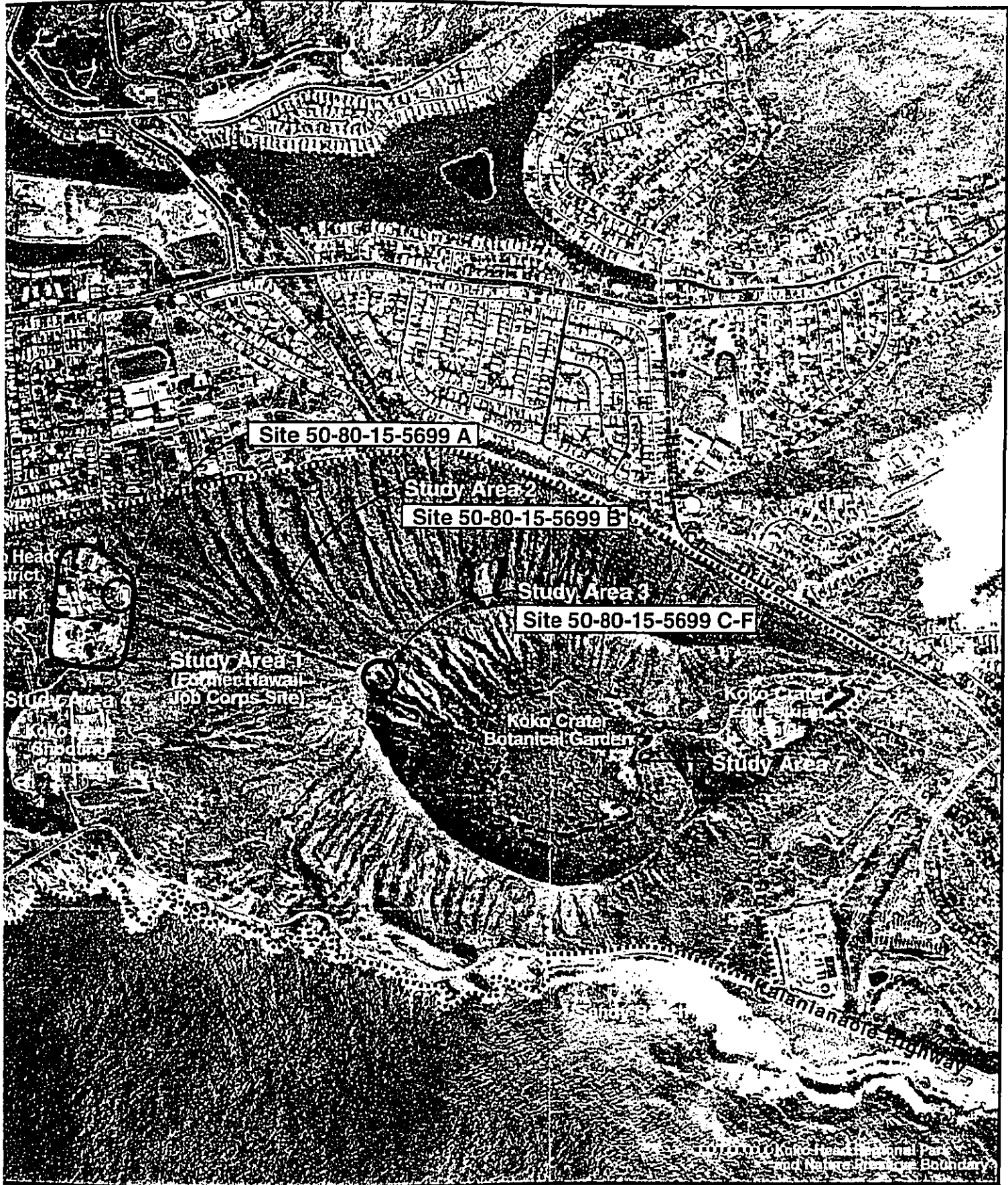
### 4.4 TERRESTRIAL CONDITIONS

#### 4.4.1 Topography

The terrain at the Park site was built by volcanic eruptions and erosional forces. The resulting topography is characterized mainly by cones, craters and stretches of white sandy beaches. Stream erosion has etched small V-shaped gullies into the crater walls producing a rugged and harsh landscape.



CSH Archaeological Inventory Study Areas  
 Koko Head Regional Park and Nature Preserve



Source: Cultural Surveys Hawaii Report

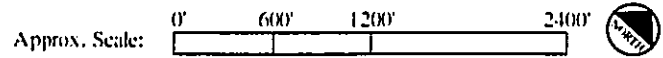


Figure 4-4

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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Topographic relief ranges from sea level to approximately 1,208 feet with slopes as high as 130 percent (70 degrees). The craters and cones which comprise the inland portions of the Regional Park area include the following: Koko Crater, Kahauloa Crater, Hanauma Bay, Koko Head, Nonoula Crater, and Ihi'ihilauakea Crater (Figure 4-5).

At Hanauma Bay, the elevation ranges from sea level to approximately 223 feet above mean sea level near the intersection of Kalaniana'ole Highway and the access road to the bay. Slopes range from about 8 percent to approximately 66 percent. The crescent-shaped crater has a submerged basin that opens its eastern edge towards the Ka Iwi Channel. The beach and bay water are protected by a shallow fringing reef that lies offshore.

Koko Head elevations range from sea level to 642 feet above mean sea level at the top of the tuff cone. Slopes are steep - up to 100 percent (45 degrees) near the seacliffs. The western slope of the tuff cone is characterized by dense low-lying vegetation while the summit is relatively sparse of plant life.

Nonoula Crater rests below Koko Head and to the south of Hanauma Bay. The crater's elevation is approximately 200 feet around its rim. The base of the crater is circular and consists of approximately 8 acres. Vegetation is dense within the crater floor.

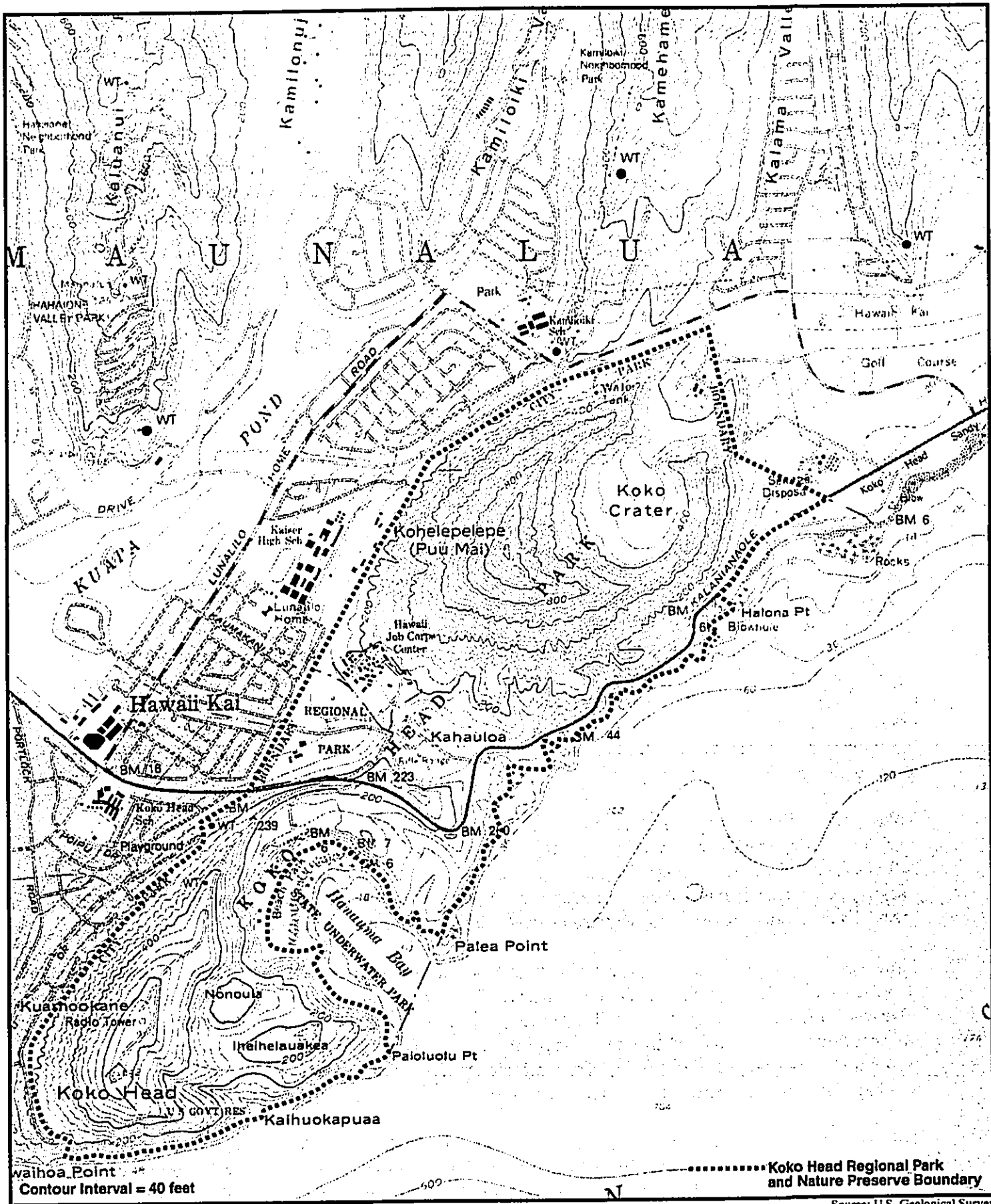
Ihi'ihilauakea Crater (spelled "Theihelauakea" on the USGS Map used for Figure 4-5) sits on the southern lip of Hanauma Bay's ridgeline. Its elevation is approximately 200 feet at its crater rim. The floor area of the oblong crater is approximately 12 acres. The crater periodically floods during the rainy season creating a vernal pool at its base which evaporates when warmer weather prevails. It is densely vegetated at the base and is the habitat for an endangered plant 'ihi'ihl fern.

Koko Crater is a horseshoe shaped tuff cone, open to the northeast, with its highest point (1,208 feet) on the southwestern rim. Slopes range from 10 to 20 percent at the base of the crater up to 100 percent (45 degrees) near the rim. The crater floor of the Botanical Garden consists of roughly 58 acres; the base of the outer crater where the stables are located is approximately 20 acres. Deep eroded gullies characterize both the inside and outside crater walls.

Kahauloa Crater is the site for the Koko Head Shooting Complex. Its elevation ranges from about 84 feet to 110 feet above mean sea level. The crater walls enclose a grassy area of about 20 acres considered to be the floor. The walls range in elevation from approximately 280 feet at the southern rim, 160 feet at the northwestern rim and about 120 feet at the eastern rim that is parallel to Kalaniana'ole Highway. The crater's lowest point is about 84 feet above mean sea level and serves as a natural catch basin and ponding area for any surface runoff waters.

The rugged topography of the park's shoreline consists of rocky coasts and protective structures with a few short reaches of sandy beaches extending between lava basalt outcrops. The approximate 4 mile shoreline rises from about 3 feet to over 30 feet above the sea surface.





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### 4.4.2 Views

Koko Head Regional Park and Nature Preserve offers some of the most spectacular views of nature in the State of Hawaii. These include both views of the park and views from the park. One of the most unique and spectacular views in Hawaii is of the ocean-breached crater of Hanauma Bay from the lookout above.

The landforms of Koko Head and Koko Crater are familiar to everyone who has ever traveled east of Kaimuki. They are a prominent part of the viewshed for anyone traveling on Kalaniana'ole Highway in the region, as well as for many homes extending from Kaimuki through Kalama Valley.

Scenic roadway views are virtually continuous along the section of Kalaniana'ole Highway traversing the Park. The three scenic lookouts along the highway within the Park also offer significant panoramic views. The Kuapa Pond Lookout provides an excellent overview of Maunalua Bay and Diamond Head in the distance, as well as of Kuapa Pond and the surrounding Hawaii Kai community within the backdrop of the Koolau Mountains. Lanai Lookout and Halona Point offer spectacular views of the shoreline and deep blue ocean waters and, on clear days with minimal ocean mist, of the islands of Molokai, Lanai and possibly even Maui.

In addition to Hanauma Bay, there are many other places within the various distinct Regional Park areas that offer significant view opportunities. Coastal and distant ocean views from within Sandy Beach Park are as noteworthy as those from the nearby scenic lookouts. Trails along Koko Head and Koko Crater, while currently restricted or having only limited public access, offer incredible 360-degree views of the ocean and Koolau Mountains.

Altogether, Hanauma Bay Nature Preserve and Koko Head Regional Park and Nature Preserve probably offers by far the greatest concentration of significant panoramic views of Hawaii's natural landscape that is available in the State. The most important of these are depicted on Figure 4-6.

### 4.4.3 Geology and Soils

The project site consists of several cones which are aligned along the south coast at the eastern tip of Oahu (Figure 4-7). Belonging to the Honolulu volcanic series, these cones began activity in the late Pleistocene to recent age. The tuff cones mark the Koko Head rift that extends from Hanauma Bay to Makapuu Point. A submarine ridge indicates that this series of eruptions continued beneath the sea. Traveling in a northeastward direction, the vents located within Koko Head Regional Park and Nature Preserve include Koko Head, Hanauma Bay, Kahauloa Crater and Koko Crater.

The Koko Head-Hanauma Bay-Koko Crater complex is composed of tuff incorporated with numerous large fragments of old coral reef and country rock. Hanauma Bay is an old tuffcone

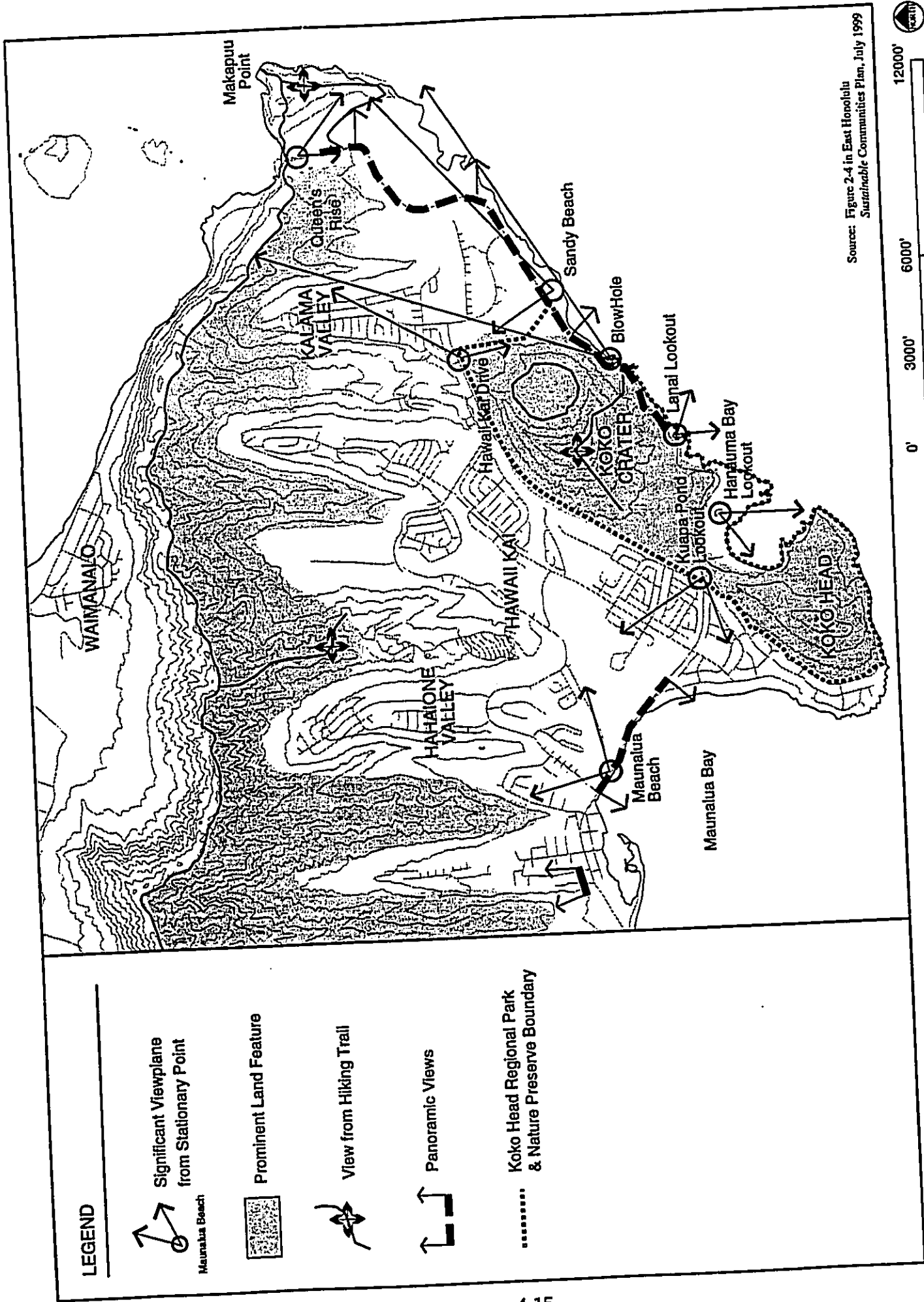
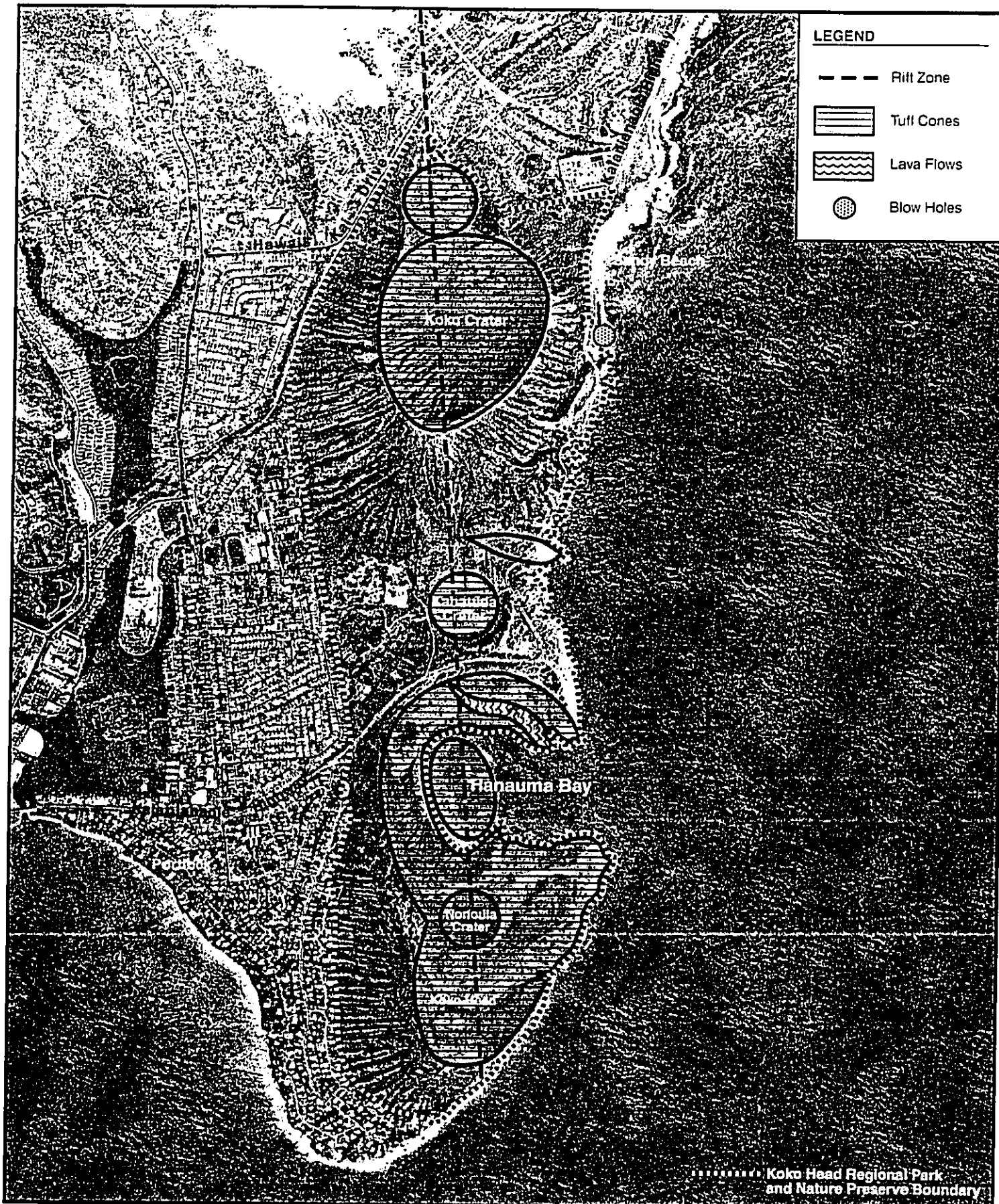


Figure 4-6

Koko Head - Makapuu Viewshed  
 Koko Head Regional Park and Nature Preserve



Geological Formations

Koko Head Regional Park and Nature Preserve

Figure 4-7



## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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that has been breached by wave erosion and contains a cut bench and a beach with calcareous and olivine sands. Koko Crater is the highest and largest cone in the Koko Rift. On its eastern flank it contains one of the few base surge deposits (a deposit composed of layers of sand and gravel produced by an explosive eruption) known to exist in the islands.

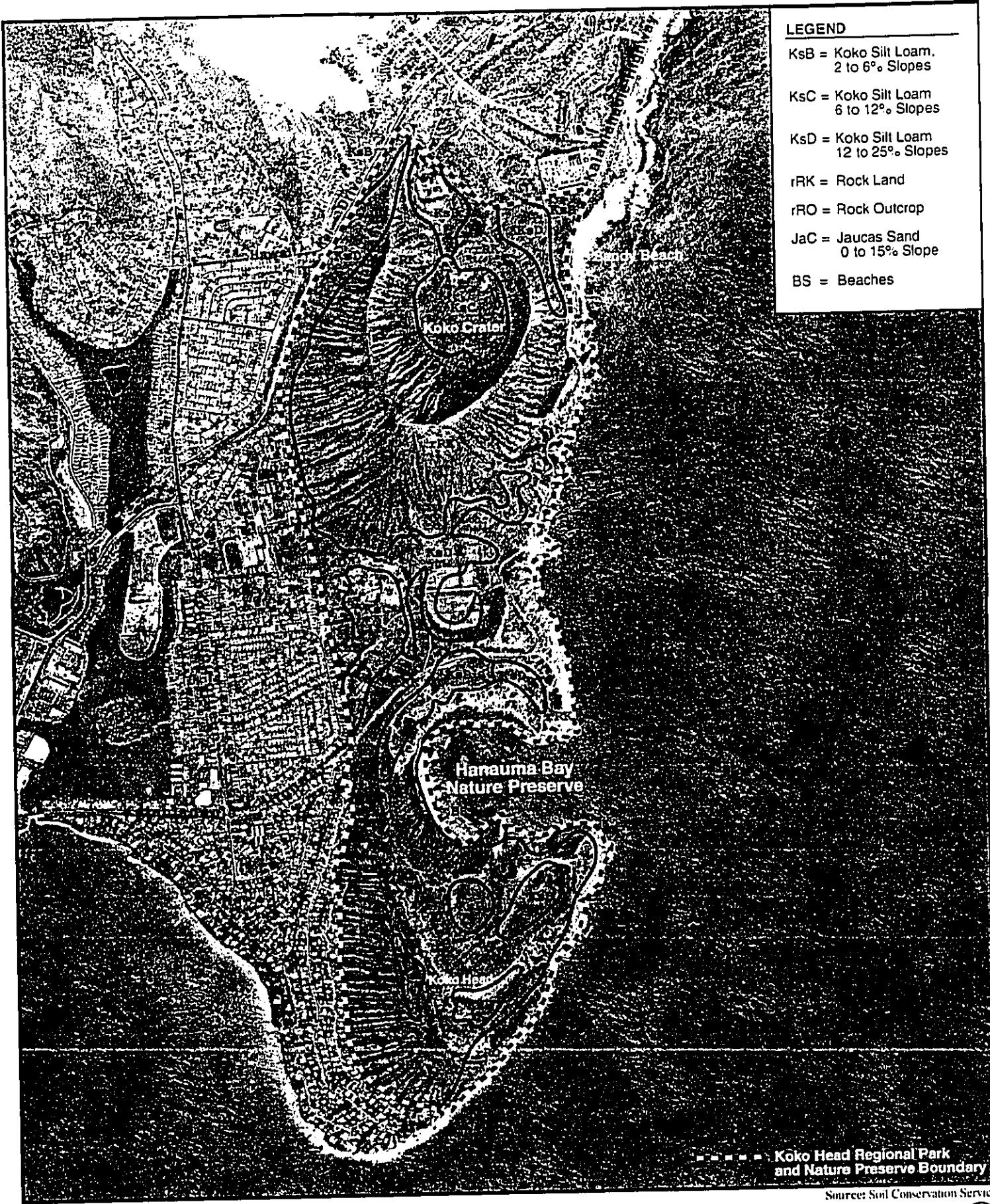
The seven different soil types described below have been identified within the Park area by the U.S Department of Agriculture Soil Conservation Service. Their general locations are shown on Figure 4-8.

<u>Code</u>	<u>Soil Type</u>	<u>Description</u>
KsB	Koko silt loam, 2 - 6% slopes	Occupies smooth slopes; moderate permeability; slow runoff; slight erosion hazard.
KsC	Koko silt loam, 6 - 12% slopes	Medium runoff moderate erosion; slight workability.
KsD	Koko silt loam, 12 - 25% slopes	Located on fans on foot slopes of volcanic craters. Medium to rapid runoff; moderate to severe erosion; difficult workability.
RRK	Rock land	Exposed rock covers 25 to 90% of surface. Rock outcrops and very shallow soils; nearly level to very steep; soil is very sticky and plastic with high shrink- swell potential.
RRO	Rock outcrop	Exposed bedrock covers more than 90% of surface. Gently sloping to precipitous.
JaC	Jaucas sand, 0 - 15% slopes	Rapid permeability; very slow to slow runoff; slight water erosion hazard; severe wind erosion if vegetation has been removed; workability is slightly difficult due to loose soil; lacks stability for use of equipment.
BS	Beaches	Occur as sandy, gravelly, or cobbly areas.

#### 4.4.4 Drainage, Flood and Tsunami Hazards

There are no streams or major drainage channels that flow through ~~Hanauma Bay Nature Preserve or the Regional~~ Park area. Storm runoff generally collects and drains through a series of relatively closely spaced gullies that are carved into the sides of Koko Head and Koko Crater and then into the ocean or adjacent lower areas to the west, mauka and east. Since much of the land is rock, runoff is relatively rapid. ~~[sentence re overall Regional Park drainage deleted]~~

~~Runoff in the upper park area at Hanauma Bay Nature Preserve collects in a series of retention basins that, except when there are very heavy storms, hold it until the storm water has time to percolate into the ground and evaporate into the air. Overflow structures are provided for~~



Soil Types

Koko Head Regional Park and Nature Preserve

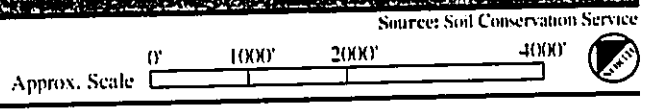


Figure 4-8

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excess runoff from these basins during intense storms. These lead to an underground porous pipe system, which allows some of the additional runoff to percolate into the ground and channels the rest to the lower bay area. Overall, with this drainage system, the amount and intensity of storm water runoff from the upper park area into the bay is much less than it was prior to its construction. It is also considerably less than occurred under "pristine" conditions or before there were any park improvements and significant public use at Hanauma Bay.

The entire area of Koko Head Regional Park and Nature Preserve is designated as "Zone D" on the Federal Emergency Management Agency's Flood Insurance Rate Map covering this area. Zone D is defined as "areas in which flood hazards are undetermined" or, in other words, areas where no studies have been conducted to determine whether or not there is a flood hazard.

The Oahu Civil Defense Agency's Tsunami Evacuation Maps indicate the coastal shelf area along the Regional Park's entire shoreline, and most if not all of Hanauma Bay Nature Preserve's lower beach area, as subject to inundation in the event of a tsunami. Included in the potential inundation area at Hanauma Bay are the existing snack bar/equipment rental/exhibit building, all three comfort stations, and the beach tram turn-around. The Lanai Lookout and the Halona Blowhole and Lookout are also included in this area.

#### 4.4.5 Vegetation

A botanical survey was completed in October 1998 by Char & Associates in connection with the proposals being considered at that time for new park facilities in Koko Head Regional Park and Nature Preserve. The primary purposes of this survey were to (1) provide a general description of the character of vegetation in the Regional Park area; (2) identify rare, threatened or endangered species, native plant communities and any exceptional trees; and (3) prepare recommendations for the preservation and management of important existing botanical resources. The results of the survey are summarized below. They are documented in two reports, copies of which are provided in Appendices F and G.

##### 4.4.5.1 Vegetation in Undeveloped Areas

Six general vegetation types were recognized within the undeveloped portions of the Park area: coastal scrub, koa haole scrub, kiawe forest, kawelu grassland, 'a'ali'i/koa haole scrubland, and 'ihi'ihii herbland. Their general locations are depicted on Figure 4-9. All are described in detail in Appendices F and G. Those located within and in the vicinity of Hanauma Bay Nature Preserve are described as follows:

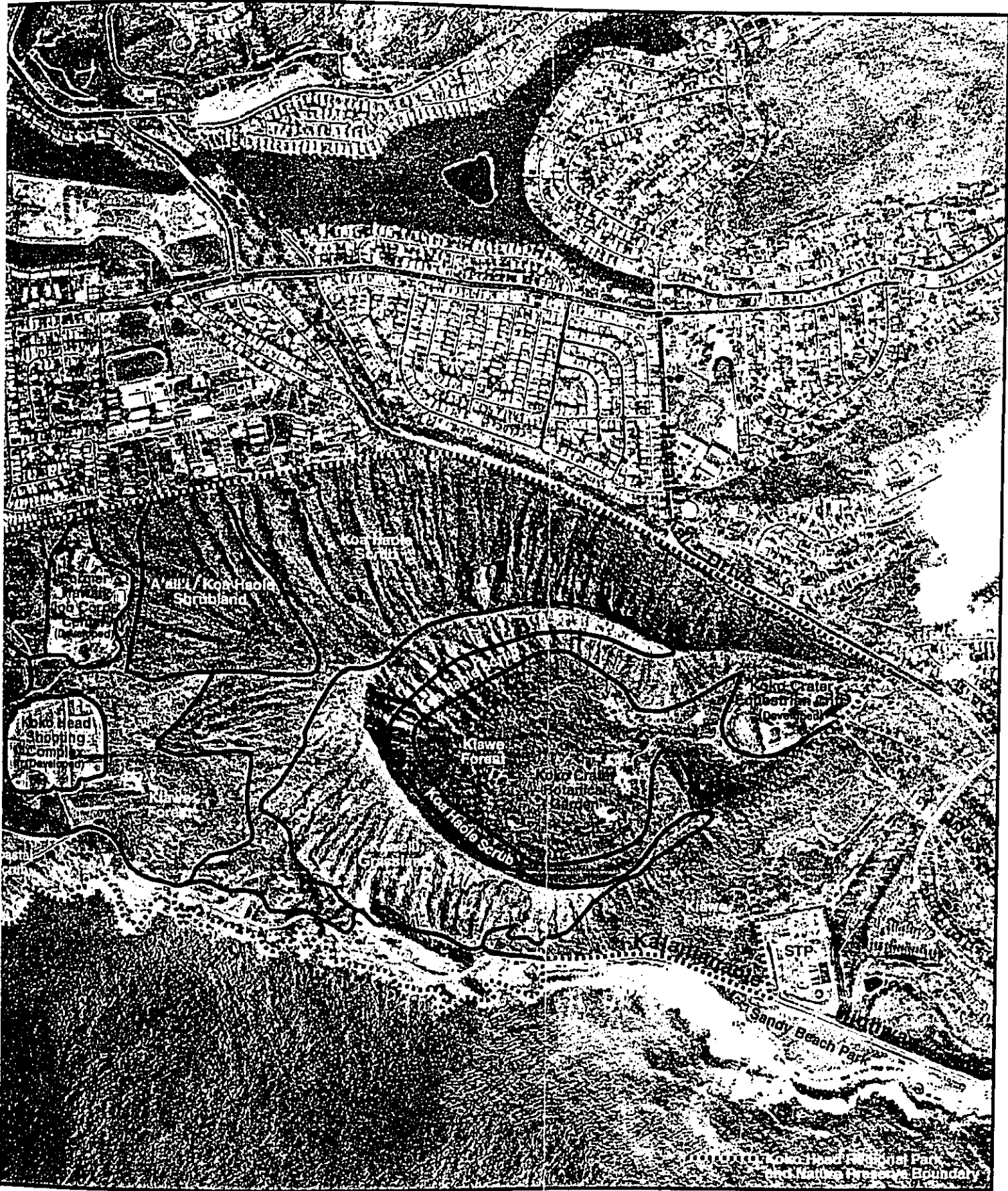
*Coastal Scrub* - The coastal scrub is composed primarily of native species which occur as scattered pockets between the cliffs and Kalaniana'ole Highway. Wind and salt spray strongly influence the growth form and distribution of the vegetation along these rocky, coastal cliffs. Rounded clusters of kiawe, 20 to 30 feet across, are scattered along the coast. The kiawe vary in height from 4 to 7 feet tall with branches spread to the ground. Various weedy grass and herbaceous species such as swollen finger grass, bristly foxtail, buffel grass, sow thistle, and two species of Spanish needle, find shelter under the kiawe.



Vegetation Types

Koko Head Regional Park and Nature Preserve





Source: Botanical Survey by Char & Associates, November 1998

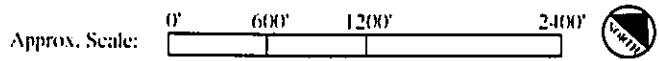


Figure 4-9

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In the open, rocky areas, especially where soil has accumulated in depressions or on very weathered, upraised, coral line material, native coastal species form low cushions or mats. Some of the more frequently encountered species are pa'uo-o-Hi-aka, nehe, 'ilima, 'uhaloa, fimbristylis, nena, hinahina-ku-kahakai, and 'ihi. A few hardy introduced species, such as Bermuda grass, mimi-loa, swollen finger grass, Australian salt bush, and Indian pluchea, also can be observed here. Along the very edges of the cliffs, on ledges exposed to occasional wave wash, the succulent 'akulikuli plant forms small patches.

*Koa Haole Scrub* - Koa haole is the most abundant species on the project site where it forms low, windswept thickets, 3 to 7 feet tall, on the slopes and ridge tops of Koko Head and Koko Crater. On the mauka (leeward) side of Koko Crater and in some gulch areas where it is more protected, the koa haole is taller and more tree-like. Scattered trees or small stands of kiawe, 10 to 20 feet tall, are commonly associated with the koa haole scrub.

The understory consists of low, scattered mats of buffel grass, 1 to 2 feet tall, and clumps of somewhat taller Guinea grass in areas with slightly deeper soil. Locally common in some places are shrubs of wild basil, 1 to 3 feet tall. Areas with rocky outcroppings or stony, shallow soils support carrion flower, a succulent-stemmed plant up to 10 inches tall with foetid-smelling, brownish-red flowers.

*Kiawe Forest* - Kiawe forest is found in the areas with deeper soil around the outside base of Koko Crater and on the crater floor. It is also found in gulches, drainageways, and Nono'ula Crater on Koko Head. In these more protected situations, tree cover may be somewhat dense and the trees 25 to 30 feet tall. Scattered patches of koa haole shrubs are found under the trees. Buffel grass and Guinea grass form dense mats between the woody components.

Along the windward facing lower slopes of Koko Crater, above the Halona Blow Hole area and the rugged coastline, the kiawe trees form low, dense, windswept thickets, 3 to 6 feet tall.

*Kawelu Grassland* - Kawelu or 'emoloa grassland is found on the more exposed, windward facing mid to upper slopes and rims of Koko Head and Koko Crater. Kawelu forms low, rounded tussocks and can be easily recognized by its large spike-like inflorescences which persist for a long time on the plant. Common associates of this vegetation type include other native species such as shrubs of 'ilima, 'uhaloa, and 'a'ali'i; clumps of pili grass; and low mats of pa'uohi'iaka, nehe, and alena. The introduced koa haole occurs here as scattered, low patches.

~~Paragraphs describing 'A'ali'i/Koa Haole Shrubland deleted.~~

*'Ihi'ihii Herbland* - This vegetation type or plant community is dominated by the endangered 'ihi'ihii fern. It occurs in perennially dry lowland areas subject to seasonal flooding. On O'ahu, it is found at 'Ihi'ihilauakea Crater on Koko Head and in Lualualei Valley.

At 'Ihi'ihilauakea Crater, an almost solid mat of the fern covers about 0.5 acre of the crater floor. A dense ring of kiawe trees surrounds this area except for a small entrance on the east side of the crater. During the dry summer months or drought conditions, the fern becomes dormant.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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During the winter season and the arrival of the rains, the ferns quickly send out new leaves and the crater floor turns a bright green color from the dense mat of ferns. Every few years, the crater floor may be flooded; during the 1987-88 flooding, several species of crustaceans appeared in the ponded crater bottom (U.S. Fish and Wildlife Service 1996). Weedy species found in this vegetation type include cocklebur, bristly foxtail, Bermuda grass, swollen fingergrass, hairy merremia, Guinea grass, sourgrass, and jungle-rice. A few shrubs of the native 'ilima are also found here (Gagne and Cuddihy 1990; U.S. Fish and Wildlife Service 1996).

[description of vegetation along Koko Crater cable car route and at summit deleted]

#### 4.4.5.2 Landscape Plantings in Developed Areas

While little remains in the way of original or natural vegetation at Hanauma Bay Nature Preserve, there is considerable introduced landscaping. Landscaping on the developed upper plateau area consists of large expanses of Bermuda grass or manienie lawn with scattered large, old kiawe trees. The trees appear to have been originally growing on or near the site and were incorporated into the landscaping plan.

Plantings around the comfort stations, visitor check-in building, and other structures consists of beach naupaka and red hibiscus hedges and trees such as tiger's claw, hala, and milo. A small planting of variously colored hybrid bougainvillea is found near the visitor parking lot.

On the lower beach level, there are patches of Bermuda grass lawn and scattered coconut palms. Also present are kiawe trees, beach naupaka shrubs, and beach heliotrope.

[description of plantings on Job Corps site deleted]

#### 4.4.5.3 Summary

The only endangered species observed during the studies was the 'ihi'ih fern. The largest population of this fern in Hawai'i is found within 'Ihi'ihilauakea Crater. The 'ihi'ih, which resembles a four-leaf clover, is found in dry, lowland areas subject to periodic flooding during the rainy season. The U.S. Fish and Wildlife Service prepared a recovery plan for this area in 1996 that outlines procedures for its protection and management. Barriers have also been erected to keep four-wheeled recreational vehicles out of the 'ihi'ih fern area. Management of the crater is handled cooperatively by The Nature Conservancy of Hawaii, the U.S. Fish and Wildlife Service, and the City and County of Honolulu.

One other endangered species is known to be located within the Regional Park, but not within the vicinity of Hanauma Bay Nature Preserve. The endangered 'awiwi has been found on the steep slopes above Halona Blow Hole.

Three plants of Schiedea globosa (no common name), considered rare by The Nature Conservancy's Hawai'i Natural Heritage Program, were found on the narrow, windswept

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ledges near the summit lookout on Koko Crater. A small planting of a few native species, some of them rare, were also found on the northeast side of the Hanauma Bay rim.

No other naturally occurring threatened and endangered species, or species of concern (U.S. Fish and Wildlife Service 1997) were observed during the field studies.

#### 4.4.6 Birds, Fauna and Insects

A field survey of animal and bird life in the Koko Head Regional Park and Nature Preserve was conducted in May 1988 by Phillip L. Bruner. Its purpose was to document the species present in the Regional Park and their relative density. The results of the survey are summarized below, and the full report is provided in Appendix H.

*Birds* – No endemic land birds were recorded during the course of the field survey. The Short-eared Owl or Pueo was observed on two occasions in 1986 on the slopes of Koko Crater near Kalona Point. This endemic subspecies is listed as endangered on Oahu by the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife. No other epidemic land birds are known to occur on the property nor would any be expected given the nature of the present habitat.

Migratory species, such as the Pacific Golden Plover and Wandering Tattler, were observed on the site. The Ruddy Turnstone and Sanderling were not observed but have been recorded regularly along this coastline of Oahu.

No resident indigenous land birds were observed. The Black-crowned Night Heron might occur on the project site as it has been observed foraging among the mangroves at Kaloko cove, an estuary adjacent to the survey site.

There were eleven resident indigenous seabirds observed in the Regional Park. (See Appendix H for detailed listings.) In addition, the occurrence of Wedge-tailed Shearwaters and Bulwers Petrel nesting on the inaccessible seaward facing cliffs at Koko Head is also possible, as these two species nest in burrows and under ledges in cliff faces. None of those seen in the area are listed as threatened or endangered.

A total of 17 species of exotic birds were recorded during the field survey. (Descriptions of the relative abundance and typical habitat preferences of these species can be found in Appendix G.) The most abundant species during the three-day survey were Japanese White-eye, Zebra Dove and Redvented Bulbul. The following exotic species were not observed on the survey but have been recorded in the past: Common Barn Owl, Common Waxbill, Chestnut Mannikin, Warbling Silverbill, and Melodious Laughing-Thrush.

*Fauna* – Mammals that were observed during the survey were the Small Indian Mongoose and cats. Rats and mice were not observed but are likely to occur in the Regional Park. The relative abundance of rats, mice, mongooses and cats are not known. However, it is likely that their numbers are typical of what one would find elsewhere in a similar habitat on Oahu.



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No Hawaiian Hoary Bats were observed in this survey. Nevertheless, bats have been observed in dry coastal habitats elsewhere in Hawaii.

*Insects* - Koko Head is a seasonal habitat. During the wet winter months insects are visible and active and in the dry summer months many insects aestivate (a dry-type of hibernation) (Howarth, pers. comm. 1988). The only known published daytime reconnaissance survey of insects at East Oahu was made by O.H. Swezy in the winter of 1934 after a heavy rain had produced growth of vegetation attractive to insects, (Department of Parks and Recreation, 1984). According to Dr. Frank G. Howarth, Entomologist at the Bishop Museum, environmental conditions at Koko Head have changed tremendously over time since the written report. As a result, the insect population recorded in Swezy's report may not represent the existing conditions at the project site.

Dr. Howarth knows of only one endemic insect, Rhyncogonus simplex, which was common among the drier slopes of Koko Head and Koko Crater and last seen in the rocky area between Sandy Beach and Makapuu Peninsula. The Rhyncogonus simplex is a flightless Hawaiian snout beetle apparently restricted to a single host plant, Hawaiian cotton. It is listed by the U.S. Fish and Wildlife Service as a candidate "taxa for which information now in the possession of the Service indicates that proposing to list the specie as endangered or threatened is possibly appropriate, but for which conclusive data on biological vulnerability and threat(s) are not currently available to support proposed rules at this time," (DPR, 1984).

*Conclusions* - The following were the broad conclusions of the survey with respect to bird and mammal activity in the Regional Park area:

- The present environment provides a limited range of habitats that are utilized by the typical array of exotic birds one would expect at this elevation and in this type of environment on Oahu.
- No unusual activity was observed during the survey.

#### 4.5 NEARSHORE CONDITIONS

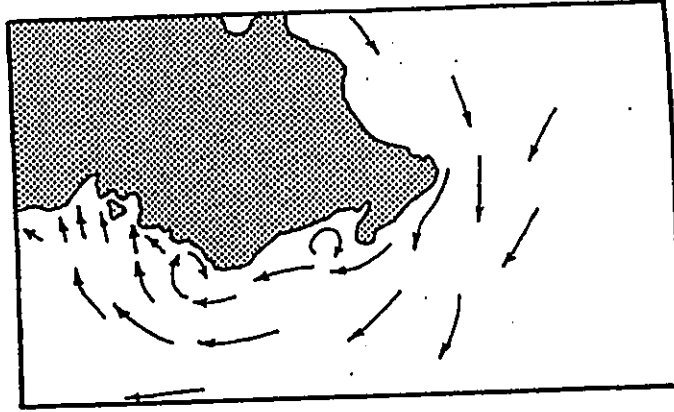
##### 4.5.1 Oceanography/Current Flows

In deep water around the Hawaiian Islands, tradewinds generally drive surface currents westward at 0.4 to 0.6 knots. Nearshore currents are dominated by the tides. During the flood tide, nearshore currents are usually to the south or southwest at 0.1 to 0.4 knots (Engineering-Science, Inc. 1971, 1972).

During ebbing tides, nearshore currents significantly slow down and sometimes reverse. The net southwesterly current flow is strongest during the winter. Southerly nearshore currents frequently exceed 2 knots and have been nicknamed the "Molokai Express." Figure 4-10 shows typical directions of nearshore currents at East Oahu (Engineering-Science, Inc, 1971, 1972).



SUMMER



WINTER

DURING FLOODING TIDE



SUMMER



WINTER

DURING EBBING TIDE

Source: Ka Iwi State Park Master Plan, 1996

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### 4.5.2 Coastal Water Quality

#### 4.5.2.1 Offshore Waters

Water quality is excellent offshore of Hanauma Bay and the rest of Koko Head Regional Park and Nature Preserve, except in the immediate vicinity of the Hawaii Kai Sewage Treatment Plant outfall which is located 3,000 feet offshore in 35 feet of water between Halona Point and Sandy Beach. The City and County of Honolulu has a permit declaring the waters surrounding the outfall a mixing zone.

Water quality standards have been established by the Department of Health and are defined in Title 11, Chapter 54 of the Hawaii Administrative Rules. According to these standards, the coastline from Makapu'u Point to Wawamalu Beach and beyond is designated as Class A. The definition of Class A waters in Hawaii Administrative Rules §11-54-03 is as follows:

*It is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish and wildlife, and with recreation in and on these waters. These waters shall not act as receiving waters for any discharge which has not received the best degree of treatment or control compatible with the criteria established for this class. No new sewage discharges shall be permitted within embayments...*

#### 4.5.2.2 Hanauma Bay

~~Two~~ key concerns in planning for future improvements and establishing limits on the volume of human use allowed at Hanauma Bay ~~are the impacts of such use on water quality and on~~ the maintenance of the natural biotic habitats there. The two components of the Bay's marine habitat - water quality and biotic composition - were investigated by Marine Research Consultants in October 1998. Their full report is provided in Appendix I. A summary of the findings and recommendations with respect to water quality is provided immediately below. Those related to marine biota are provided in Section 4.5.3.2.

Water quality is, of course, a concern in terms of its impacts on people's recreational use of the Bay. The water needs to be safe from a health perspective, and it also needs to be reasonably clear or free of turbidity, at least other than that which is caused naturally. Equally important are potential impacts that changes in water quality could have on the biotic composition of the area.

To assess the impacts of human use of Hanauma Bay on water quality, two forms of water chemistry sampling were used:

- Samples were taken at regular intervals from the shoreline seaward beyond the reef crest to a distance from shore (approximately 100 meters) that is beyond the area of most human usage. Where there were changes in water chemistry, the sources of change were then

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identified. In particular, any changes from the more heavily used shoreline area to the lightly used seaward end of the sampling line could be related to human activity.

- Samples were taken at 6:30 AM on a day following a day of complete park closure -- i.e., following the maximum interval of no human usage -- and again at 6:00 PM on the same day. The time between sampling spanned a full day of park usage, and thus any changes between the two sampling times could be a strong indicator of human impact.

Differences in water quality as sampling moved from the shoreline seaward were small and for the most part were limited to the area abutting the shoreline. These differences were of a type that commonly occur in Hawaii, and are the result of the discharge of groundwater into the Bay. The freshwater discharge at Hanauma Bay is relatively small in magnitude.

In terms of the temporal (morning-to-evening) differences, these were also relatively minor. There were somewhat higher levels of phosphorus and ammonium detected in the evening samples that appear to be in response to human usage. However, the overall water quality of the Bay does not appear to change substantially as a result of human usage, nor are the changes at a level that might raise any health concerns or be considered detrimental to marine biota.

State Department of Health (DOH) water quality criteria were exceeded only for the level of nitrates in the shoreline samples. However, it is apparent that these samples contained a detectable component of groundwater, which is naturally high in nitrates. As noted, this is a common occurrence along all Hawaii shorelines. In general, water quality in Hanauma Bay was found to be in compliance with DOH water quality criteria.

#### 4.5.3 Marine Life Habitats

##### 4.5.3.1 Nearshore Ocean Waters

The following information has been adapted from Hawaii Coral Reef Inventory Island of Oahu (AECOS, 1981) and pertains to typical marine biota found along rocky surge coastlines similar to shoreline along Koko Head Regional Park and Nature Preserve.

The lower portion of the rocky shoreline environment may be characterized by the presence of extensive growths of coralline algae, encrusting alga, urchins, opihi, and a host of other forms. Crusts of blue-green algae and rock crab, and other organisms such as the neritid, and littorinid gastropods, may also be present.

The upper portion of the shoreline on rocky coasts is characterized by strand plants. Commonly found in this area are pulmonate snails.

Coral cover on the offshore shelf near Makapuu Head in depths of 20 to 30 feet include Porites lobata and Leptastrea purpurea. Sea urchins found at this depth include Tripneustes gratilla, Echinometra mathaei and Diadema paucispinum.

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Fish in the shallow plain is dominated by the following species: Coris venusta, Thalassoma duperreui, and Chromis vanderbilti, Macropharyngodon geoffroyi and Stethojulis balteata. Fish most common at a depth of 25 feet are wrasses, damsels, and surgeon fishes.

Coral cover below 60 feet is primarily Porites lobata and occasionally abundant growths of "lace coral" occur. Sea urchins are common. Fishes being less abundant and relatively diverse at this depth include: Anthias thompsoni, Chaetodon kleini, and Chromis hanui. Common algae include: Boodlea composita, Codium edule, Halimeda discoidea, Neomeris sp., Asparagopsis taxiformis, Galaxaura sp., Martensia sp., Liagora sp., and Porolithon sp.

The high rocky shoreline, reached only by spray, is inhabited by relatively few species; they are dull gray or black in color and can withstand long periods without water. The littorines (pupu kolea) among the mollusks, and the scuttling black grapsid crab (a'ama) are the most conspicuous members of this community. Seaward of the littorines and the crab, but still above the reach of the tide, are the black nerite (pipipi) and, in a narrow band, a pulmonate limpet, Siphonaria (University of Hawaii, Department of Geography, 1983).

Humpback and sperm whales can often be seen offshore along the coastline during the winter.

Virtually all of the nearshore marine biota in this area are indigenous (occurring naturally in Hawaii and elsewhere) rather than endemic (occurring naturally only in Hawaii). None are considered either threatened or endangered.

### 4.5.3.2 Physical/Biological Structure of Hanauma Bay

A major concern regarding human usage of Hanauma Bay is the potential effect of high densities of swimmers on biotic composition. Feeding of fish has been documented to substantially alter the behavior and population structure within the bay. ~~Feeding of fish is now being well controlled.~~ ~~Reference to fish~~ Also of concern is the effect that swimmers have on the benthic community, primarily stony corals. Corals are considered "keystone" species in that they provide much of the physical structure of the coral reef framework, as well as provide food and shelter for the associated reef community.

Hanauma Bay, which lies within a double-sided steep volcanic crater, is exposed to ocean swells directly from the southeast and indirectly from the south and east. The entrance to Hanauma Bay is 350 meters wide, approximately 60% the width of the inner bay. As a result the inner bay and fringing reef are semi-sheltered from open ocean swell. The submerged reef area is divided into a back reef flat that extends from the shoreline approximately 80 meters seaward. The back reef flat consists of shallow calcium carbonate platforms less than one meter in depth, that are bisected by pockets of sand.

Few corals occur in this area, and the majority of the limestone substratum is covered with a veneer of calcareous algae. While coral growth on the upper flat surface of the platform may be restricted by exposure to air during low tidal stands, few corals occur on the vertical sides of

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the platform at the edges of sand patches, or in deep crevices and pockets on the platform. The lack of corals on deeper vertical surfaces suggests that some physical factors other than aerial exposure are also responsible for the present lack of corals on the back reef.

The back reef terminates in a reef crest, or algal ridge that is exposed to the atmosphere at low tidal stands. The reef crest absorbs much of the wave energy that reaches the inner bay. Seaward of the reef crest, water depth increases sharply to a depth of approximately 5 meters. The most substantial reef development consisting of living corals is found in the outer fore reef zone seaward of the algal ridge. This reef is one of the best developed on Oahu (Wells 1988). With increasing distance seaward toward the mouth of the bay, water depth increases to up to 18 meters. The sides of the bay lack the shallow reef platform, and the shoreline consists of nearly vertical basaltic walls.

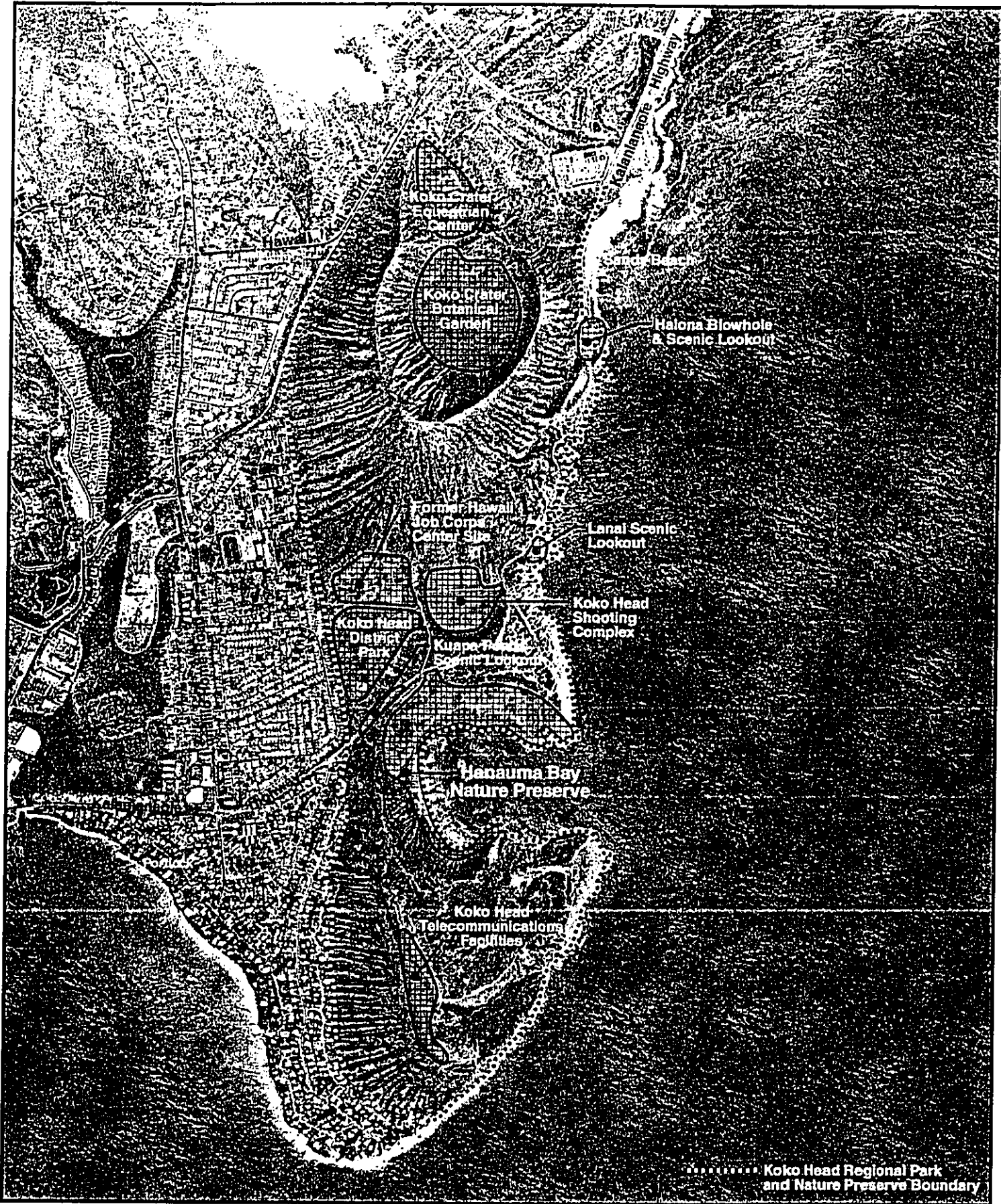
In 1964, ten cores were drilled through the shallow reef platform (Easton and Olson 1976). This work showed that the reef at Hanauma Bay began growing about 7,000 years ago at 15 meters depth when rising sea level flooded the bay. While the vertical rate of accretion (reef growth) was initially high, the rate of accretion has slowed to about 1 mm/year for the past 3,000 years. In the middle of the reef flat, the youngest reef material present today is dated at 2,000 to 3,000 years old. The youngest samples obtained from the inner reef flat by Easton and Olson (1976) was  $480 \pm 100$  years.

Hence, it appears from geologic data that the inner reef flat at Hanauma Bay has not been an actively growing coral reef for at least four centuries. Based on this geologic record, as well as the observations that few corals occur on the inner reef flat on deep or vertical surfaces (below the depth of aerial exposure, and where people can't walk), it appears that the composition of the Bay's coral community, especially in the deeper areas where most of it is located, is primarily a result of natural processes, and not a result of human impact. The primary impacts of human activity have been on the composition of the fish community, due in large part to fish feeding.

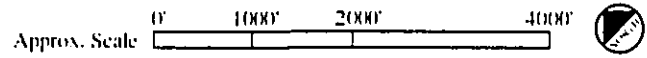
#### 4.6 EXISTING USES AND ACTIVITIES

A historical perspective on the use of the Koko Head Regional Park and Nature Preserve is provided in Section 4.2. Described below in greater detail are the current uses and activities that are located in the Koko Head Regional Park and Nature Preserve. Their locations within the overall Regional Park area are depicted on Figure 4-11.

The proposed actions discussed in this EIS are limited to improvements at Hanauma Bay Nature Preserve and to the demolition of existing unoccupied and dilapidated structures at the former Hawaii Job Corps site. Other uses and activities occurring in other areas of the Regional Park are also briefly described in order to provide a more complete picture and context for the consideration of the potential impacts of the proposed actions.



Existing Uses and Activities



Koko Head Regional Park and Nature Preserve

Figure 4-11



## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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### 4.6.1 Hanauma Bay Nature Preserve

This park can be divided into three distinct parts, the upper park area atop the crater rim, the lower park area which extends from the rim down to the shore, and the offshore area. Existing park resources and facilities are shown in Figure 4-12.

#### 4.6.1.1 Upper Park Area

The upper park includes the access road into the park, parking lots, tour bus/van staging area, open grass and shaded picnic areas, scenic overlook, a comfort station, buildings housing the park office and an interpretive display area, and the upper park terminal for the beach shuttle bus. It serves several functions: providing access and parking for the park, accommodating picnicking, and offering sightseeing and interpretive opportunities for the public to gain an understanding of the Nature Preserve and its significance.

*Access and Parking:* The entrance to Hanauma Nature Preserve is at Kalaniana'ole Highway. At that intersection the highway has one lane in each direction with no storage lanes for turns. As part of the current management program, guards are stationed at the entry to direct motorists past it when the parking lots are full.

There are two paved parking lots marked for a total of 300 regular and eight handicap stalls. The tour bus/van staging area is located west of the picnic area. It consists of eleven bus parking stalls and a municipal bus stop. A 15-minute time limit is imposed on the commercial tour vehicles parked in this area.

Pedestrian access to the park is shared with vehicles along the access road, which provides the only improved access into the park. However, because of the length of the road, pedestrians have worn several trails down the scrub-vegetated slope into the first parking lot as a short-cut.

*Sightseeing:* Sightseeing opportunities are provided from the scenic overlook consisting of a paved walkway and low rock wall along the cliff's edge adjacent to the picnic area. They are also available along the cliff on the east side of the shuttle terminal.

*Picnicking:* The picnic area is located between the tour bus/van staging area and the first parking lot. It covers over two acres and is extensively landscaped and shaded by kiawe trees. The comfort station and maintenance shed complex is located in the picnic area and serves the upper park. The picnic area also functions as a catchment basin to contain storm water runoff and reduce siltation into the bay.

*Park Office and Interpretive Display Area:* These operations are in separate buildings, with the controlled entry to the lower park area located in between. The interpretive display is operated by ~~the University of Hawaii Sea Grant Program as a part of~~ the Hanauma Bay education program. The building in which it is located was originally intended to accommodate a snack bar, which was to be relocated from the lower park area. However, the actual relocation has been deferred pending the completion of plans for the improvements that are the subject of this EIS.



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### 4.6.1.2 Lower Bay Area

The lower park can be divided into four components: the beach access road, sandy beach area, grassy picnic areas, and the bay rim trails.

*Access Road:* The single lane road connecting the upper and lower park is the only way for pedestrians and vehicles to move between the two levels. There are two pull-out areas along the road that are primarily used as scenic overlooks and for pedestrians to get out of the way of passing shuttles. Vehicular access by the general public onto the road is prohibited.

*Beach:* At almost two acres, the sandy beach area constitutes the largest usable proportion of the approximately six acres of land in the lower park. The beach is also the most heavily used area of the entire park.

*Picnic Area:* The flat grassy areas between the beach and the steep walls of the crater are generally regarded as picnic areas. These areas often function as alternative areas for sunbathing or as fields for informal play.

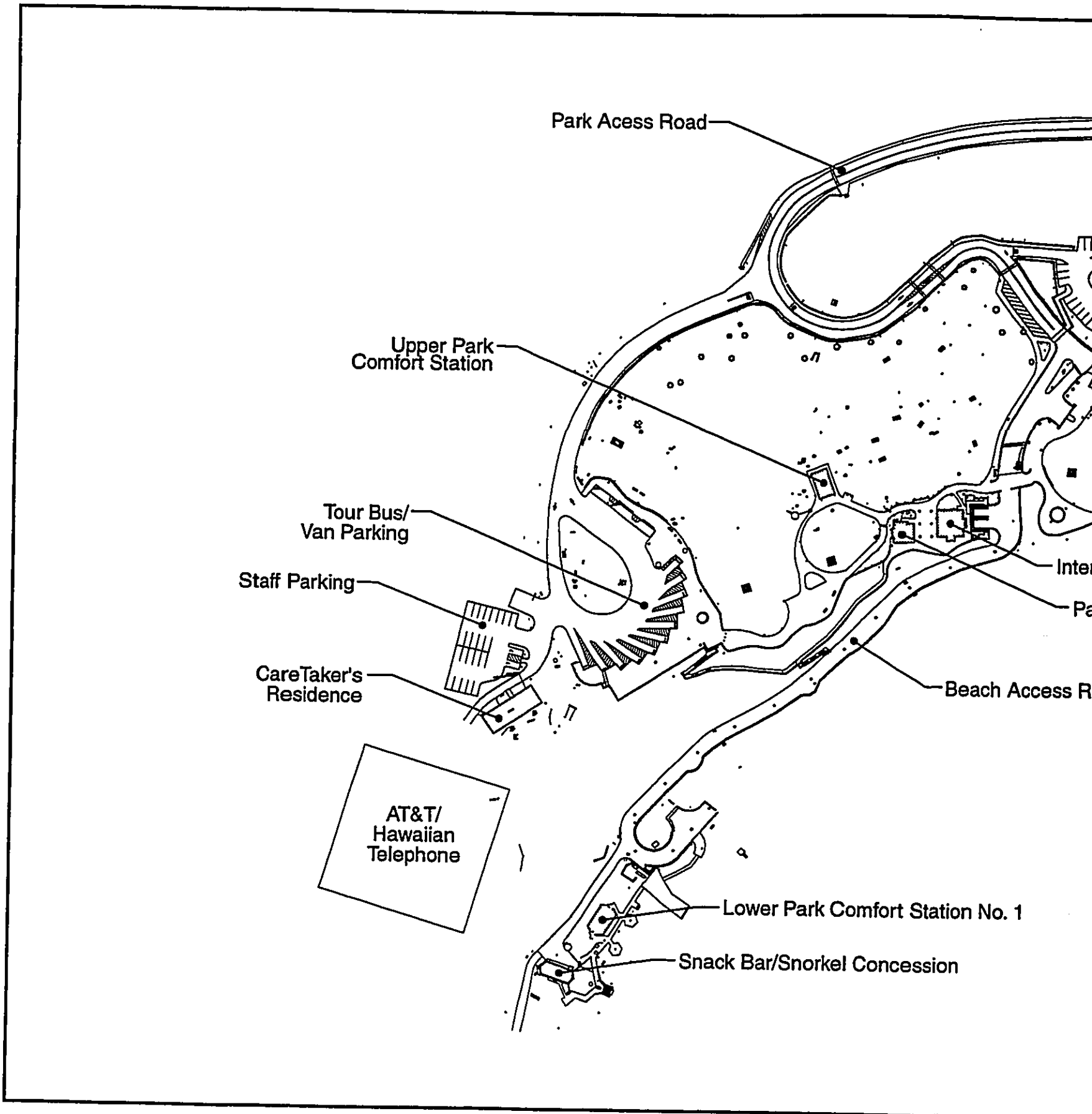
*Rim Trails:* A geological feature known as a wave cut terrace forms trails along the steep rock faces of the crater at the bay rim. Trails begin from both the eastern and western ends of the sandy beach and proceed along the water's edge. The trail on the eastern side of the bay leads approximately 1/3 mile toward Palea Point to Queen's Bath or what is commonly known as the "Toilet Bowl." Constant wave action through this remnant of a collapsed lava tube has sculpted a smooth lava rock pool in which hikers making the trek may swim and bob in the surging water of the pool. The western rim trail leads approximately 1/6 mile to Witch's Brew; a semi-circular cove where waves frequently break on the rocks with enough force to send plumes of white-water high into the air. ~~Access to both rim trails is blocked off by gates when the surf is high because of the potential hazards.~~

*Support Facilities:* Most of the public convenience facilities are located at the base of the access road near the shuttle turnaround area. There are three comfort stations in the lower park area, each with an adjoining shower facility. Three lift stations with force mains convey sewage from the comfort stations up to an existing sewer line in Kalaniana'ole Highway.

There are presently three concessions operating in the lower park: a snack bar and a snorkeling equipment rental, which are located in the concession building, and the shuttle bus service along the beach access road. The snack bar provides basic refreshments.

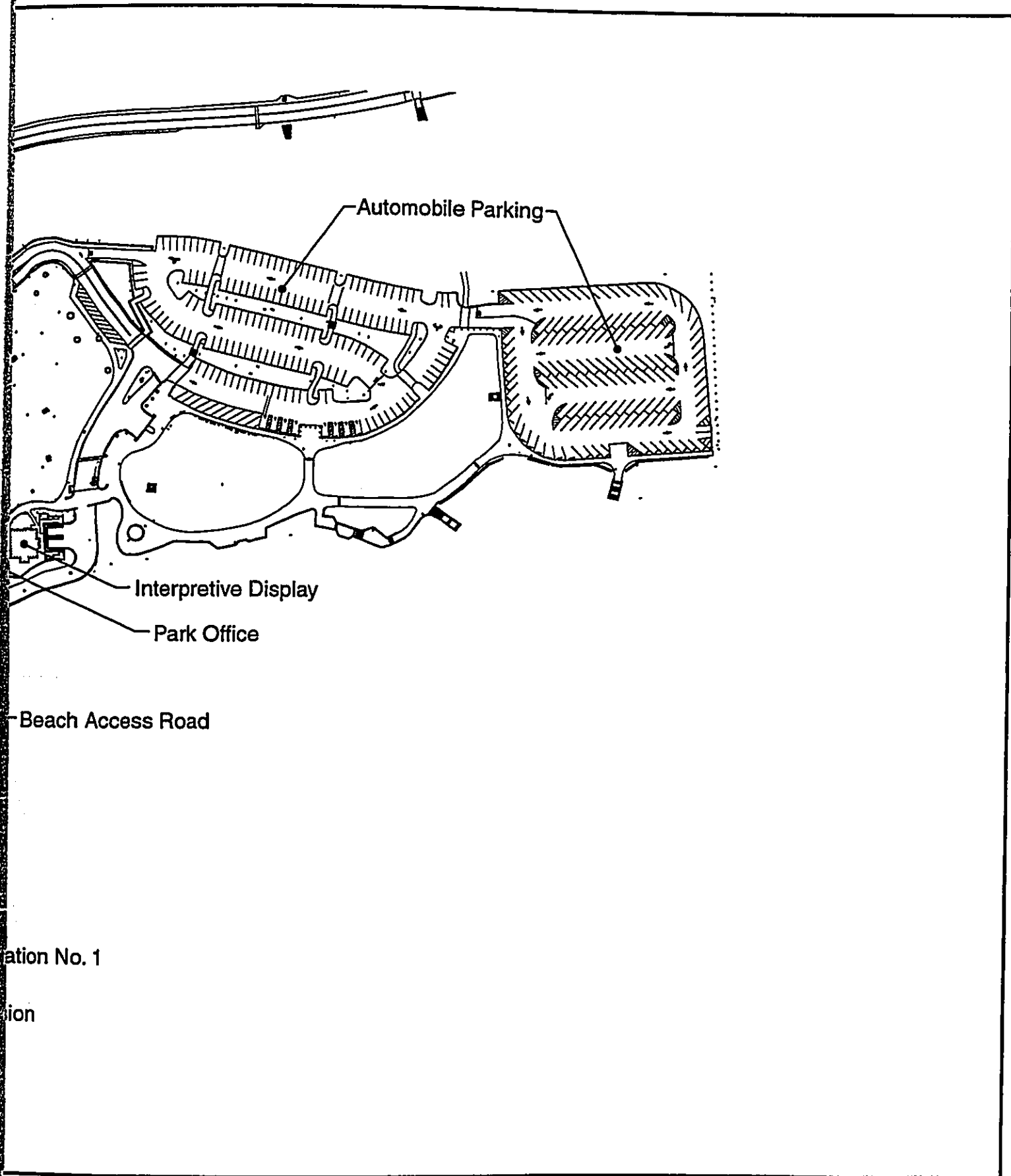
### 4.6.1.3 Offshore Area

The offshore area includes the waters of Hanauma Bay, which are excellent for marine life viewing, snorkeling and scuba diving because the calm and clear nearshore waters are protected by fringing reefs. Even on rough days, when waves several feet in height may break on the outer reef, waves at the shoreline generally remain small. Fish are abundant because they are protected by the bay's designation as a Marine Life Conservation District.



Existing Facilities and Resources, Hanauma Bay Nature Preserve

Koko Head Regional Park and Nature Preserve



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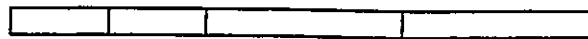


Figure 4-12

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### 4.6.2 Koko Head District Park

This park occupies approximately 40 acres and serves the greater Hawaii Kai community. Outdoor recreational facilities include ~~one full size and three youth baseball fields~~, six tennis courts, two basketball and one volleyball court, and a fitness center. A complex of five buildings includes a gymnasium, locker rooms, art and crafts facilities, meeting rooms, and administrative space.

### 4.6.3 Former Hawaii Job Corps Center Site

As noted in Section 4.2.2, the Hawaii Job Corps Center was located in Koko Head Regional Park from 1966 to 1995. There are 38 buildings on the site, most of which are unoccupied. Activities currently occupying portions of this site are limited to a field office for the Department of Emergency Service's Water Safety Division, maintenance facilities for DPR's Park District No. 1, a little league ballfield, and a Police Substation. Asphalt and concrete paved parking lots are located throughout the 19-acre site. Outdoor recreational facilities include two basketball courts, a ballfield and a stage pavilion.

### 4.6.4 Koko Head Shooting Complex

This 20-acre facility located in Kahauloa Crater, and is the only public shooting range on Oahu. It is primarily used by the general public and organized clubs for recreational shooting, but is also used by the Honolulu Police Department (HPD), other law enforcement agencies and the military for training purposes. The complex accommodates six different types of shooting ranges: a pistol range, a rifle and .22 target range, a skeet range, a trap shooting range, a combat/MPPL range, and a metallic silhouette pistol range. Structures include covered firing positions at some of the ranges, an HPD weapons and equipment storage building, and public restrooms. ~~reference to existing caretaker's residence deleted.~~

HPD and other law enforcement agencies use the range during daylight hours Monday through Friday. It is open to clubs and the general public in the afternoons on Wednesday through Friday, and all day on weekends and holidays. There are no night-time shooting hours. Use of the facility by the general public is controlled by the staff to ensure that all users are qualified to use firearms. There are no fees charged ~~for general public use of the facilities~~ ~~but fees are charged for certain shooting sports.~~

### 4.6.5 Koko Crater Botanical Garden and Stables

The lands within the rim of Koko Crater total about 200 acres. It is made up of the main crater itself and a smaller outer crater. The main crater is approximately 155 acres, of which 90 acres consists of the steep crater walls. The outer crater is about 45 acres, of which 20 acres is unusable due to steep slopes.

The main crater houses the botanical garden and plant collections. The collections are generally grouped according to geographic and climatic zones, e.g. South Africa, Hawaiian, succulents

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and cacti. There are currently about 1,000 species represented. Of particular note is the stand of native Wili Wili that is on the City's list of Exceptional Trees. An unimproved loop trail along the base of the crater provides access throughout the garden area.

The outer crater contains the existing stables and riding facility. This facility, occupying about 10 acres, is on a month-to-month lease basis with the current operators. The facility is used to board horses as well as provide private riding and training programs. Portions of the outer crater also contain botanical garden elements including the plumeria collection and horticultural test plots.

Although the botanical garden is closed off to private vehicle access, the crater is used by the public for walking and jogging. Arrangements for tours can be made through the Honolulu Botanical Gardens office.

Access to the crater is via a narrow paved driveway from Kealahou Street. The driveway goes through private (Bishop Estate) lands although no recorded easements or agreements exist.

### 4.6.6 Koko Head Telecommunications Facilities

With its 640-foot height, line-of-sight prominence from Diamond Head to Makapuu Point and to Molokai and Maui Islands, as well as its relatively level and expansive summit area, Koko Head was quickly recognized as a prime site for communications and navigation relay stations once Kalaniana'ole Highway was extended through the Park. Several of the current government agency users are described below. The locations of their facilities, as well as those of various telecommunications and cablevision companies, are shown on Figure 4-13.

**FAA Vortac Facility:** In June, 1950, the City granted a lease to the Civil Aeronautics Administration (CAA) for the construction of an air navigation facility. In 1959, a one-year renewable lease was granted to the CAA's successor, the FAA, for a 4.09 acre facility.

Subsequently, the FAA constructed a VORTAC (VHF Omn*i*-Range Tactical Navigation) station consisting of a 16-foot high cone, housing a repeating navigational signal, surrounded by an eight-foot high perimeter fence. Since beginning operation of its facility, the FAA lease has required that all subsequent facilities to be located on Koko Head first receive approval of the FAA to ensure that they will not interfere with FAA operations.

**Hawaiian Telephone Company:** In September, 1956, the City granted the Hawaiian Telephone company a deed for a 42,000 square foot parcel of land on the summit of Koko Head for a radio station site, together with road, utility and cable easements accessing the site. In 1959, the Hawaiian Telephone site was relocated to its present location on Koko Head.

**Honolulu Board of Water Supply:** In June 1960 the City granted a lease to the Board of Water Supply for a two acre on Koko Head for location of a water reservoir.



Koko Head Telecommunications Facilities

Hanauma Bay Nature Preserve

Figure 4-13

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Honolulu Police Department: On January 14, 1964, the FAA granted the use of a portion of its site to the Honolulu Police Department for the construction and operation of a radio relay station.

Federal Bureau of Investigation: On April 16, 1986, the City authorized the FBI to install equipment and an antenna at the existing HPD site on Koko Head. No new construction was involved.

#### 4.6.7 Scenic Lookouts

With the opening of Kalaniana'ole Highway in 1932, sightseeing at various roadside pullouts became a popular activity. (These areas were also used by fishermen for parking.) Over time, with the increase in traffic and concern for safety, several of the more informal pullouts have been blocked off with guardrails. Today this activity is limited to three scenic lookouts with improved parking areas; namely Halona Blowhole and Lookout, Lanai Lookout, and Kuapa Pond Lookout (Figure 4-11).

### 4.7 ROADS, DRAINAGE AND UTILITIES

#### 4.7.1 Roads and Traffic

Kalaniana'ole Highway, which runs through the center of the Koko Head Regional Park and Nature Preserve, provides the primary route of travel for users of the facilities at Hanauma Bay Nature Preserve, as well as for most users of other areas within the Regional Park. It also serves as the principal traffic route for vehicles traveling to and from East Honolulu and the Waimanalo area of Oahu, and is a major scenic route for tourist travel as well. Further, it is a major route for large trucks unable to use Pali and Wilson Tunnels, and as an alternative route in cases of emergency when other roads between the Windward side and central Honolulu are blocked or closed off. The highway is a two-lane roadway along its entire length within the Regional Park.

Direct access to Hanauma Bay Nature Preserve and three of the other five principal use areas in the Regional Park is from Kalaniana'ole Highway. (The three in addition to Hanauma Bay are the communications relay stations on Koko Head, the former Hawaii Job Corps Center site, and the Koko Head Shooting Complex - see Figure 4-11.) The three scenic lookouts within are Regional Park area are also located along Kalaniana'ole Highway.

The main access to the Koko Head District Park is from Anapalau Street, which connects with Lunalilo Home Road at a point approximately 1,600 feet north/mauka of its intersection with Kalaniana'ole Highway. Access to the Koko Crater Botanical Garden and Stables is off of Kealahou Street. Most traffic to these facilities reach Kealahou Street via Kalaniana'ole Highway, which intersects with this street approximately three-fourths of a mile from the Botanical Garden/Stables entrance.

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Data on existing peak-hour traffic conditions at five key intersections within and in the vicinity of the Park were gathered and analyzed for this project by Pacific Planning and Engineering, Inc (Figure 4-14). Their full report is provided in Appendix J.

Generally, it was found that traffic flowed smoothly during the study peak hours - weekdays between 6:00 a.m. and 8:00 a.m. and between 4:00 p.m. and 6:00 p.m., and Saturdays between 1:00 p.m. and 3:00 p.m. - at four of the five studied intersections, and along all of the roadways leading to the studied intersections. The only one where there were problems was at the entrance to Hanauma Bay Nature Preserve. Three problems were observed at this intersection:

- At times, stacked vehicles turning left from Hanauma Bay Road onto Kalaniana'ole Highway would block vehicles making a left turn from Kalaniana'ole Highway to Hanauma Bay Road;
- Vehicles turning left from Kalaniana'ole Highway to Hanauma Bay Road would sometimes enter the wrong access; and
- At times, vehicles making a left turn out of Hanauma Bay Road would edge out onto Kalaniana'ole Highway before turning, blocking on-coming traffic.

#### 4.7.2 Drainage

Existing drainage conditions in the two portions of the Koko Head Regional Park and Nature Preserve that will be impacted by the planned improvements are described below.

##### 4.7.2.1 Hanauma Bay Nature Preserve

Storm runoff from the parking and other paved areas in the upper portion of this park is directed into retention basins in the picnic area, where it percolates into the ground or evaporates. During heavier storms, overflow from the retention basins enters drains that direct flows over the cliff into the lower portion of the park, where the runoff percolates into the porous sand at the base of the cliff. This is the natural drainage course from the upper into the lower park area. During the most intense storms, the runoff may flow overland to the shoreline, eroding gullies through the beach sand.

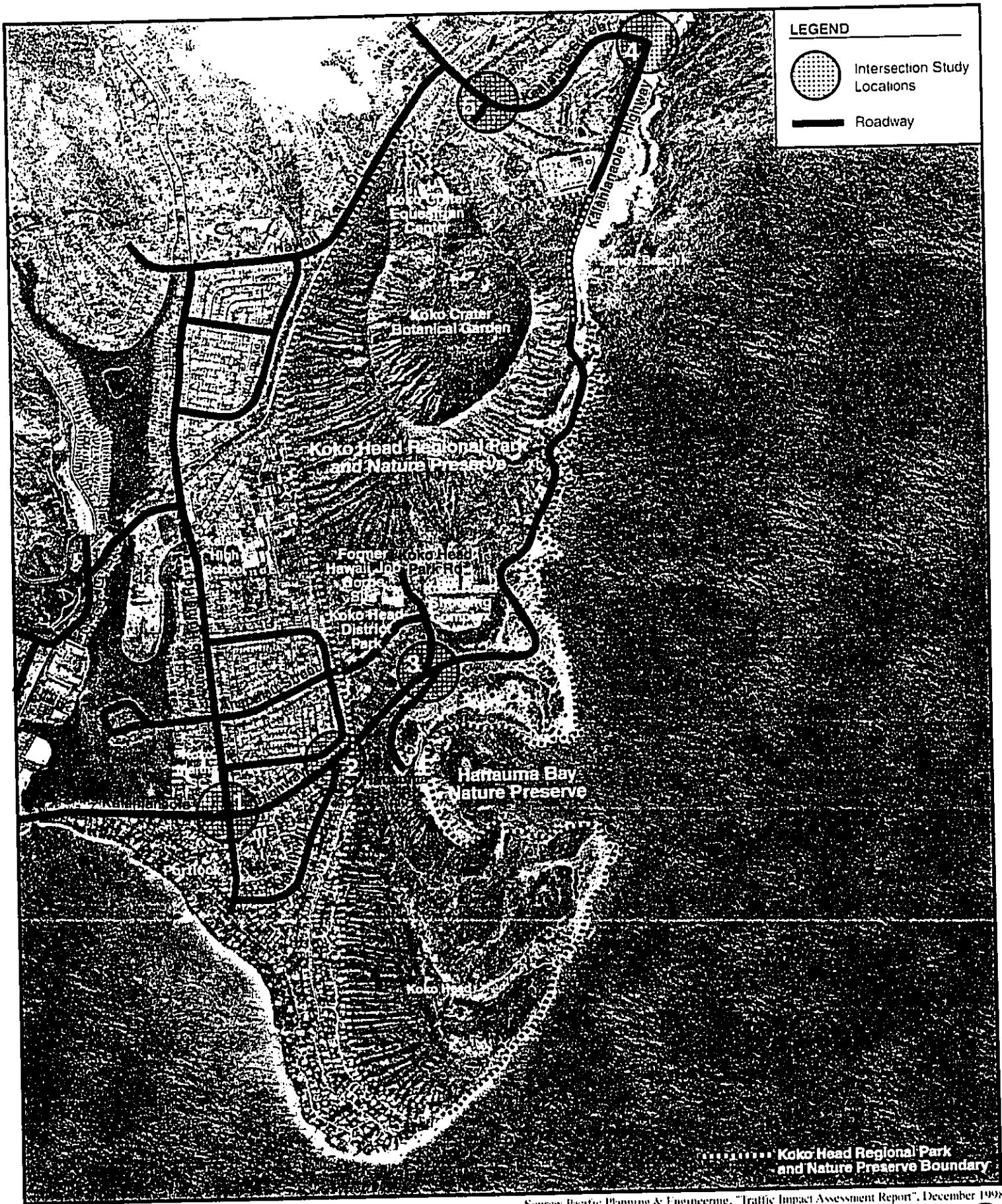
##### 4.7.2.2 Former Hawaii Job Corps Center Site

Storm runoff from this site and from Koko District Park sheet flows in a northwesterly direction into an existing concrete open channel that runs along the District/Regional Park's property line. This channel was built as part of the drainage system established to intercept runoff from the Park area when the adjoining residential area and Kaiser High School were developed.

#### 4.7.3 Water Supply

The Board of Water Supply (BWS) provides water service to Hanauma Bay Nature Preserve and all other activities and facilities in the Regional Park that require such service. These





Roadway Network and Intersection Study Locations  
 Koko Head Regional Park and Nature Preserve

Figure 4-14

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include Koko Head District Park, the former Hawaii Job Corps Center site, Koko Head Shooting Complex, and the Koko Crater Botanical Garden and Stables. ~~reference to the Botanical Garden not having a water system deleted.~~

Two BWS reservoirs are situated on the northwestern face of Koko Head. The Koko Head Reservoir has a capacity of 1.0 million gallons (MG), and the Koko Head 405 Reservoir has a capacity of 0.2 MG.

#### 4.7.3.1 Hanauma Bay Nature Preserve

Hanauma Bay Nature Preserve is supplied by an 8-inch line that runs directly from the Koko Head 405 Reservoir. Records indicate that water consumption ranges from 25,000 gallons per day (gpd) during the winter months to 50,000 gpd during the summer, with an average daily consumption of 37,000 gpd over a year-long period.

#### 4.7.3.2 Former Hawaii Job Corps Center Site

Water service to the former Hawaii Job Corps Center was provided from its own 4-inch water meter located at the Anapalau Street entrance to Koko Head District Park. (Water service to the District Park is provided by a separate 4-inch meter.) This meter still exists. ~~reference to this meter being available to provide service to the no longer proposed improvements at this site deleted.~~ Data on water usage when the Job Corps occupied the property is not available.

#### 4.7.4 Wastewater Collection, Treatment and Disposal

Wastewater treatment and disposal for Hanauma Bay, the Koko Head District Park, and the former Hawaii Job Corps Center site are handled by the privately owned and operated Hawaii Kai Regional Wastewater System. The Hawaii Kai Treatment Plant, located mauka of Sandy Beach, provides secondary level treatment. Following treatment, effluent from the plant is discharged through an ocean outfall that extends 3,000 feet offshore.

On-site cesspools are used to dispose of sewage at the Koko Head Shooting Complex and the Koko Crater Stables. The Koko Crater Botanical Garden does not have a wastewater treatment system or disposal services; staff use the facilities at the nearby Stables.

##### 4.7.4.1 Hanauma Bay Nature Preserve

At Hanauma Bay Nature Preserve, wastewater from the three lower area comfort stations and concession stand, and from the one upper area comfort station and the caretaker's residence, is collected and pumped to the existing Hawaii Kai Regional Wastewater System sewer main in Kalaniana'ole Highway. Prior to the installation of this system 1990, these facilities were served by individual cesspools.

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### 4.7.4.2 Former Hawaii Job Corps Center Site

As noted, the former Hawaii Job Corps facilities were also connected to the Hawaii Kai Regional Wastewater System. A gravity flow sewer line in Anapalau Street, which connects to the sewer main in Lunalilo Home Road, still exists. ~~reference to this line being available to provide service to the no longer proposed improvements at this site deleted.~~

### 4.7.5 Power and Communications

Electrical and telephone services are provided to all Park facilities requiring them by the Hawaiian Electric Company and the Hawaiian Telephone Company, respectively.

## 4.8 SOCIO-ECONOMIC CONDITIONS

The only confirmed residents of Koko Head Regional Park and Nature Preserve are the caretaker and his family at Hanauma Bay.

The number of full-time equivalent jobs at Hanauma Bay Nature Preserve is approximately 50. Included in this number are management, operations, maintenance and security personnel, lifeguards stationed at the Bay, and concession employees.

A small number of Department of Emergency Services personnel are stationed at the Water Safety Division field office, which is located on the former Hawaii Job Corps Center site, as are Parks Department personnel who work out of the District No. 1 maintenance facilities. ~~Honolulu Police Department officers stationed in the area also use one of the buildings on this site.~~

## **Section 5.0**

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### **Relationship to Existing Koko Head Regional Park and Hanauma Bay Nature Preserve Plans, Policies and Controls**

## 5.0 RELATIONSHIP TO EXISTING KOKO HEAD REGIONAL PARK AND HANAUMA BAY NATURE PRESERVE PLANS, POLICIES AND CONTROLS

### 5.1 OVERVIEW

An important consideration in evaluating the potential impacts of a proposed action on the environment is how it may conform to or conflict with approved or proposed land use plans, policies and controls for the affected area. In the case of the planned improvements to Hanauma Bay Nature Preserve, the evaluation of their relationships to various plans, etc. is presented in two separate sections in this EIS.

Specific park master plans prepared in the past by the City Department of Parks and Recreation for the overall Koko Head Regional Park and for Hanauma Bay Nature Preserve are discussed below in this Section. The relationships of the planned improvements to designated special districts and adopted rules and regulations for environmentally sensitive areas at Hanauma Bay are also discussed below. The applicable plans, special districts and regulations are:

- "Koko Head Park Master Plan", completed in January 1992;
- "Hanauma Bay Nature Park Master Plan", completed in May 1992 and updated in December 1996;
- "Hanauma Bay Marine Life Conservation District", established in 1967;
- "Hanauma Bay Rules and Regulations Relating to Visitor Use Levels and Controls", established initially in July 1990 and as subsequently amended in July 1998; and
- "Hawaii Job Corps Site Master Plan", completed in September 1995.

Evaluation of the relationships of the planned Nature Preserve improvements to adopted or proposed Federal, State and City and County land use plans, policies and controls is presented in the following Section 6.

### 5.2 KOKO HEAD [REGIONAL] PARK MASTER PLAN

As noted, this master plan was completed in January 1992. Its purpose was to focus on planning for the future of the Regional Park as a single resource, rather than as individual components. However, three major areas were excluded - Hanauma Bay Nature Preserve, Koko Crater Botanical Garden, and Koko Head District Park - because they were the subject of a recent (the Botanical Garden) or on-going (Hanauma Bay) master planning study, or are administered as a separate facility (the District Park).

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This plan includes a resource assessment and constraints analysis (much of which was used to prepare Section 4 of this EIS), goals and objectives, and a series of master plan options and recommendations. Summarized in the following paragraphs are the overall master plan goals, and the options and recommendations related to the areas that will be impacted by proposed actions.

5.2.1 Master Plan Goals

Four goals "are proposed to guide future management, development, and day to day operations" of the Park:

- Goal A: To preserve and enhance the natural character of Koko Head Regional Park.
- Goal B: To provide low-impact recreational opportunities in the Koko Head Regional Park that minimize impacts on landforms, flora and fauna.
- Goal C: To unify existing and future recreational activities in the park and provide greater linkage among them.
- Goal D: To emphasize and enhance the educational value of the park and its resources.

Relationship of the Proposed Actions - The specific purposes of the proposed new facilities at Hanauma Bay are to:

Contribute to the preservation and enhancement of the Bay's natural environment and marine ecosystem by lessening or making more low-impact the effects of existing uses on Hanauma Bay, and

Enhance the public's awareness, appreciation and enjoyment of the Nature Preserve's natural resources through the provision of a marine education center in the upper park area and an information kiosk in the lower bay area.

The first of these purposes relates to the implementation of Goals A and B, and the second to the implementation of Goal D. All improvements will be located in areas that have been previously improved for park use and none will adversely impact the natural character of the Nature Preserve. The natural character of the lower beach area will be enhanced, as called for in Goal A, by the removal of the existing large concession structure, relocation of the food concession to the upper park area, and placement of remaining uses in smaller and more appropriately designed structures that are dispersed and mostly sited in less visually intrusive locations.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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All planned improvements will be located and designed in a way that will have little if any impact on existing land forms, flora and fauna, as called for in Goal B. As just noted, all improvements will be in previously developed areas, and will involve little or no further changes to already altered land forms. Existing natural flora and fauna habitats will not be disturbed. As described in Section 3, new structures will be placed and designed in a manner that will blend into the existing landscape.

[paragraph referencing the no-longer-proposed shuttle transportation system, nature learning center on the Job Corps site, and Koko Crater funicular and summit lookout deleted.]

### 5.2.2 Master Plan Options and Recommendations

Master Plan options and recommendations related to both traffic and recreation improvements are presented in this plan, and are grouped according to the following eight geographic areas: Kalaniana'ole Highway, Kahauloa Crater (Koko Head Shooting Complex), Sandy Beach, Unimproved Sandy Beach Area, (the former) Hawaii Job Corps Center Area, Koko Crater, Koko Crater Stables, and Koko Head. Only one of these areas - the former Hawaii Job Corps Center site - would be impacted by the planned improvements discussed in this EIS. Kalaniana'ole Highway will not be directly affected by any of the planned improvements, but changes in traffic conditions could result from their completion. Recommendations in the master plan for these two areas are discussed below.

#### 5.2.2.1 Kalaniana'ole Highway

The basic problem that this master plan attempts to address is the serious conflicts that result from the segment of the highway through the Regional Park serving both as one of the most important scenic routes on Oahu and as a heavily traveled through route for traffic between Hawaii Kai and Waimanalo. Suggested options range from building a new mauka by-pass highway and converting the section of the existing roadway through the Regional Park to a 15 mile-per-hour (mph) one-way scenic drive, to only minor roadway improvements such as widening at critical points, shoulder widening where possible, and improvements to guardrails and signs.

Construction of a new by-pass roadway from Lunalilo Home Road to Kalaniana'ole Highway near Queens Beach, and converting the section of the existing roadway through the Park to a 25 mph one-way scenic drive, was recommended in the 1992 master plan. Also recommended were the addition of a second left-turn lane from Kalaniana'ole Highway to Lunalilo Home Road, and the installation of a traffic signal at the Kealahou Street-Kalaniana'ole Highway intersection. (The latter improvement has since been completed.)

Relationship of the Proposed Actions - As noted, none of the improvements currently being proposed for Hanauma Bay Nature Preserve will directly impact Kalaniana'ole Highway. As discussed in Section 7, the planned improvements are also not expected to result in any substantive changes in current overall attendance levels at the Nature Preserve, the mix of park

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

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users, or the patterns of their use. Thus, existing traffic volumes on Kalaniana'ole Highway should not be affected. This highway is expected to have sufficient capacity to accommodate projected future traffic volumes with or without the planned improvements.

The by-pass road proposed in the 1992 Master Plan would involve both the significant widening of existing sections and construction of as-yet unbuilt sections of Hawaii Kai Drive in the vicinity of the Regional Park. Right-of-way reservations for a major new thoroughfare (Hawaii Kai Drive), which would extend through the entire length of the Hawaii Kai community and pass mauka of Koko Head Regional Park and Nature Preserve, were included as part of the master plan for this region that was prepared in the 1960's.

However, this part of the master plan has not been fully implemented, and parts of the right-of-way have since been abandoned and developed with other uses. At present, the State Department of Transportation has no plans to complete even those segments of the thoroughfare where right-of-way reservations remain available. The very high costs of this roadway make it impossible for the City and County to itself fund these improvements.

~~Paragraph related to the no longer proposed intersection improvements at the Hanauma Bay Nature Preserve entry deleted.~~

Given the absence of the proposed by-pass highway, the recommended second left-turn lane for traffic moving from Kalaniana'ole Highway to Lunalilo Home Road will not be needed to accommodate anticipated future traffic volumes. The recommended traffic signal at the Kealahou Street-Kalaniana'ole Highway intersection has been installed.

~~In conclusion, the scope of the planned improvements at Hanauma Bay Nature Preserve are not at a level that indicates a need to consider possible alternatives for improving Kalaniana'ole Highway at this time. Any such improvements should be considered in the context of a comprehensive update of the Koko Head Regional Park's master plan. A community-based effort to prepare a new master plan for Koko Head Regional Park and Nature Preserve is scheduled to begin later this year.~~

#### 5.2.2.2 Former Hawaii Job Corps Center Area

It is pointed out in the 1992 Master Plan that the use of this area by a non-recreational activity is not consistent with the natural character of the Regional Park. Termination of the site's availability for the Hawaii Job Corps Center, once the existing lease expired, was recommended. The Job Corps vacated the site and moved to a new facility in Waimanalo in 1995.

Two options for the future use of this area were offered:

- Use part of the site for the by-pass highway right-of-way (see discussion in Section 5.2.2.1 immediately above), and the remaining portion as an expansion area for the Koko Head District Park.



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- If the by-pass highway option is not implemented, use the existing facilities for a variety of purposes, including possibly a "visitor destination center", scouting and/or high school leadership camps, and/or staging areas for organized and self-directed hikes. Any remaining underutilized portions of the site are recommended for integration into the District Park.

Recommended in this master plan is utilization of the site as a "new administrative center" for the Regional Park. Such a center would include "meeting rooms, educational programs, performing arts, and recreational facilities for the islandwide population, similar in scope to McCoy Pavilion at Ala Moana Park". Also recommended is the improvement of a parking area near the base of the abandoned summit railway for use by hikers.

**Relationship of the Proposed Actions -** The only improvements that are currently planned for the former Hawaii Job Corps Center site are the demolition of the existing unoccupied and dilapidated buildings, and minimal regrading and grassing of the disturbed areas. This is primarily being done to remove a potential hazard, but will also facilitate the implementation of future proposals to use for this area for park purposes. Community based efforts to prepare new master plans for both Koko Head District Park and Koko Head Regional Park and Nature Preserve are scheduled to begin later this year.

~~section discussing no longer proposed improvements on Koko Crater, deleted.~~

### 5.3 HANAUMA BAY NATURE PARK MASTER PLAN

This master plan was completed in May 1992. It was further updated in December 1996 in order to incorporate minor design modifications to several improvements, and to establish an admission and parking fee structure for park users. The purposes of preparing this master plan were to:

- Examine problems associated with high levels of use at the park;
- Document existing and recommend new management controls; and
- Establish a planning framework for future park improvements.

The master plan includes a thorough documentation of existing park resources and facilities; an assessment of existing conditions and identification of park usage, facility and management problem areas and concerns; goals, objectives and policies related to the future use and development of the park; and specific recommendations for improvements to facilities and management practices. Summarized below are the goals and objectives, and the recommended park improvements.

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### 5.3.1 Master Plan Goals and Objectives

Three goals are included in the master plan. The first two were originally set forth in the 1977 "Hanauma Bay Beach Park Site Development Plan and Report" and are retained as valid and appropriate expressions of the City's vision for Hanauma Bay's long-term future. The third goal establishes a long-term theme for park usage. The goals are:

- A. Continue to preserve and enhance the natural qualities and opportunities unique to Hanauma Bay and its environs.
- B. Optimize the use of Hanauma Bay as an important recreational resource for the people of the State of Hawaii.
- C. Promote public education and appreciation of Hanauma Bay Nature Park's natural environment by providing opportunities for the safe enjoyment of park resources.

The objectives and policies included in the master plan provide guidance as to how these goals should be achieved. A major focus is on resolving park usage and management concerns. The seven objectives are:

- 1. Limit overall park user volumes as a means of controlling impacts on natural resources and park facilities.
- 2. Better match intensities of park usage with available park resources.
- 3. Provide new park facilities and improve existing facilities to reduce their impact on natural park resources.
- 4. Achieve safer participation in park activities.
- 5. Foster park user respect for natural resources and park facilities.
- 6. Develop informational bases on which to formulate future park policy.
- 7. Establish public education and awareness as a primary purpose of park policy.

Relationship of the Proposed Actions – All of the planned improvements at Hanauma Bay Nature Preserve ~~reference to Job Corps site deleted~~ will be consistent with and contribute toward implementation of these objectives and policies. The new marine education center ~~in the upper park area and the information kiosk and lifeguard equipment storage facility in the lower bay area~~ represent major steps toward implementing Goal C and Objectives ~~and~~ 7. It will be especially important to achieving Objective 5. Emphasizing activities in the upper park area, and correspondingly decreasing them in the lower bay area with such improvements as relocating the snack bar to the upper area, will help to implement Goal A and Objectives 2 and 3.

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[bullet items related to the no-longer-proposed relocation of the Hanauma Bay parking, shuttle to get to Hanauma Bay, and new access controls at Hanauma Bay, all deleted.]

### 5.3.2 Recommended Facility Improvements

Nineteen (19) specific recommendations for improvements to the park are provided in the master plan. A four-phase implementation program is proposed. The recommendations for the upper park area emphasize regulating park user volumes at the entry, controlling access into the lower bay area, accommodating sightseeing, and serving both as the primary park user orientation area and as an interpretive/education center. Those for the lower bay area place an emphasis on safely and comfortably accommodating park users in as natural a setting as possible, with a minimal amount of support activities and structures to house them.

A Special Management Area (SMA) Use Permit and a State Conservation Use Permit allowing the City to proceed with these improvements were issued in July and November 1993, respectively. Several, but not all, of them have subsequently been completed. Listed below are the 19 recommended improvements and the status of their completion.

Phase I Improvements – These focus on accommodating increased usage of the upper park for sightseeing, and on controlling access to the lower park.

1. *Construct a new visitor center/concession facility and shuttle turnaround in the upper park area.* New visitor center/concession facilities and surrounding plaza were completed in 1996. However, with the establishment of entry fees at about the time construction of these facilities was nearing completion, they immediately became inadequate and obsolete. This was because they were not designed to accommodate the added staff, the handling of significant amounts of cash, and the extensive park visitor queuing area required in connection with the entry process. One of the results is that the concession facility is being used for added staff space and as a small visitor exhibit/education center rather than as a snack bar. (The equipment and furnishings necessary to operate it as a snack bar were never installed.) The beach tram turn-around also has not been completed.
2. *Reconfigure the parking lot to add handicapped stalls and relocate the loading/unloading zone.* These have been completed.
3. *Convert the existing loading/unloading zone into a moped/bicycle parking area.* This has been completed.
4. *Replace the upper park area comfort station.* This has been completed.
5. *Relocate the caretaker's quarters.* This has been completed.
6. *Construct a new employee's parking lot.* This has been completed.

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Phase II Improvements – These address planned changes in the lower bay area, including the relocation of some major facilities to the upper park area, further implementation of the public education theme, and public safety.

7. *Demolish the existing concession/visitor center.* This has not been done. The lower bay area food concession continues to operate, since the new facility in the upper park area is not operational.
8. *Replace the main comfort station (#1) near the existing concession/visitor center.* This has not been done.
9. *Construct a shuttle turn-around area with emergency ramp.* The turn-around design was modified subsequent to issuance of the 1993 SMA Use Permit, so a new permit for the modified design was obtained in 1997. However, this improvement has not yet been done.
10. *Construct an auxiliary beach information pavilion/snorkel gear rental concession.* This has not been done. The existing facilities continue to be used for these purposes, as well as for the food concession.

Phase III Improvements – These emphasize improvements needed to control vehicular access into the park and improve pedestrian safety on access roads.

11. *Re-stripe, construct islands, and add a gate at the park entrance.* Re-striping and installation of a gate have been completed. The "island areas" have been striped rather than constructed and landscaped.
12. *Construct a pedestrian walkway from Kalanianaʻole Highway.* This has been completed.
13. *Construct traffic management kiosks.* With the adoption of a parking and entry fee system in 1996, a new SMA Use Permit was obtained in 1997 to allow the construction of collection booths. Permanent facilities have not been constructed, but portable kiosks have been installed.
14. *Construct a separate beach access pedestrian walkway.* This has not been done.
15. *Renovate comfort station #2.* This has been completed.

Phase IV Improvements – These will be completed as funding is available.

16. *Renovate comfort station #3.* This has been completed.
17. *Construct a pedestrian promenade/maintenance path from the shuttle turn-around area to comfort station #3.* This has not been done.
18. *Construct a water safety observation post along the cliff's edge.* This has not been done.
19. *Complete landscape improvements (groundcover, irrigation and plantings) as needed throughout the improved park areas.* This has been partially completed.

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Relationship of the Proposed Actions - ~~[introductory paragraph deleted]~~ Specific improvements listed above that will be implemented as part of the proposed actions discussed in this EIS include the following:

- A new marine education center with controlled entry and ticketing area, and a snack bar concession facility, in the upper park area (#1 and #13);
- Demolition of the existing concession/visitor center in the lower bay area (#7);
- A new auxiliary beach information kiosk and a snorkel gear rental concession facility in the lower bay area (#10);
- Replacement of the main comfort station in the lower bay area (#8);
- New beach shuttle turn-arounds at both the upper and lower ends of the route (#1 and #9);
- ~~[item listing reconstruction of Kalamanaole Highway entrance deleted]~~
- ~~[A new traffic management kiosk/collection booth at the entry to the private automobile parking lots (#13); and]~~
- Landscaping in all areas being improved (#19).

There are three of the recommended improvements that have not been done and are not included as part of these proposed actions:

- ~~[item listing traffic management kiosks as not being a proposed action deleted]~~
- *A separate beach access pedestrian walkway (#14).* ~~Current plans are to instead continue joint pedestrian and beach tram use of the existing beach access road and improve safety by considering replacement of the existing beach tram with a narrower and more suitably designed vehicle. This will provide more room for pedestrians on the existing roadway and improve the effectiveness of measures used to maintain separate pathways for pedestrians and the tram. Improved pavement markings and other measures will be used to clearly designate separate portions of the roadway for pedestrian and tram use. Continued joint use of the existing roadway~~ will also avoid further significant physical and visual disruptions to the natural character of the cliffside due to construction of a separate path, as well as the expense of constructing it.
- *A pedestrian promenade along the rear or interior edge of the beach (#17).* The desire to avoid where possible any further disturbances to Hanauma Bay's special natural beauty raises questions as to the compatibility of a beach promenade with this intended character. In addition, given efforts to ~~manage the number of people in the lower bay area and their impacts on~~ the bay's fragile marine ecosystem, a paved promenade intended to accommodate significant pedestrian traffic appears to be neither necessary nor consistent with this management policy. As a result, plans for the promenade have been put on hold for the present. They may be reconsidered in the future if found to be appropriate.

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- A water safety observation post along the cliff's edge (#19). Provision of this facility is not included in this project scope because no permanent construction or major alteration of the existing terrain is needed in order to accommodate it. Rather, at such time as funding is made available to staff this new post, a suitably designed lifeguard-type stand that has been fabricated elsewhere can be installed. This should not require CIP funding or SMA and Conservation District Use Permits. If any design that requires these approvals is decided upon in the future, the necessary applications should be processed at that time.

[section referencing Hawaii Job Corps Site Master Plan relocated to end of chapter.]

### 5.4 HANAUMA BAY MARINE LIFE CONSERVATION DISTRICT

This district covers the submerged lands and overlying waters of Hanauma Bay. As noted, it was established in 1967. Its purpose is to preserve and protect the marine environment and resources in the Bay. This is primarily done through prohibitions on potentially damaging activities, such as any form of fishing and the taking or altering of coral and other geologic features. Boating is also prohibited in the Bay under separate rules established by the Harbors Division of the State Department of Transportation.

Relationship of the Proposed Actions – None of the planned improvements will have any adverse impacts on the marine environment or water quality in Hanauma Bay. On the contrary, several improvements such as removal of the existing snack bar/concession building and reconstruction of the main comfort station in the lower bay area should help to reduce any existing adverse impacts that may be occurring from the current use of these facilities.

### 5.5 HANAUMA BAY RULES AND REGULATIONS

"Rules and Regulations Related to Visitor Use Levels and Controls at Hanauma Bay Beach Park" were initially adopted by the City on July 12, 1990. These rules have successfully utilized controls over access and parking as the primary means of reducing the then very high level of park usage and its impact on park resources. Related controls, as amended through July 1998, are summarized in Table 5-1, which is provided at the end of this section.

Relationship of the Proposed Actions – The only change in the existing Rules and Regulations that may be necessary to implement these proposed actions is to add the requirement that all Nature Preserve visitors wishing to go to the lower bay area attend a resources awareness training session at least once every 12 months. Annual passes would be issued to those completing the training that allow them to bypass the training and to go directly down to the lower bay area.

In addition to this change, carrying capacity studies of the bay area are currently being conducted. Once completed these studies could, depending on the findings, result in further rules modifications in order to implement any applicable recommendations.

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No other changes to the existing Rules and Regulations are needed or proposed in connection with the activities that will be accommodated in the planned new facilities. Existing fees for parking (\$1.00 per car) and non-resident entry (\$3.00 per adult) are expected to remain at their current levels. The current policy of closing the Nature Preserve to the public on Tuesdays will be maintained.

### 5.6 HAWAII JOB CORPS SITE MASTER PLAN

This master plan was completed in September 1995, at which time the Hawaii Job Corps Center was in the process of relocating its operations to new facilities in Waimanalo. The purpose of the plan was to establish a basic policy direction for the future use of the site and provide a framework for specific decisions on the development of new recreational facilities.

The master plan calls for utilizing the site for the expansion of Koko Head District Park. Recommended new recreational facilities and areas include:

- target archery and field archery facilities, which would be relocated from Kapiolani Park and Kapolei Regional Park, respectively;
- an area for frisbee golf; and
- passive recreational areas and pathways for picnics, walking and jogging, roller bladers and bicyclists, etc.

Recreational facilities that would be retained include the existing ballfield, which would be upgraded for multi-purpose use and include softball and soccer fields, and the existing playcourts. It is also recommended that some of the existing buildings be retained and used to house some or all of the other activities that are currently using the site. These include the Department of Parks and Recreation's Park District No. 1 baseyard facilities for grounds maintenance and mobile mowing crews, the Department of Emergency Services Water Safety Division field office, and the office space being used by the Honolulu Police Department.

Relationship of the Proposed Actions - included in this project is a proposal to demolish all of the existing dilapidated buildings at this site except those occupied by the Park District's baseyard facilities. Coe's Memorial Ballfield would remain as is. The buildings occupied by the Ocean Safety Division field office and HPPD will be demolished, and these users will be relocated to other City facilities.

The disturbed areas where the demolished buildings were located would be rough graded as necessary and planted with grass. No new facilities are planned for this site.

As noted earlier, demolition is proposed primarily to remove a potential hazard. It will also facilitate the implementation of future proposals to use of this area for park purposes. Community-based efforts are scheduled to begin later this year as part of the development of new master plans for both Koko Head District Park and Koko Head Regional Park and Nature Preserve are scheduled to begin later this year.

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**TABLE 5-1  
Hanauma Bay Rules And Regulations  
As Amended Through July 16, 1998**

**Section 5. Times of Use.**

- (a) Except holidays, Hanauma Bay Nature Preserve shall be closed to visitors every Tuesday.
- (b) Hanauma Bay Nature Preserve shall be closed between the hours of 7:00 p.m. to 6:00 a.m. from the Memorial Day weekend through Labor Day weekend. From the day after the Labor Day weekend through the day prior to the Memorial Day weekend the hours of closure shall be 6:00 p.m. through 6:00 a.m.
- (c) Hanauma Bay Nature Preserve may also be closed to all visitors when:
  - (1) The park or park facilities sustain damages; for scheduled or ongoing construction; repairs or maintenance activities; or because of other reasons.
  - (2) A state of emergency is declared by the Director or other proper authorities.
  - (3) Natural or civil disturbances, including but not limited to, tsunamis, floods, earthquakes, storms, riots, demonstrations and employee strikes occur or threatens to occur.

**Section 6. Fees and Admission to Lower Level.**

- (a) The following fees shall be assessed for entrance to the Hanauma Bay Nature Preserve:
  - (1) For nonresidents of Hawaii, 13 years of age and older, to enter the lower level (beyond the scenic lookout): \$3 per person.
  - (2) For vehicles entering the preserve, a \$1 parking fee shall be assessed; provided that this parking fee shall be refunded to all vehicles departing from Hanauma Bay Nature Preserve within 15 minutes of their entry.
- (b) The Director is authorized to waive the fees provided by this section and to allow entry of any person to the Hanauma Bay Nature Preserve as part of an educational or promotional program or package made available or authorized by the City.
- (c) Hawaiians entering the Hanauma Bay Nature Preserve to exercise their traditional and customary rights for subsistence, cultural and religious purposes shall be exempt from paying admission fees; provided that nothing in this subsection shall be construed as allowing activities which may be otherwise prohibited by the Hawaii Revised Statutes or administrative rules of the Department of Land and Natural Resources.
- (d) In order to protect the quality of Hanauma Bay Nature Preserve, no more than 2,000 people may access the lower level of Hanauma Bay Nature Preserve at any one time. This number may be adjusted based on future studies or reports.



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TABLE 5-1 (Continued)  
Hanauma Bay Rules And Regulations

Section 7. Public Parking Lot.

- (a) The use of the parking lot shall be limited to non-commercial and U-drive passenger vehicles and authorized permittees who have obtained commercial filming, commercial scuba and snorkeling permits, in accordance with the rules governing the activities. Upon request, the permittees shall show the permits to any authorized representative of the City.
- (b) Parking shall be limited to the number of parking stalls marked within the paved area of the parking lot.
- (c) Vehicles shall be denied entry into the parking lot when full.
- (d) All applicable fees shall be assessed in accordance with section 6 of these rules and regulations.

Section 8. Commercial Vehicle Lot and Upper Level Scenic Viewing Areas.

- (a) Commercial tour company vehicles are authorized to use the commercial vehicle lot and scenic viewing areas located in the upper level of the Hanauma Bay Nature Preserve.
- (b) Taxis and vehicles displaying a disabled parking placard shall be allowed to drop off and pick up patrons in designated areas of the commercial vehicle lot, provided that the taxis and vehicles displaying a disabled parking placard comply with all applicable Statutes, City Ordinances and Public Utilities Commission rules and regulations.
- (c) Use of the commercial vehicle lot and scenic viewing areas shall be limited to the activities of sightseeing and picture-taking.
- (d) Sightseeing and picture taking activities in the commercial vehicle lot shall be limited to a period of fifteen (15) minutes and confined to the upper level of Hanauma Bay Nature Preserve.
- (e) The use of the lower level of Hanauma Bay Nature Preserve by commercial tour companies and their patrons shall be prohibited unless authorized under City concession.
- (f) The Department reserves the right to control the numbers of commercial vehicles, including taxis, shuttles, limousines, buses, in the commercial vehicle lot.
- (g) Vehicles shall be denied entry into the commercial vehicle lot when congestion presents a safety hazard.

Source: *Rules and Regulations Relating to Visitor Use Levels and Controls at Hanauma Bay Nature Preserve*, as amended through July 16, 1998.

**Section 6.0**

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Relationship to Federal, State, and City and County of  
Honolulu Land Use Plans, Policies and Controls

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### 6.0 RELATIONSHIP TO STATE AND CITY AND COUNTY OF HONOLULU LAND USE PLANS, POLICIES AND CONTROLS

#### 6.1 U.S. GOVERNMENT PLANS AND CONTROLS

The federal government has no direct jurisdiction over property within the boundaries of ~~Hanauma Bay Nature Preserve~~ of Koko Head Regional Park and Nature Preserve. However, two separate parcels within the Regional Park are administered by Federal agencies and are, therefore, subject to limited federal control. In addition, development seaward of the low water line requires approval from the U.S. Army Corps of Engineers.

An area at the summit of Koko Head is leased to the Federal Aviation Administration (FAA) for the operation of a VORTAC (VHF Omni-Range Tactical Air Navigation) facility which serves as a navigational aid to pilots (Figure 4-13, page 4-36). The VORTAC facility consists of a 16-foot high conical structure surrounded by an 8-foot high perimeter fence. Pursuant to Part 77, Subchapter B, of FAA Regulations, structures proposed to be built within 1,500 feet of a VORTAC facility must be approved by the FAA.

Relationship of the Proposed Actions - None of the planned improvements will impact or be within 1,500 feet of the VORTAC facility. ~~Reference to proposed aquarium at Hanauma Bay deleted.~~ There will be no seaward improvements that would require a permit from the U.S. Army Corps of Engineers.

#### 6.2 STATE OF HAWAII PLANS AND CONTROLS

##### 6.2.1 Hawaii State Plan and Functional Plans

###### 6.2.1.1 Hawaii State Plan

It is the goal of the Hawaii State Plan to achieve "a desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people." Objectives and policies of the State Plan which are relevant to Koko Head Regional Park and Nature Preserve include the following:

*Section 226-11 Physical Environment – Land-based, Shoreline, and Marine Resources.*

- (a) OBJECTIVE: Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:
- (1) Prudent use of Hawaii's land-based, shoreline, and marine resources.
  - (2) Effective protection of Hawaii's unique and fragile environmental resources.

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- (b) To achieve the land-based, shoreline, and marine resources objectives, it shall be the policy of this State to:
- (1) Exercise an overall conservation ethic in the use of Hawaii's natural resources.
  - (2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.
  - (3) Take into account the physical attributes of areas when planning and designing activities and facilities.
  - (4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.
  - (5) Encourage the protection of rare or endangered plant and animal species and habitats native to Hawaii.
  - (8) Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.

#### *Section 226-12 Physical Environment – Scenic, Natural Beauty, and Historic Resources*

- (a) **OBJECTIVE:** Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawaii's scenic assets, natural beauty, and multicultural/historical resources.
- (b) To achieve the scenic, natural beauty, and historic resources objective, it shall be the policy of this State to:
- (1) Promote the preservation and restoration of significant natural and historic resources.
  - (3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

#### *Section 226-13 Physical Environment – Land, Air and Water Quality*

- (a) **OBJECTIVE:** Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:
- (1) Maintenance and pursuit of improved quality in Hawaii's land, air, and water resources.
  - (2) Greater public awareness and appreciation of Hawaii's environmental resources.

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- (b) To achieve the land, air, and water quality objectives, it shall be the policy of this State to:
- (1) Foster educational activities that promote a better understanding of Hawaii's limited environmental resources.
  - (2) Promote the proper management of Hawaii's land and water resources.
  - (8) Foster recognition of the importance and value of the land, air and water resources to Hawaii's people, their cultures and visitors.

#### *Section 226-23 Socio-Cultural Advancement - Leisure*

- (a) **OBJECTIVE:** Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.
- (b) To achieve the leisure objective, it shall be the policy of this State to:
- (2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, recreational needs of all diverse and special groups effectively and efficiently.
  - (4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historic, geological, or biological values while ensuring that their inherent values are preserved.
  - (5) Ensure opportunities for everyone to use and enjoy Hawaii's recreational resources.
  - (6) Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.
  - (10) Assure adequate access to significant natural and cultural resources in public ownership.

Relationship of the Proposed Actions - All planned improvements will be consistent with and contribute to the implementation of these objectives and policies. Their basic intent is to support prudent use and management of natural resource areas in Hanauma Bay Nature Preserve for recreational and educational purposes. New facilities are being planned and designed in a manner that takes into account and is compatible with the physical attributes of the different areas within the Nature Preserve, and that avoids any costly or irreparable environmental damage.

'Ihi'ihilauea Crater on Koko Head, which provides an important habitat for the endangered 'ihi'ihii fern, will not be impacted by any of the planned improvements, and will continue to be protected. Existing views and vista points will also not be impacted, and will be preserved as

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they are now. [reference to enhancement of view opportunities by proposed Koko Crater summit funicular and viewing platform deleted.]

### 6.2.1.2 State Recreation Functional Plan

Most of the objectives, policies and implementing actions in this functional plan deal with ways to expand public recreational resources that do not directly relate to the proposed improvements at Hanauma Bay Nature Preserve. However, one of the four issues addressed under the general issue area of "Ocean and Shoreline Recreation" is particularly relevant - namely, saturation of beach park capacity. The relevant objective, policy and implementing actions are:

**OBJECTIVE I-A:** Address the problem of saturation of the capacity of beach parks and nearshore waters.

**Policy I-A(3):** More aggressively manage and control the use of existing beach parks.

**Implementing Action I-A(3)a:** Develop and implement an ongoing capacity analysis program, including beach counts and analyses to determine appropriate uses and the maximum number of allowable users at a facility (carrying capacity or "limits of acceptable change").

**Implementing Action I-A(3)b:** Identify heavily stressed beach parks and nearshore ocean areas, prioritize them in terms of need for action, carry out capacity analyses, determine appropriate activities, set limits, and develop measures to control use, such as permits, user fees, limiting the number of users, etc.

**Relationship of the Proposed Actions** - By the late 1980s, usage of Hanauma Bay had reached levels that were seriously stressing the natural resources and environment. As a result, the City and County beginning in 1990 have instituted a variety of management regulations and practices that have reduced and made it possible to effectively reduce and control patronage to a level of use that avoids serious or permanent damage to the Nature Preserve's ecosystems. These include closing off vehicular access once the parking lots are filled, strictly enforcing no parking regulations in other areas, limiting the number of snorkel and dive tour permits, closing the Nature Preserve at regular weekly intervals for maintenance. These practices, which have significantly reduced the daily visitor traffic, will be maintained.

There are no plans for park improvements or management practices that would increase the number of visitors to the Nature Preserve. The major changes expected to be a reduction in the collective impact of individual park visitors on Hanauma Bay's marine ecosystem. This will result from the education, awareness, and understanding gained by visitors from having to attend resource awareness training sessions and having the opportunity to view and discuss exhibits and displays with staff and volunteer docents. It will also result from removing from

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~~the lower bay area uses like the snack bar that do not need to be there. All improvements are intended to help to protect and maintain the Nature Preserve's natural resources.~~

### 6.2.2 State Conservation District Regulations

Pursuant of Chapter 203, Hawaii Revised Statutes, the State Land Use Commission has established the boundaries for three State Land Use Districts used on Oahu: Urban, Agriculture and Conservation. All of Koko Head Regional Park and Nature Preserve, including Hanauma Bay Nature Preserve, is contained within a Conservation District (Figure 6-1).

The State Board of Land and Natural Resources is responsible for the regulation of land uses within the Conservation District. It has established four types of resource subzones (general, resource, limited and protective), designated subzone areas within the various Conservation Districts based on their resource characteristics, and adopted regulations identifying permitted uses and permitting requirements. The subzone designations for the ~~area occupied by Hanauma Bay Nature Preserve and surrounding areas within the~~ Koko Head Regional Park are indicated on Figure 6-2. Described below are the subzone objectives and types of included areas. Permitted uses are listed in Table 6-1.

Protective Subzone (P): The objective of this subzone is to protect valuable resources in such designated areas as restricted watersheds, marine, plant, and wildlife sanctuaries, significant historic, archaeological, geological, and volcanic features and sites; and other designated unique areas.

Areas Included:

- Lands and waters necessary for protecting watersheds, water sources, and water supplies.
- Land and waters necessary for the preservation and enhancement of designated historic or archaeological sites and designated sites of unique physiographic significance.
- Areas necessary for preserving natural ecosystems of native plants, fish, and wildlife, particularly those which are endangered.

Limited Subzone (L): The objective of this subzone is to limit uses where natural conditions suggest constraints on human activities.

Areas Included:

- Land susceptible to floods and soil erosion, lands undergoing major erosion damage and requiring corrective attention by the county, state, or federal governments.
- Land necessary for the protection of the health and welfare of the public by reason of the land's susceptibility to inundation by tsunami and flooding or to volcanic activity and landslides which incorporate a general slope of 40 percent or more.

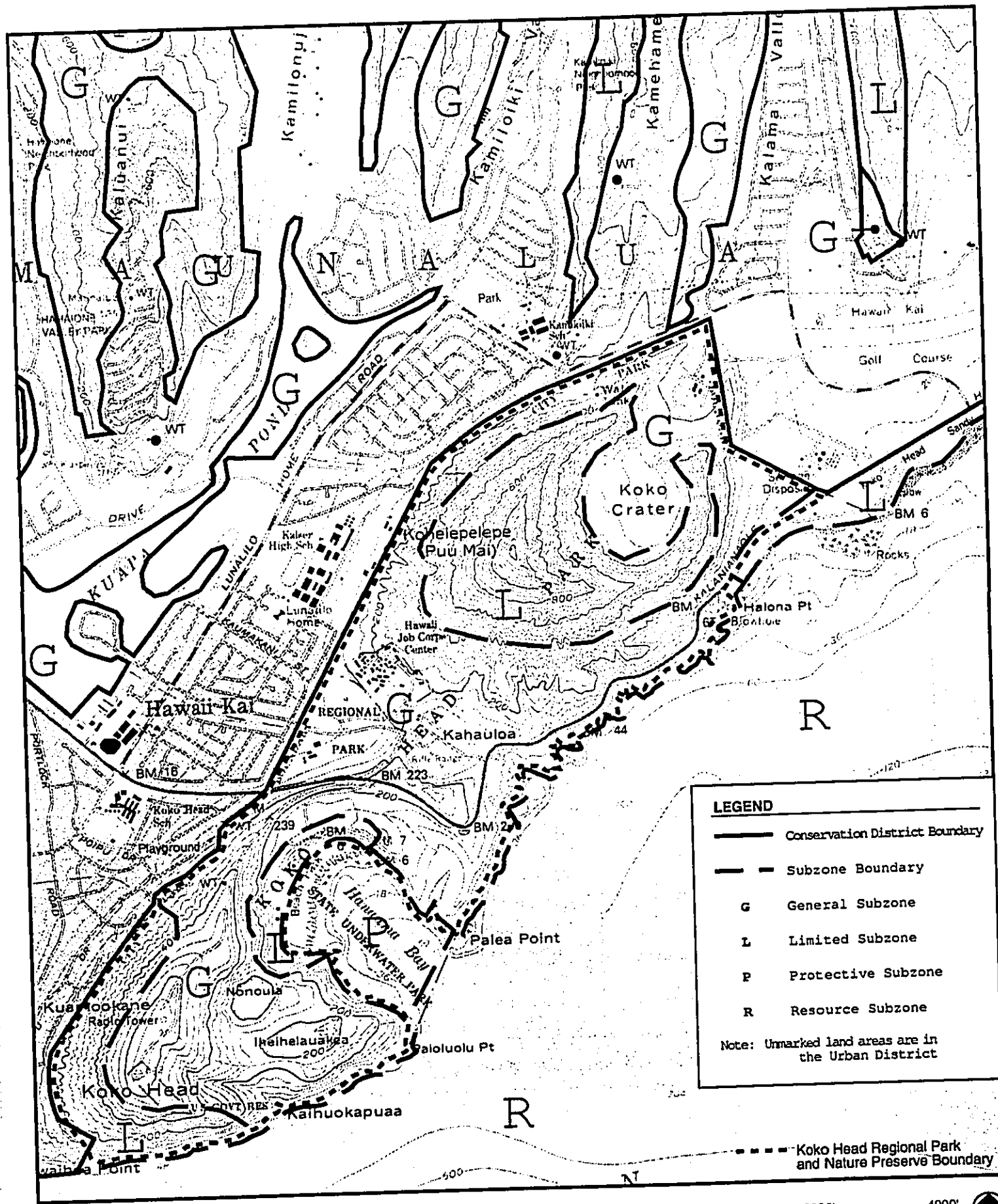


State Land Use Districts

Koko Head Regional Park and Nature Preserve

Figure 6-1





State Conservation District Subzones  
 Koko Head Regional Park and Nature Preserve

Figure 6-2

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<p align="center"><b>TABLE 6-1</b>  <b>Permitted Uses Within State Conservation District Subzones</b></p>	
Protective (P) Subzone	<ul style="list-style-type: none"> <li>Data Collection</li> <li>Fishponds</li> <li>Kuleana Land Use</li> <li>Landscaping, Removal of Noxious Plants</li> <li>Moorings and Aids to Navigation</li> <li>Public Purpose Uses</li> <li>Sanctuaries</li> <li>Signs</li> <li>Structures, Existing</li> <li>Structures, Accessory</li> <li>Subdivision of Consolidation of Property</li> <li>Tree Removal</li> </ul>
Limited (L) Subzone	<ul style="list-style-type: none"> <li>Uses in Protective Subzone</li> <li>Agricultural</li> <li>Botanical Gardens and Private Parks</li> <li>Erosion Control</li> <li>Landscaping and Removal of Noxious Plants</li> <li>Seawalls and Shoreline Protection</li> <li>Single Family Residence</li> <li>Structures, Accessory</li> </ul>
Resources (R) Subzone	<ul style="list-style-type: none"> <li>Uses in Protective and Limited Subzones</li> <li>Aquaculture</li> <li>Artificial Reefs</li> <li>Astronomy Facilities</li> <li>Commercial Forestry</li> <li>Landscaping</li> <li>Marine Construction</li> <li>Mining and Extraction</li> </ul>
General (G) Subzone	<ul style="list-style-type: none"> <li>Uses in Protective, Limited &amp; Resource Subzones</li> <li>Open Space</li> <li>Land Use Not Previously Identified</li> </ul>
<p>Source: Table V-1 in Ka Iwi State Park Master Plan, April 1996.</p>	

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Resource Subzone (R): The objective of this subzone is to develop, with proper management, areas to ensure sustained use of the natural resources of those areas.

Areas Included:

- Lands necessary for providing future park land and lands presently used for national, state, county, or private parks.
- Lands suitable for growing and harvesting of commercial timber or other forest products.
- Lands suitable for outdoor recreational uses such as hunting, fishing, hiking, camping, and picnicking.
- Lands and state marine waters seaward of the upper reaches of the wash of waves, usually evidenced by the edge of vegetation or by the debris left by the wash of waves on shore to the extent of the State's jurisdiction, unless placed in a (P) or (L) subzone.

General Subzone (G): The objective of this subzone is to designate open space where specific conservation uses may not be defined, but where urban uses would be premature.

Areas Included:

- Lands with topography, soils, climate, or other related environmental factors that may not be normally adaptable or presently needed for urban, rural, or agricultural use.
- Lands suitable for farming, flower gardening, operation of nurseries or orchards, grazing; including facilities accessory to these uses when said facilities are compatible with the natural physical environment.

Relationship of the Proposed Actions – The lower area and area fringing the crater rim at Hanauma Bay are within the Limited Subzone (Figure 6-2). As noted above, "the objective of this subzone is to limit uses where natural conditions suggest constraints on human activities." More mauka areas, primarily used for parking, are within the General Subzone. This subzone is intended to encompass general open space areas.

Planned improvements at Hanauma Bay are intended to increase educational benefits and appreciation for the natural environment experienced by visitors, and to improve the natural setting and public safety. In other words, they will not simply add man-made improvements in a manner that is permitted and consistent with the purpose and intent of the Conservation District. Rather, they will actually lessen impacts on the natural environment caused both by current physical improvements in the Nature Preserve and by the use of its natural resources by Nature Preserve visitors.

~~Two paragraphs referencing the no-longer-proposed new nature learning center and central parking area on the job Corps site, and the summit funicular and viewing platform, deleted.~~

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### 6.2.3 Ka Iwi State Park Master Plan

The planned Ka Iwi State Park encompasses all of the land on the makai side of Kalaniana'ole Highway between the City owned Wawamalu Beach and Makapuu Lookout, where Windward Oahu portion of the highway begins. A master plan for this park was prepared for the State Department of Land and Natural Resources by Wilson Okamoto and Associates in 1996.

The master plan establishes the following goals for the future use of the park:

1. Preservation and enhancement of the Ka Iwi site's natural, cultural and scenic qualities;
2. Promotion of public education and awareness of these qualities; and
3. Careful management of recreational activities.

To implement these goals, a combination of preservation and limited interpretive/passive recreation uses is proposed. Extensive areas within the park are to be set aside for "vegetative restoration". Improvements would include:

- A visitor center and parking area (+/-50 cars) opposite the entry to the Hawaii Kai Golf Course.
- A cultural center at the top of Makapu'u Head, with a +/-40 car parking lot just off the highway at the base to the trail/service road to the visitor center.
- Modest, primarily safety-related improvements to the existing trail system, and a limited number of new interconnecting trails.
- An expanded parking area (+/-40 cars and 5 buses) at the Makapuu Lookout alongside Kalaniana'ole Highway.

Relationship of the Proposed Actions - The recreational or nature-related character of existing uses at Hanauma Bay Nature Preserve and Koko Head Regional Park, the extensive natural open space that generally separates the different use areas, and the very limited and resource-protecting purpose of the proposed improvements at Hanauma Bay, are all very similar to the types and spread-out pattern of uses planned for this new State Park. The two parks will be very compatible with and complementary of each other, and will ensure that this vast and unique open area at the eastern end of Oahu will be permanently maintained as a natural resource park for the enjoyment of residents and visitors alike.

### 6.3 CITY AND COUNTY OF HONOLULU PLANS AND CONTROLS

#### 6.3.1 General Plan

The General Plan for the City and County of Honolulu is, firstly, a statement of long-range social, economic, environmental and design objectives for the general welfare and prosperity of the people of Oahu. These objectives contain both statements of desirable conditions to be sought over the long run, and statements of desirable conditions that can be achieved within an

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approximate 20-year time horizon. Secondly, the General Plan is a statement of broad policies which facilitate the attainment of the stated objectives.

Economic Activity, Natural Environment and Culture and Recreation are three of 11 subject areas in the General Plan that provide the framework for the City's expression of public policy concerning the needs of the people and the functions of government. Objectives and policies within these subject areas that relate to the proposed actions covered by this Environmental Impact Statement are presented below.

#### *Economic Activity*

##### Objective B

To maintain the viability of Oahu's visitor industry.

##### Policy B8

Preserve the well-known and widely publicized beauty of Oahu for visitors as well as residents.

#### *Natural Environment*

##### Objective A

To protect and preserve the natural environment.

##### Policy A1

Protect Oahu's natural environment, especially the shoreline, valleys and ridges, from incompatible development.

##### Policy A2

Seek the restoration of environmentally damaged areas and natural resources.

##### Policy A8

Protect plants, birds and other animals that are unique to the State of Hawaii and the Island of Oahu.

##### Policy A10

Increase public awareness and appreciation of Oahu's land, air and water resources.

##### Objective B

To preserve and enhance the natural monuments and scenic views of Oahu for the benefit of both residents and visitors.

##### Policy B1

Protect the Island's well-known resources: its mountains and craters; forests and watershed areas; marshes, rivers and streams; shoreline, fishponds and bays; and reefs and offshore islands.

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#### Policy B2

Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas.

#### Policy B4

Provide opportunities for recreational and educational use and physical contact with Oahu's natural environment.

#### *Culture and Recreation*

#### Objective B

To protect Oahu's cultural, historic, architectural, and archaeological resources.

#### Policy B2

Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.

#### Objective D

To provide a wide range of recreational facilities and services that are readily available to all residents of Oahu.

#### Policy D2

Develop and maintain a system of regional parks and specialized recreation facilities.

#### Policy D4

Encourage public and private botanic and zoological parks on Oahu to foster an awareness and appreciation of the natural environment.

#### Policy D6

Provide convenient access to all beaches and inland recreation areas.

#### Policy D7

Provide for recreation programs which serve a broad spectrum of the population.

#### Policy D8

Encourage ocean and water-related recreation activities that do not adversely impact the natural environment.

Relationship of the Proposed Actions - None of the planned improvements will have any substantive adverse impacts on the distinctive natural and scenic beauty of Hanauma Bay Nature Preserve. They will have no impact whatsoever on Koko Head, Koko Crater, or the coastline. All are intended to lessen visitor impacts on Hanauma Bay's marine ecosystem while also improving the quality of their experiences and improving public safety. One of their basic purposes is to foster a greater awareness and appreciation of the natural environment. Thus, they will help to implement several of the above policy statements.

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Areas impacted by the planned improvements are limited to previously improved or altered areas at Hanauma Bay Nature Preserve. No physical improvements or changes to the existing availability and limitations on public access to Hanauma Bay, the coastline and other areas in the Regional Park are planned. Existing protections to endangered plant areas and cultural and archaeological sites will remain in effect.

[last 3-1/2 paragraphs referencing no longer proposed improvements and access controls at Hanauma Bay deleted.]

### 6.3.2 East Honolulu Sustainable Communities Plan

East Honolulu is one of eight development plan areas in the City and County of Honolulu. A comprehensive revision and update of the East Honolulu Development Plan (DP) was recently undertaken for the purpose of bringing its content into conformance with the City Charter amendments adopted in 1992. It is also intended to update the DP's land use policies, principles and guidelines as needed to better reflect the current conditions and vision for East Honolulu's future development character. This update was completed with the adoption of the new "East Honolulu Sustainable Communities Plan" (SCP) in May 1999. It became effective on July 27, 1999.

Relevant provisions of this new community plan, together with a discussion of the relationship of the proposed Hanauma Bay Nature Preserve improvements to them, are presented below.

[entire section (both text and plan maps) referencing the now-repealed East Honolulu Development Plan deleted.]

Principles for Future Land Use and Development - Seven (7) principles are presented in the SCP that reaffirm East Honolulu's role in Oahu's development pattern. Two are closely related to the current and future use of Hanauma Bay Nature Preserve and Koko Head Regional Park:

• Preserve scenic views of ridges, upper valley slopes, shoreline areas from Kalamanaole Highway and from popular hiking trails that extend from Koko Head to Makapuu Head.

• Promote access to mountain and shoreline resources for recreational purposes and traditional hunting, fishing, gathering, and religious and cultural practices.

Relationship of the Proposed Actions - Existing scenic views at Hanauma Bay will not be disturbed by the proposed improvements. The accessibility of vantage points to view the bay from the rim will change slightly, but will not really be reduced or increased, with the relocation in the Makapuu direction of the lower bay area entry point. The difference is because vantage points outside of the entry area are accessible to everyone who comes to the Nature Preserve, whereas once inside the entry area, only those who have passed through the entry have access to the view from the controlled access entry area. However, even with the

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change, people will continue to have free access to excellent vantage points from which they can view Hanauma Bay either from the mauka side or from the Makapuu side of the rim.

Because of the fragile nature of Hanauma Bay's marine ecosystem and the significant number of people who already are using the bay, access to the shoreline at this location is not being improved or promoted. The purpose of the planned improvements is to contribute to the preservation and protection of Hanauma Bay. Realistically, this means that existing restrictions on access need to be retained.

*Vision Statement* - The vision for East Honolulu, as presented in Section 2 of the SCP, focuses on two themes: the preservation, conservation and enhancement of community resources; and adaptation to changing community needs. The first part of the vision statement concerning the protection of community resources (Sec. 2.1.1) is relevant to the planning of improvements to Hanauma Bay Nature Preserve.

- *Protect Natural and Scenic Resources.* Significant scenic views of ridges, upper valley slopes, shoreline areas from Kalaniana'ole Highway and from popular hiking trails that extend from Koko Head to Makapuu Head must be protected. Furthermore, access to shoreline areas and mountainous regions will be improved and provided for all to use.
- *Preserve Cultural and Historical Resources.* These resources will be preserved by retaining visual landmarks and significant views, and by preserving significant historic, cultural, and archaeological features from East Honolulu's past.

**Relationship of the Proposed Actions:** The comments above on the relationship of the proposed actions to the SCP principles address the first bullet item above as well. The proposed improvements will not impact and are not in the vicinity of any known historic, cultural, and archaeological features. See Section 4.2.3 and Figure 4-3 in this EIS for further details.

**Key Elements of the Vision:** The East Honolulu Sustainable Communities Plan includes seven "key elements of the vision". Two of these - the Koko Head-Makapuu viewshed, and the protection and preservation of natural areas - relate to the planning of improvements to Hanauma Bay Nature Preserve and other areas in Koko Head Regional Park. Relevant portions of the discussion in the SCP document of each of these elements are provided below.

#### 2.2.2 Preserve the Scenic Value of the Koko Head-Makapuu Viewshed

The rugged coastal lands between Koko Head and Makapuu Point are among Oahu's most unique and spectacular scenic resources, offering mauka and makai views from many vantage points [Figure 4-6 in this EIS]. Protection of the scenic value of this viewshed has island-wide importance because of its attraction to both residents and visitors. Preserving one of Oahu's most popular visitor resources is critical to our economy since tourism, our base industry, continues to grow in significance.



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Nowhere else on the island, with the exception of the Kaena coastline, are there elements of a natural environment in one large, contiguous area of undeveloped open space. Unlike Kaena, however, the Koko Head-Makapuu coastline is easily accessible by vehicle. While easy access benefits the public's recreational needs, it can also contribute to degradation of the area's resources. Overuse, misuse, and potential urban encroachment, particularly in the Queen's Beach vicinity, are pressures which threaten the integrity of this coastal area.

The resources of the Koko Head-Makapuu region should be protected and enhanced. The publicly owned Koko Head Regional park, which includes Hanauma Bay Beach Park and Sandy Beach Park, should continue to provide world-class recreational opportunities, but at the same time the value of these resources must be protected from overuse.

#### 2.2.5 Protect and Preserve Natural Areas

Natural areas in East Honolulu include [Figure 6-3 in this EIS]:

- Paiko Lagoon Wildlife Sanctuary;
- 'Ihiihilauea Preserve;
- Hanauma Bay Marine Life Conservation District; and
- Queen's Beach (Ka Iwi scenic shoreline).

These natural areas should continue to be protected and preserved by providing proper management and security to protect endangered species habitat, and by monitoring and regulating uses to avoid overuse and misuse of resources. In addition, steps should be taken to acquire land for the creation of the Ka Iwi scenic shoreline (see East Honolulu SCP Section 3.2.1.2) as a means to protect the area's rich recreational and scenic resources. Furthermore, the effects of runoff into these areas from any future upland construction will need to be thoroughly examined.

Relationship of the Proposed Actions - The "relationship" discussions immediately above in this section and in Section 6.3.1 also apply to the proposed actions' relationship to these elements of East Honolulu's vision. The planned improvements are intended to enhance the protection of Hanauma Bay Marine Life Conservation District and improve the quality of the experience without attracting or otherwise substantially altering the current number of visitors to this Nature Preserve. The proposed requirement that everyone going to the lower bay area use complete resource awareness training is intended to enhance safety and reduce inappropriate behavior and damage caused by bay users. This will supplement the existing limits on parking capacity and other management practices that are now being employed to control the number of visitors to Hanauma Bay and protect the Nature Preserve's natural resources from overuse.

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The planned improvements will enhance the spectacular scenic resource offered by Hanauma Bay by reducing the visual intrusion of the improvements on the natural setting. They will lessen the visual impacts of park facilities in the upper park area by designing new replacement structures to blend in better with the natural environment. Visual impacts will be reduced in the lower bay area by a combination of an overall reduction in building bulk, more sensitive design of new structures, and siting new facilities further back from the shoreline than the ones they are replacing.

*Land Use Policies, Principles and Guidelines* – These statements, as presented in Section 3 of the *Sustainable Communities Plan*, indicate what actions need to be taken in order to implement the above-described vision for East Honolulu. Relevant statements and the accompanying discussion in the SCP document are provided below.

### 3.1 OPEN SPACE PRESERVATION AND DEVELOPMENT

Open space preservation and development is a key element of the vision for East Honolulu's future. Long-term protection and preservation of scenic resources, natural areas, and recreational areas are important to maintaining the desirability and attractiveness of East Honolulu for both residents and visitors.

#### 3.1.1. General Policies

Open space will be used to:

- Protect scenic views and provide recreation
- Promote access to shoreline and mountain areas

#### 3.1.2 Planning Principles

The general policies listed above provide the basis for the following planning principles:

- *Provide Passive and Active Open Spaces.* The open space system shall consist of areas in both active and passive uses. Active areas include community-based parks, golf courses, and the Hawaii Kai Marina. Passive areas include lands in the State Conservation District, drainage and utility corridors, nature preserves, and tracts of lands left undeveloped because of physical constraints or hazards. Beach parks may be either active or passive, depending on the extent to which the landscape has been modified by grading and construction of facilities and the intensity of public use.
- *Promote Accessibility of Recreational Open Space.* Public parks and most golf courses will be accessible for recreation use, but the open space system should also promote the accessibility of shoreline and mountain areas (as required by City ordinance). Access to mountain trails and shoreline areas should be readily available. This also includes the need for parking areas.

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### 3.1.3 Guidelines for Carrying Out the General Policies and Planning Principles

~~[statement of SCP guidelines for community-based parks deleted]~~

#### 3.1.3.6 *Shoreline Areas*

- Place high priority on maintaining the untamed landscape quality of the Koko Head to Makapuu viewshed. Any modification to this shoreline area should be done in a manner which preserves the aesthetic values of the undeveloped xerophytic landscape.

~~• Protect and preserve the long-term recreational and scenic value of the shoreline between Koko Head and Makapuu by supporting the creation of the Ka Iwi scenic shoreline.~~

#### 3.1.3.7 *Wildlife Preserves*

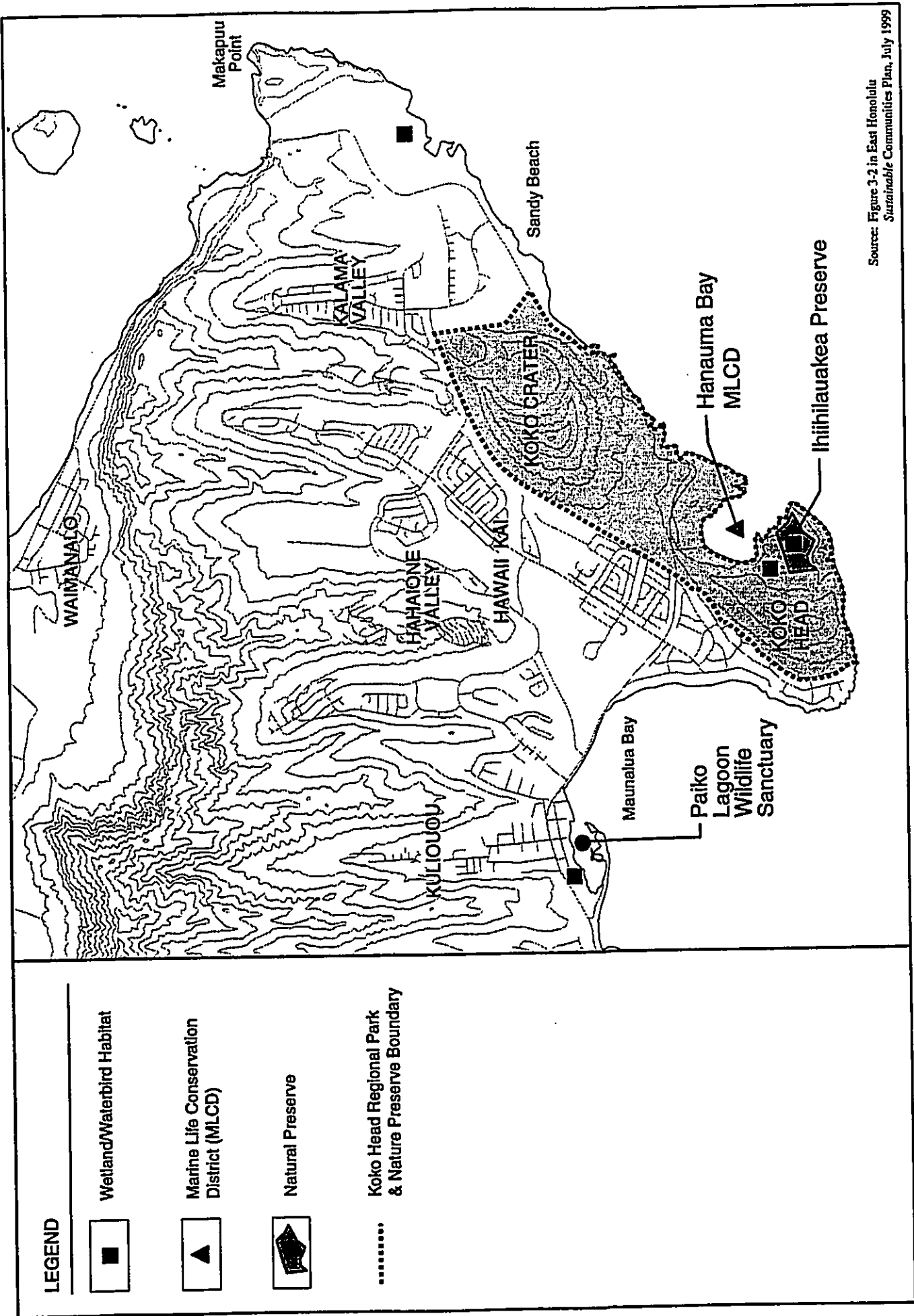
East Honolulu is home to three formal wildlife preserves [one of which is located very nearby on Koko Head, and the other being Hanauma Bay itself – see Figure 6-3 in this EIS]:

- 'Ihi'ihilauea Preserve. This preserve is located on the southern rim of the Hanauma Bay ridgeline on land owned by the City and County of Honolulu, and is managed by the Nature Conservancy of Hawaii through a cooperative agreement with the City. This preserve maintains a pool for the endangered Ihihi (*Marsilea villosa*), an ephemeral plant appearing only during periods of rainfall.
- Hanauma Bay Marine Life Conservation District (MLCD). Established in 1967 by the Department of Land and Natural Resources, the Hanauma Bay MLCD was once a popular site for fishing and throw netting. Wildlife within Hanauma Bay are now protected by State law. The adjoining beach park is part of Koko Head Regional Park, administered by the City. In order to protect the marine resources of this popular visitor destination, the City has restricted the daily number of visitors that have access to the bay, closes the beach all day on Tuesdays, and bans smoking at the bay. The City also collects entry and parking fees used to fund maintenance and capital projects at Hanauma Bay.

The SCP guideline related to these two preserves is:

- Implement management programs in areas where intense human activity threatens the sustainability of the resources, such as at Hanauma Bay. This could include, for example, monitoring studies, limits on the number of visitors, and admission fees.

Relationship of the Proposed Actions – All of the planned improvements are consistent with and will contribute toward implementing the above land use policies, principles and guidelines. ~~Hanauma Bay is one of the most significant nature preserves in the State of Hawaii and the planned improvements will contribute toward its protection and preservation.~~



Natural Areas

**East Honolulu Region**

Figure 6-3

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Access will continue to be available to a degree that is consistent with the overriding importance of protecting this precious natural resource. A primary reason for providing the proposed marine education center with its educational exhibits and facility for the marine awareness training is to reduce individual impacts on the bay's marine ecosystem so that restrictions on access can be kept to a minimum. Reducing human impacts will also contribute to the protection of the Marine Life Conservation District.

The untamed quality of the Hanauma Bay shoreline area will be enhanced by reducing the overall building bulk on the beach and siting new facilities further back from the shoreline than the ones they are replacing.

The Alii-ini-lanakea Preserve will not be impacted by the planned improvements.

Existing management programs and other protections will remain in full force and effect, and as noted, will be augmented by the proposed resource awareness training.

### 3.2 ISLAND-BASED PARKS AND RECREATIONAL AREAS

#### 3.2.1 Overview

The City and County of Honolulu Department of Parks and Recreation (DPR) develops and maintains a system of park and recreation facilities which it classifies in a hierarchical manner. The largest and most specialized parks are classified as island-based parks since they serve the needs of all Oahu residents. This group includes regional parks, beach/shoreline parks, beach/shoreline right-of-ways, nature parks/reserves, botanical gardens, golf courses, and zoological parks [Table 6-2 in this EIS]. DPR's standard for island-based parks is eight acres for every 1,000 persons.

~~SCP provisions related to Koko Head Regional Park deleted.~~

#### 3.2.2 General Policies

~~an SCP provision related to increasing the inventory of island-based parks deleted.~~

- Maintain and enhance, to the extent possible, existing island-based parks by utilizing land area that has not been fully developed for recreation use. Island-based parks are part of the region's abundance of natural and scenic resources and contribute to the attractiveness of East Honolulu to both residents and visitors.

#### 3.2.3 Planning Principles

- ~~Environmental Compatibility. Construct park facilities in a manner which avoids adverse impacts on natural resources or processes in the coastal zone.~~

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TABLE 6-2 Types of DPR Island-Based Parks	
Regional Parks	Large areas that may serve the entire island or a region of the island and may include a variety of recreation park types and facilities, natural and cultural sites.
Beach/Shoreline Parks	Areas and sites along the shoreline that may include facilities and support services for water activities, sunbathing, picnicking, and other passive activities.
Beach/Shoreline Rights-of-Way	Access lanes to beaches and the shoreline where residential or other uses prevent development of a beach/shoreline park.
Nature Parks/Reserve	Areas maintained primarily to preserve or conserve unique natural features.
Botanical Gardens	Areas developed for the recreational and educational appreciation of specific types of plants and plant communities.
Source: Table 3-1, East Honolulu <i>Sustainable Communities Plan</i> , July 1999	

on any other environmentally sensitive area. In the design of recreation areas, incorporate natural features of the site and use landscape materials that are indigenous to the area where feasible in order to retain a sense of place.

Relationship of the Proposed Actions – Hanauma Bay is an island-based nature preserve, as opposed to a park in the usual sense. Consequently, utilizing land area that has not been fully developed for recreation use would be inappropriate. Rather, the primary purpose of the proposed improvements is to help meet the intent of such preserves, as stated in Table 6-2, which is to preserve or conserve unique natural features.

As previously described, the new park facilities will be constructed in a manner that avoids adverse natural resource impacts. Landscape materials that are indigenous to the area will be used wherever feasible.

### 3.3 COMMUNITY-BASED PARKS

#### 3.3.1 Overview

East Honolulu contains a total of approximately 120 acres of community-based parks of which the largest is the 40-acre Koko Head District Park. Expansion of the park to 59 acres is proposed by incorporating the adjacent Job Corps site. In East Honolulu, this is the most appropriate location for sports and active

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recreation facilities designed for league play and other major sporting events. This complex should also include passive use areas for quiet enjoyment and nature learning activities. These areas can serve as buffers from adjacent residential areas or from natural features, such as the slopes of Koko Crater.

In evaluating community-based recreational park needs, the DPR uses a standard of two acres per every 1,000 persons, although this figure varies according to each community's situation. Based on this population standard and East Honolulu's 1990 population of 45,650, there is a surplus of approximately 26 acres of community-based parks in the region. There is only one District Park in the region, while DPR's population service ration would suggest the need for two such parks in East Honolulu. However, the land area for Koko Head District Park is twice as large as DPR's standard for District Parks. Moreover, as mentioned earlier, this park can be expanded to 59 acres by incorporating the adjacent Job Corps site.

#### 3.3.2 General Policies

- Increase the inventory of community-based parks, when feasible, to provide sports and recreation facilities for East Honolulu residents in appropriate locations.

#### 3.3.3 Guidelines

- Expand active recreational facilities at Koko Head District Park by incorporating and developing the adjacent Job Corps site.

Have master plans for development of new parks or redevelopment of existing parks provide for facilities and accessible pathways from surrounding streets to facilitate pedestrian and bicycle access to parks.

Relationship of the Proposed Actions - The proposed demolition of existing unoccupied and dilapidated structures on the former Hawaii Job Corps Center site will facilitate its eventual redevelopment for park purposes. Programs to prepare new master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve are scheduled to begin later this year.

## 3.4 HISTORIC AND CULTURAL RESOURCES

### 3.4.1 Overview

In 1930, an archaeological survey of Oahu [by J. Gilbert McAllister] documented approximately 60 sites in the area now defined as East Honolulu. Many of these sites, however, have since been destroyed by the 1946 tsunami, erosion, or other land altering activities such as beach development and construction. Within the Koko Head Regional Park, for example, a survey conducted in 1988 relocated only one of five sites identified in the 1930 study. This site, the Koko Head Petroglyphs, was discovered in 1899 and is situated near the Lanai Lookout. The

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petroglyphs have been extensively altered by erosion and vandals since the 1930 survey, but nevertheless remain significant examples of petroglyph art.

#### 3.4.2 General Policies

- Emphasize physical references to East Honolulu' history and cultural roots.
- Preserve significant historic features from earlier periods.

#### 3.4.3 Planning Principles

The treatment of a particular historic or cultural site should depend upon its characteristics and potential value. The following planning principles should be used to determine appropriate treatment:

- *Preservation and Protection.* Recommend in situ preservation and appropriate protection measures for sites that have high preservation value because of their good condition or unique features.
- *Compatible Setting.* Determine the appropriate treatment for a historic site by the particular qualities of the site and its relationship to its physical surroundings. The context of a historic site is usually a significant part of its value and care should be taken in the planning and design of adjacent uses to avoid conflicts or abrupt contrasts that detract from or destroy the physical integrity and historic or cultural value of the site.
- *Accessibility.* Determine the degree of access that would best promote the preservation of the historic, cultural and educational value of the site, recognizing that economic use is sometimes the only feasible way to preserve a site. Public access to a historic site can take many forms, from direct physical contact and use to limited visual contact. In some cases, however, it may be highly advisable to restrict access to protect the physical integrity or sacred value of the site.

#### 3.4.4 Guidelines

The following guidelines apply to native Hawaiian cultural and archaeological sites and implement the general policies and planning principles listed above.

- Determine the appropriate preservation methods on a site-by-site basis in consultation with the State Historic Preservation Officer.
- Determine appropriate delineation of site boundaries and setbacks and restrictions for adjacent uses on a site-by-site basis in consultation with the State Historic Preservation Officer.
- Include sight lines that are significant to the original purpose and value of the site in criteria for adjacent use restrictions.



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- Determine the appropriateness of public access on a site-by-site basis in consultation with the State Historic Preservation Officer, Hawaiian cultural organizations, and the owner of the land on which the site is located.

Relationship of the Proposed Actions – None of the planned improvements will impact existing traditional Hawaiian archaeological sites within the Park's boundaries, and no important cultural resources will be impacted. Existing preservation and protection measures for these sites will remain in full force and effect.

~~Paragraph referencing the former military radar station on Koko Crater deleted.~~

6.3.3 Land Use Ordinance/Zoning Districts

The City and County of Honolulu Land Use Ordinance and accompanying maps define the allowable uses of land zoned for residential, apartment, business, resort, industrial, agricultural, preservation, and mixed uses. The entire area of Koko Head Regional Park and Nature Preserve, including Hanauma Bay Nature Preserve, is within the P-1 Restricted Preservation District (Figure 6-4).

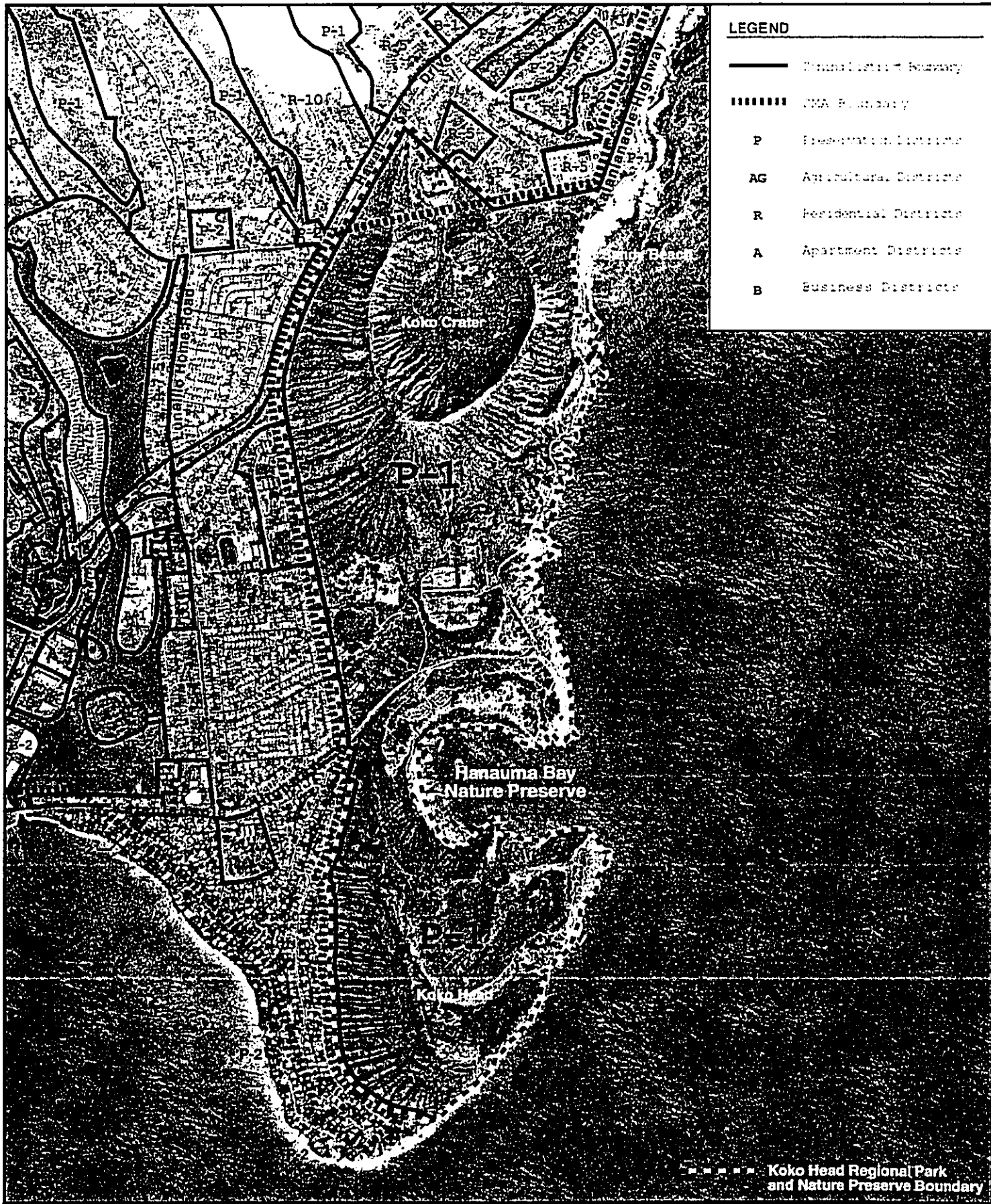
All lands within the State Conservation District are zoned P-1, in which "all uses, structures and development standards shall be governed by the appropriate State agencies." (Section 5.10-1(a) Ordinance No. 86-96, as amended). As noted previously, use of lands in the Conservation District is administered by the State Board of Land and Natural Resources. Permitted uses within the Hanauma Bay Nature Preserve's boundaries are described in Section 6.2.2.

Relationship of the Proposed Actions – As described in Section 6.2.2, all of the planned improvements are in full compliance with the objectives and permitted uses for each of the State Conservation District subzones covering the immediate area and vicinity of ~~Hanauma Bay Nature Preserve~~. Necessary permits will be applied for and obtained before any new construction is initiated.

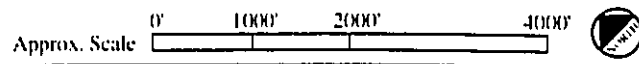
6.3.4 Coastal Zone/Special Management Area Program and Regulations

The State Coastal Zone Management (CZM) Law (Chapter 205A, Hawaii Revised Statutes) charges the counties with designating and administering Special Management Areas (SMA) within the State's coastal areas. Any "development", as defined by the CZM Law, that is located within the SMA requires a SMA Use Permit. Within the City and County of Honolulu, the SMA Use Permit application review is administered by the Department of Planning and Permitting, and the decision on its issuance is rendered by the City Council, pursuant to Ordinance No. 84-4. The SMA boundary is contiguous with the boundaries of Koko Head Regional Park and Nature Preserve, except for a small portion of Koko Crater that is occupied principally by the Equestrian Center (Figure 6-4).

Issuance of the SMA Use Permit is based on a development proposal's consistency with the objectives, policies and review guidelines specified in the CZM Law. Relevant objectives,



Zoning District and SMA Boundaries



Koko Head Regional Park and Nature Preserve

Figure 6-4

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policies and guidelines, and the relationship of the proposed improvements to them, are presented and discussed below.

### 6.3.4.1 CZM Objectives and Policies

*Recreational Resources Objective* – Provide coastal recreational opportunities to the public.

Recreational Resources Policy (B) – Provide adequate, accessible and diverse recreational opportunities in the coastal zone management area by:

- (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas.
- (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value.
- (iv) Encouraging expanded public recreational use of county, State and federally owned or controlled shoreline lands and waters having recreational value.

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

Historic Resources Policies:

- (A) Identify and analyze significant archaeological resources.
- (B) Maximize information retention through preservation of remains and artifacts or salvage operations.

*Scenic and Open Space Resources Objective* - Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.

Scenic and Open Space Resources Policies:

- (A) Identify valued scenic resources in the coastal zone management area;
- (B) Insure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;
- (C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

*Coastal Ecosystems Objective* – Protect valuable coastal ecosystems from disruption and minimize adverse impacts on all coastal resources.

Coastal Ecosystems Policy (B) – Preserve valuable coastal ecosystems of significant biological or economic importance.

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Relationship of the Proposed Actions – The planned improvements at Hanauma Bay Nature Preserve are intended to help protect coastal resources in three basic ways:

- by accommodating activities, such as training sessions and educational displays that will change how people use the bay and thereby reduce their impacts on the bay's marine ecosystem;
- by improving public safety through education and physical improvements, such as upgrading the lower bay access and constructing a lifeguard equipment storage building, and
- by lessening the visual impacts of park buildings on the Nature Preserve's natural setting through more sensitive design and less conspicuous siting.

The proposed resource awareness training, educational displays and other educational programs are specifically directed toward achieving the objective of providing and managing adequate public access consistent with conservation of natural resources to and along shorelines with recreational value, such as Hanauma Bay. They will also directly contribute to protecting valuable coastal ecosystems for disruption and minimizing adverse impacts on all coastal resources.

While not technically encouraging expanded public recreational use of county lands and waters having recreational value, the proposed actions will lessen human impacts on the bay's marine ecosystem and thus better assure its protection from damage without requiring further restrictions on public use. Should the carrying capacity study now in progress indicate that further restrictions would be appropriate, the planned facilities will be able to house any new programs needed to support the implementation of additional or modified control measures.

Both extensive (park-wide) and intensive (planned improvement area) surveys have been conducted to identify potential historic and cultural resources. (See Section 4.2.3 and Appendices B, C and D.) No areas or sites that were identified as being of potential significance will be impacted by the planned improvements at Hanauma Bay Nature Preserve or by the planned demolition of existing unoccupied and dilapidated structures on the former Hawaii Job Corps Center site. None of the traditional Hawaiian archaeological sites known to exist in the Hanauma Bay Nature Preserve or Koko Head Regional Park will be impacted, and existing preservation and protection measures at these sites will remain in full force and effect.

All new structures will be very low in height and located and constructed in a manner that will be compatible and blend in with the surrounding terrain. No substantive alteration of existing natural landforms will be required. None of the planned improvements will negatively impact existing public views or shoreline open space and scenic resources. Reduction of the overall building bulk in the lower bay area, and location of needed facilities further back from the shoreline will help to restore shoreline open space and scenic resources in the lower bay area.

Existing significant coastal ecosystems within and in the vicinity of the Nature Preserve – most notably, the Hanauma Bay Marine Life Conservation District and the 'Thi'ihilauakea Preserve –

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will not be adversely impacted by the proposed actions. ~~reference to outdoor reef exhibits~~  
~~Deleted~~ Existing protections for the 'Ihi'ihilauakea Preserve will remain in effect.

### 6.3.4.2 Relevant SMA Review Guidelines

*All development in the special management area shall be subject to reasonable terms and conditions set by the council to ensure that:*

- (1) Adequate access, by dedication or other means, to publicly owned or used beaches, recreation areas and natural reserves is provided to the extent consistent with sound conservation principles;
- (2) Adequate and properly located public recreation areas and wildlife preserves are reserved;
- (3) Provisions are made for solid and liquid waste treatment, disposition and management which will minimize adverse effects upon special management area resources; and
- (4) Alterations to existing land forms and vegetation, except crops, and construction of structures shall cause minimum adverse effect to water resources and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation or failure in the event of earthquake.

*No development shall be approved unless the council has first found that:*

- (1) The development will not have any substantial, adverse environmental or ecological effect except as such adverse effect is minimized to the extent practicable and clearly outweighed by public health and safety, or compelling public interest. Such adverse effect shall include, but not be limited to, the potential cumulative impact of individual developments, each one of which taken in itself might not have a substantial adverse effect and the elimination of planning options;
- (2) The development is consistent with the county general plan, development plans and zoning.

*The council shall seek to minimize, where reasonable:*

- (1) Dredging, filling or otherwise altering any bay, estuary, salt marsh, river mouth, slough or lagoon;
- (2) Any development which would reduce the size of any beach or other area usable for public recreation;
- (3) Any development which would reduce or impose restrictions upon public access to tidal and submerged lands, beaches, portions of rivers and streams within the special management area and the mean high tide line where there is no beach;
- (4) Any development which would substantially interfere with or detract from the line of sight toward the sea from the state highway nearest the coast; and
- (5) Any development which would adversely affect water quality, existing areas of open water free of visible structures, existing and potential fisheries and fishing grounds, wildlife habitats, or potential or existing agricultural uses of land.

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Relationship of the Proposed Actions – As described in Sections 6.3.1, 6.3.2 and 6.3.3 above, all planned improvements are consistent with the General Plan, East Honolulu *Sustainable Communities Plan*, and zoning.

Relatively minor upgrades to the existing beach access road and tram operation are planned in order to improve the adequacy and safety of public access to the lower bay area at Hanauma Bay Nature Preserve. These will be done in a manner that reflects sound conservation principles. Overall alterations to existing landforms will be minimal and will not adversely affect ocean water resources or scenic and recreational amenities. All new facilities and improvements will be constructed in a manner that avoids creating either individually or cumulatively any dangers from floods, landslides, erosion, siltation or failure in the event of an earthquake.

The recent connection of Hanauma Bay Nature Preserve's wastewater system to the Hawaii Kai treatment plant has eliminated previous adverse impacts on bay waters. The planned improvements will not impact the adequacy of the existing Hanauma Bay collection system to properly handle wastewater disposal. The East Honolulu Wastewater Treatment Plant has sufficient processing capacity to handle existing and anticipated future wastewater discharges from the Nature Preserve.

Existing solid waste management practices are generally adequate to avoid any adverse impacts on the Nature Preserve's resources. Similar practices will be employed at new facilities, and improvements will be made as appropriate to ensure that any adverse impacts continue to be avoided.

No construction is planned that would alter Hanauma Bay or the coastline, or would reduce the size of any beach or other existing or potential public recreation areas within the Nature Preserve. No proposals are being made that would reduce or further restrict public access.

The new marine education center and snack bar at Hanauma Bay will be somewhat visible from a relatively short segment of Kalaniana'ole Highway just to the Makapuu side of the entrance to Hanauma Bay Nature Preserve. The nature of these impacts is described in Section 7.2.9 of this EIS. As indicated in Section 7.2.9, measures are proposed to minimize these impacts and avoid any substantial interference with or defraction from lines of sight to the sea from Kalaniana'ole Highway.

None of the planned improvements will impact ocean water quality, views of open water, or existing fish or other wildlife habitats.

**Section 7.0**

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**Probable Impacts and Mitigative Measures**

## 7.0 PROBABLE IMPACTS AND MITIGATIVE MEASURES

Two types of probable impacts on the environment are discussed in this section: short-term or construction-related impacts, and long-term or operational-related impacts. Also described are mitigative measures that are proposed for implementation, where appropriate and feasible, to minimize any adverse impacts. In addition, areas where there could potentially be adverse impacts, but where none are actually anticipated, are discussed.

There are some types of impacts where the short-term impacts of constructing a new facility, or of improving an existing facility, will be different or distinct from the long-term impacts that would be due to changes resulting from the existence of that new facility or improvement. In other cases, impact concerns will be related more to the permanent change that is being made, rather than to any distinction that could be made between impacts of the temporary or short-term construction process and the long-term impacts of the completed improvement. Where there could be significant differences between short-term and long-term impacts - e.g., in the case of impacts on coastal water quality - separate discussions of both types of impacts are provided. Where little or no difference is anticipated, or is not considered to be significant - e.g., in the case of impacts on views - the entire discussion is included in the sections addressing long-term impacts.

### 7.1 SHORT-TERM IMPACTS

Construction of the facilities planned for the Hanauma Bay Nature Preserve and the demolition of existing, unoccupied and dilapidated structures at the former Hawai Job Corps Center site will create some local short-term construction-related impacts on the environment. These will include temporary changes to drainage and runoff patterns, soil disturbance, dust and erosion due to clearing and grading; traffic in the project's vicinity due to construction equipment and trucks; and increased noise due to construction-related operations. There will also be some temporary disruptions to visitor use of Hanauma Bay.

Short-term beneficial impacts related to construction will include employment-related expenditures and the purchase of services and materials related to the design and construction of the various projects. Local retail businesses may also indirectly benefit through direct and multiplier effects associated with construction activities.

The probable short-term impacts related to constructing the planned improvements and, where applicable, proposed mitigative measures are described in the following sections.

#### 7.1.1 Topography, Soils and Drainage

The topography of the portion of the upper park area at Hanauma Bay Nature Preserve will be only marginally affected by short-term construction. The sites of the new marine education



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center and snack bar, and the new turn-around at the upper park area end of the beach access road, are the only areas where some regrading will occur. Both of these areas have been previously regraded and improved with roadways, walkways and/or landscaping. There will be no substantive alterations to existing drainage patterns. Details on the extent of the areas to be regraded and changes in grade are provided in Section 3.

Regrading in areas where buildings will be demolished at the former Hawaii Job Corps Center site will be minimal. It will generally be limited to reshaping the building pad areas to remove any steep grades that could be hazardous and to smooth the transition to the contours of the surrounding areas. No import of fill or export of excavated material is expected to be necessary. A small amount of material may be excavated and used for fill at the new marine education center at Hanauma Bay. (See Section 3 for details). There will be no substantive alterations to existing drainage patterns during or after demolition activities.

Mitigative Measures – Strict erosion control measures, as required by the regulations, standards and guidelines cited below, will be followed in order to ensure that any significant adverse impacts are avoided. This will include the preparation and obtaining approval of an Erosion Control Plan from the City Department of Planning and Permitting (DPP) prior to initiating any construction. Erosion control measures will, where appropriate, include the use of cut-off ditches, temporary ground cover, and detention/sedimentation basins. Dust controls will include the frequent watering of exposed areas, good housekeeping at the job sites, and paving or landscaping of exposed areas as quickly as possible.

The following documents specify erosion and dust control measures that will be adhered to during construction of the planned improvements:

- *City and County of Honolulu's "Grading, Grubbing and Stockpiling Ordinance No. 3968"*. This ordinance requires the submittal and approval of appropriate plans and specifications, and the posting of a bond, for larger scale projects, prior to issuance of a permit. Minimum standards are provided with respect to the slopes and terracing of cuts and fills, size of the area that can be worked at one time, distances from property lines, preparation of ground surfaces, placement and compaction of fill, drainage provisions, dust control, etc. It also authorizes the City's Chief Engineer to attach such conditions as may be reasonably necessary to prevent creation of a nuisance or hazard to public or private property, health or welfare.
- *DPP's "Soil Erosion Standards and Guidelines"*. This document provides guidelines and standards for the preparation and execution of erosion control plans which are required as part of a grading permit application for larger scale projects. These plans must include detailed information on existing site conditions, and a comprehensive plan for controlling erosion during construction activities. Areas covered include maximum soil loss rates, dust control, sediment fences/barriers, slope protection and vegetative stabilization, sediment basins and other drainage protection measures, timing of construction activities, etc.

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- U. S. Soil Conservation Service's "Erosion and Sediment Control Guide for Hawaii". This is more of a "how-to" manual on ways to reduce erosion and sedimentation and conserve our soil resources. It is intended for use by farmers and ranchers, as well as urban developers. It provides a wealth of technical information on such things as crop planting practices, soil properties related to their susceptibility to erosion, rainfall data and charts by island for estimating runoff, and types of plants to use in different erosion control situations. [Since the publication of this document, this agency has been renamed the U.S. Natural Resources Conservation Service.]

#### 7.1.2 Coastal Water Quality

No improvements are planned that will directly impact coastal waters or water quality. The principal area of potential impacts will be from storm water runoff during construction at Hanauma Bay Nature Preserve.

Mitigative Measures – Adherence to the erosion control measures discussed immediately above will be critical in preventing any adverse impacts on coastal water quality, as well as to controlling erosion and dust. In addition to those listed above, the following regulations and guidelines will be followed in order to minimize any possible water quality impacts:

- State Department of Health's "Water Quality Standards", Chapter 37-A in the Public Health Regulations.
- Section II "Best Management Practices" in the State Department of Health's "Nonpoint Source Water Pollution Management Plan"
- U. S. Environmental Protection Agency/National Oceanic and Atmospheric Administration's "Guidance Specifying Control Measures for Sources of Nonpoint Pollution to Coastal Waters"

#### 7.1.3 Marine Life Habitats

None of the planned improvements will be located in the ocean, so there will be no direct construction-related impacts on existing marine life habitats. However, there may be potential for damage from erosion and runoff into the ocean from construction sites at Hanauma Bay Nature Preserve. ~~The demolition of existing structures at the former Hawaii Job Corps site will be sufficiently separated from the ocean to have essentially no effect.~~

Mitigative Measures – As described above in Sections 7.1.1 and 7.1.2, strict erosion and sedimentation control practices will be followed in order to ensure that any significant adverse impacts are avoided. In addition, the normally turbulent conditions caused by high rates of mixing and water exchange in Hanauma Bay and other nearshore areas bordering the Regional Park will likely result in very rapid flushing of any sediment that might reach the shoreline. No further mitigative measures are considered necessary.

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### 7.1.4 Vegetation and Wildlife

Minor short-term impacts on vegetation, wildlife and insects can be anticipated wherever site clearing and grading or excavation is necessary. Of particular concern would be any disturbance that would occur to the habitats for endangered species of vegetation or wildlife. However, as described in Section 4.4.5, there are no endangered or rare species of vegetation located in the areas to be occupied by the planned improvements ~~or disturbed by demolition activities~~. 'Ihi'ihilauea Crater, which provides an important habitat for the endangered 'Ihi'ihii fern, is more than 2,000 feet from the nearest planned improvements at Hanauma Bay, and will not be impacted.

As indicated in Section 4.4.6, no rare or endangered species of land-based wildlife or insects were found within Hanauma Bay Nature Preserve or the remainder of the Regional Park area.

Mitigative Measures – None are considered necessary.

### 7.1.5 Cultural, Historic and Archaeological Resources

As indicated in Section 4.2.3, none of the traditional Hawaiian archaeological sites known to exist within Koko Crater Regional Park and Nature Preserve are located in or near any of the areas that will be impacted by the construction of the planned improvements ~~at Hanauma Bay Nature Preserve or the demolition of existing buildings at the former Hawaii Job Corps Center site~~.

Mitigative Measures – If during the course of construction any cultural or archaeological remnants are unearthed, all work in the area will be halted and the State Historic Preservation Office will be notified.

### 7.1.6 Air Quality

During construction, three potential types of air pollution emissions will likely occur, resulting in short-term air quality impacts:

1. fugitive dust from soil excavation and vehicle movement;
2. carbon monoxide and nitrogen oxide emissions from on-site construction equipment and from vehicles of construction workers and motorized construction equipment traveling to and from the worksite; and
3. vehicular emissions resulting from traffic congestion along Kalaniana'ole Highway due to disruption of traffic flow by construction-related vehicles.

Factors favoring good air quality in the vicinity of the project site include good exposure to tradewinds and ample open space. Moreover, except for vehicles traveling along Kalaniana'ole Highway, there are no other sources of air pollution in the immediate vicinity.

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Mitigative Measures - The short-term effects on air quality during construction will be mitigated by compliance with State Department of Health Administrative Rules, Title 11, Chapter 60, Section 5 (Air Pollution Control for Oahu). Potential control measures to reduce fugitive dust include frequent wetting down of loose soil areas with water, use of wind screens, covering of open-bodied trucks during materials transport, and the washing down of tires on construction equipment. Establishment of landscaping early in the construction schedule can also help control fugitive dust. This would initially require frequent watering to carry young plants through the dry season.

If necessary, increased vehicular emissions due to disruption of peak-hour traffic by construction equipment and/or commuting construction workers can be alleviated by moving the equipment and personnel to the site during off-peak traffic hours.

### 7.1.7 Noise

Due to the distance of the project areas from potentially noise-sensitive uses, no adverse impacts resulting from construction noise are anticipated. The only people affected may be the current users of Hanauma Bay Nature Preserve and, to a lesser degree, Koko Head District Park.

Mitigative Measures - Construction vehicles and activities must comply with State Department of Health Administrative Rules, Title 11, Chapter 42 (Vehicular Noise Control for Oahu) and Title 11, Chapter 46, Section 5 (Community Noise Control for Oahu), respectively. The State of Hawaii Department of Health's noise control regulation requires a permit for construction activities which emit noise in excess of 95 decibels. Mitigation measures to minimize construction noise include the use of mufflers to suppress loud equipment and limitations on the hours of heavy equipment operation.

### 7.1.8 Recreational Resources

Operations and visitor use at Hanauma Bay Nature Preserve will be impacted in that users may be occasionally inconvenienced, and the beauty and tranquillity of the natural setting will be partially disrupted, by construction activities. ~~It is expected that public access to the lower bay area at Hanauma Bay Nature Preserve may need to be closed for up to one week during the repaving of the beach access road.~~

Mitigative Measures - ~~With proper scheduling and phasing it will be possible to minimize the inconvenience and allow continued use of Hanauma Bay Nature Preserve at substantially current levels during most of the construction period. For example, construction of the new marine education center and snack bar in the upper park area will be completed before the existing visitor entry/education center/administration building complex in the upper park area and the existing snack bar in the lower park area are removed. Repaving the beach access road will be done with quick-setting concrete and, if feasible, phased in order to limit the possible closing of the lower park area to the minimum required time.~~

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### 7.1.9 Employment

As noted in Section 3, the estimated cost for design and construction of the planned improvements is approximately \$9.9 million, and their completion is expected to take approximately 12 months. This will generate significant short-term direct employment, both on- and off-site, during the construction period. The number of jobs at any given time will vary considerably, depending on the level of construction activity. However, on the average this project should generate between 70 and 80 direct full-time equivalent construction and construction-related jobs during the time it will take to complete these improvements.

Construction activity will also generate indirect and induced employment opportunities and multiplier effects. Those impacted will be local material suppliers and retail businesses.

Mitigative Measures – The short-term employment impacts will be beneficial to both the overall Hawaii and local economies. While the magnitude of the impacts on the local economy cannot be accurately projected, it should not be at a level that would generate any significant expansion or structural changes that could lead to negative impacts when construction is completed. No mitigative measures are considered necessary.

### 7.1.10 Roads and Traffic

None of the planned improvements involve construction activities along Kalanianaʻole Highway or other streets in the vicinity of Hanauma Bay Nature Preserve and the Regional Park.

There will be some short-term impacts from trucks, heavy equipment and other vehicles that will use existing roads - primarily Kalanianaʻole Highway - to access construction areas, especially for the purpose of delivering construction materials and hauling away demolition debris. While construction vehicles are relatively slow and difficult to maneuver, it is anticipated that they will only marginally affect overall traffic flow. The relative impacts on highway traffic should be slight since most trucks will likely be traveling in the opposite direction of peak-hour flow, and Kalanianaʻole Highway is already a major thoroughfare for large trucks that are prohibited from using the Wilson and Pali Tunnels.

Commuting construction workers will slightly increase traffic levels, although their impact is anticipated to be negligible. It is anticipated that space will be provided within the Regional Park, at Hanauma Bay Nature Preserve and/or the former Hawaiian Job Corps Center site for parking all construction workers' cars and for other construction-related vehicles.

Mitigative Measures – Appropriate traffic control measures and scheduling of construction activities will be applied during the construction of the new facilities at Hanauma Bay Nature Reserve and demolition of existing buildings at the Job Corps site as necessary to ensure public safety and minimize the disruption of traffic. In addition, if necessary to avoid causing or substantively impacting any existing traffic congestion, the movement of construction equipment and slower vehicles will be coordinated to avoid peak traffic hours.

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### 7.2 LONG-TERM IMPACTS

The improved facilities at Hanauma Bay Nature Preserve, and the institution of the proposed mandatory resource awareness training for all visitors wanting to go to the lower park area, will generate some long-term impacts on the natural and human environment. In addition to the subject areas discussed above with respect to short-term impacts, areas where long-term impacts are possible include natural hazards, visual resources, population, and roads and utilities. Probable long-term impacts related to completion and operation of the planned improvements and, where applicable, proposed mitigative measures are described in the following sub-sections.

#### 7.2.1 Topography, Soils and Drainage

As noted above in Section 7.1.1, all planned improvements will be located in previously graded and improved areas. Existing landforms and drainage patterns will not be altered.

*Hanauma Bay Nature Preserve* - The new marine education center and snack bar/restroom building in the upper park area at Hanauma Bay Nature Preserve will only marginally increase the impervious surface area and amount of runoff from this part of the upper park area. In addition, the new marine education center will be built on a site that is now a drainage retention basin. Consequently, its construction will reduce the existing capacity of the storm water retention system in the upper park area. Storm water runoff from areas that drained into this basin, as well as from the new marine education center/snack bar complex, will be routed into the existing large retention basin system to the west of this area.

SSFM Engineers, civil engineers for the design of the planned improvements, have measured the increase in impervious area in the upper park area to be approximately 0.3 acres. According to SSFM calculations, peak runoff from a 10-year storm will be increased from 51 cubic feet per second (cfs) under current conditions to 52 cfs once these planned improvements are completed. A copy of the SSFM original report is provided in Appendix L. Appendix M provides an addendum to the original SSFM report that reflects the current plan to retain the existing parking lots at Hanauma Bay Nature Preserve.

The existing snack bar in the Hanauma Bay's lower park area will also be removed, resulting in a slight reduction in impervious surface area and the amount of runoff in this very sensitive area near the shoreline. Other improvements in this area - e.g., relocation and reconstruction of the main comfort station and snorkel rental concession, reconstruction of the beach shuttle turn-around, and the addition of an information kiosk and lifeguard equipment storage facility - will only minimally increase the amount of impervious surface.

*Former Hawaii Job Corps Center Site* - Demolition of the existing buildings and the grassing of these areas will slightly increase the land area available for rainfall to percolate into the ground. Consequently, storm runoff volumes should decrease slightly. The existing storm water collection system serving this site and the adjoining Koko Head District Park is adequately handling existing peak runoff volumes, and will obviously continue to do so after the existing buildings are demolished.

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Mitigative Measures - Overall, there will be no major change in existing drainage conditions at Hanauma Bay. Runoff patterns will generally stay the same, and on the rare occasions when there is runoff into the bay during particularly intense storms, the total volume will be essentially the same as it is now. As noted, all drainage from the parking lots and new marine education center/snack bar complex will be routed into the existing stormwater retention basin system. The depth of the existing basins will be increased slightly, and an existing basin that receives little runoff may also be connected to the adjoining larger basin in order to restore and maintain the existing system's overall stormwater retention capacity.

All new facilities will be designed and constructed in a manner that avoids creating any new erosion problems and meets design standards and requirements for preventing erosion and handling anticipated peak surface runoff loads. Newly disturbed areas, as well as some existing relatively barren areas, will be landscaped in a manner that will preclude any serious erosion in all but the most extreme circumstances.

### 7.2.2 Flood and Tsunami Inundation Hazards

As noted in Section 4.4.4, the Oahu Civil Defense Agency's Tsunami Evacuation Map for Waiupe to Hanauma Bay indicates most, if not all, of Hanauma Bay's beach area as subject to inundation in the event of a tsunami. Improvements planned in the lower park area include the demolition of the existing snack bar/snorkel concession (with the snack bar relocated to the upper park area) and its replacement with a new and much smaller information kiosk. The main comfort station and the beach tram turn-around are also to be rebuilt. This new comfort station will be slightly larger than the existing one, and the new snorkel rental space will be attached to it. A new life guard safety equipment storage building will also be provided. All of these improvements will continue to be located in the potential tsunami inundation zone. However, because these types of facilities are accessory to a park use and will not be used for residential purposes, regulations allow such structures to be located in flood prone areas.

Mitigative Measures - The planned improvements that are to be located in potential tsunami inundation area at Hanauma Bay will be designed in accordance with current standards and regulations applicable to structures placed in such areas. Further mitigative measures are not considered necessary.

### 7.2.3 Coastal Water Quality

As noted in Section 7.1.3, no improvements are planned that will directly impact coastal waters or water quality. The only potential long-term impact of the planned improvements on coastal waters would result from any changes to runoff patterns or intensities at Hanauma Bay Nature Preserve. As noted in Section 4.7.2.1 and Section 7.2.1, drainage patterns will change very little and, once all construction is completed and disturbed areas are fully landscaped, any runoff into Hanauma Bay will be essentially the same as under existing conditions.

Mitigative Measures - No measures beyond proper design of the new facilities and landscaping of disturbed areas are considered necessary.



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### 7.2.4 Marine Life Habitats

The planned improvements at Hanauma Bay Nature Preserve will have beneficial long-term impacts on the marine environment because:

they will make it possible to require all visitors wanting to go to the lower bay area to first complete a resource awareness training session, and

educational displays and handouts will be significantly improved.

The knowledge and awareness thereby gained by park users is expected to change how most people conduct themselves when in the bay, and thus directly result in fewer adverse individual impacts on the bay's marine ecosystem.

Mitigative Measures – No adverse long-term impacts are anticipated, and no mitigative measures are considered necessary.

### 7.2.5 Vegetation and Wildlife

As noted in Section 7.1.4, none of the planned improvements will impact areas where rare or endangered species of vegetation or wildlife have been observed during studies conducted in connection with this project, or are known or suspected to exist in the Hanauma Bay Nature Preserve or Regional Park area based on past surveys or observations.

Mitigative Measures – None are considered necessary.

### 7.2.6 Cultural, Historic and Archaeological Resources

As indicated in Section 4.2.3, there are no known traditional Hawaiian archaeological sites that are located in or near any of the areas that will be impacted by the construction of the planned improvements at Hanauma Bay or the demolition of existing buildings at the former Job Corps site.

three paragraphs referencing the former military radar station on Koko Crater, deleted.

Mitigative Measures – four paragraphs referencing the former military radar station on Koko Crater, deleted. None are considered necessary.

### 7.2.7 Air Quality

Air quality should return to existing conditions once construction and demolition work are completed. Overall attendance levels at Hanauma Bay Nature Preserve are not expected to change substantially, if at all. None of the new facilities will themselves be the source of impacts on overall air quality.

Mitigative Measures – Overall air quality in the Koko Head-Makapuu area is very good, due both to the low intensity of use and the substantial winds that blow most of the time. The



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planned improvements will not change these conditions. No mitigative measures beyond existing vehicle emission controls are considered necessary.

#### 7.2.8 Noise

Noise in the Hanauma Bay Nature Preserve should return to current levels since none of the planned improvements will generate significant amounts of noise, and no substantive changes in visitor attendance are expected.

Mitigative Measures [reference to the no-longer-proposed Koko Crater summit funicular deleted] No mitigative measures are considered necessary.

#### 7.2.9 Visual Resources

There will be limited views of the new marine education center and snack bar complex from the segment of Kalaniana'ole Highway that extends from a point just Makapuu of the Hanauma Bay Nature Preserve entry to the place where the highway begins to curve sharply to the left and parallel the shoreline. This section of the highway is roughly 1,000 to 1,100 feet (about one-fifth mile) long. Most people in vehicles headed in the Makapuu direction will not notice this area because the view angle requires them to look back as well as to the right. They are much more likely to be focusing on the ocean and coastline view to the front right. However, these new facilities are more likely to be noticed by occupants of vehicles traveling in the Honolulu direction.

The views from cars looking toward the project site will be limited because of the distances involved and the intervening scrub vegetation. Locations along the highway from which these buildings could be seen are a minimum of 700 feet away and as far as 1,700 feet away. Views from cars traveling along the highway are also short and frequently interrupted rather than continuous because the intervening vegetation blocks the view in several locations along the way.

Except for the new parking lot landscaping, all other planned improvements will not be visible from Kalaniana'ole Highway or the prominent scenic viewing points outside of Hanauma Bay Nature Preserve.

There are now and will continue to be limited views of park improvements on the beach from lookout points on the rim surrounding the bay, from the beach access road entry to the lower bay area, and from the paths to Witch's Brew and Toilet Bowl. As discussed below, under mitigative measures, these view impacts will be less with the new improvements than they are now.

Views of the roof line and upper portion of the new marine education center and snack bar will be possible from various locations on the beach, along the trails to Witch's Brew and the Toilet Bowl, and from within Hanauma Bay itself. The extent of the view will vary greatly depending on the vantage point from which the buildings are viewed. Because of the steep viewing angle and the setback of the buildings, there should be almost only a partial view of

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the marine education center - namely, of that portion of the roof that extends over the entry area - from the most popular areas of the beach.

**Mitigative Measures** - The following are proposed to minimize impacts on visual resources:

**Highway views of the marine education center and snack bar complex** - To blend these buildings in with the surrounding natural landscape, the mauka sides will consist of sloping earth mounds that will be grassed. Roofs will also be grassed and at no more than 16 feet above the adjacent grade will be kept very low rise and well below tree height. As a result, the view from Kalaniana'ole Highway will mostly be of the sloping grassed mounds, and views of actual building forms will be extremely limited. The combination of this design approach, new landscape trees in the parking lots, intervening scrub brush and distance make it unlikely that more than a small minority of those driving by will ever notice these new facilities.

It could be possible to make the marine education center and snack bar not visible at all from the highway if they were placed within the existing grove of mature kiawe trees. However, this benefit is considered to be significantly outweighed by the benefits of siting these facilities in the proposed location. The latter benefits include:

- providing a location that is convenient to and reflective of the natural flow of pedestrian traffic from the parking lots to the main and lower bay area;
- avoiding the need to tear down the existing facilities, and the consequent disruption of park operations while the new facilities are being constructed;
- and
- avoiding the need to remove a significant part of the existing grove of mature kiawe trees.

The mitigative measures described above, while not completely neutralizing the alterations to the view from Kalaniana'ole Highway of this area, are considered sufficient to make this area reasonably compatible from a visual perspective with its surroundings.

**Views of park improvements on the beach** - Compared to the existing conditions, these views will be substantially improved as a result of the proposals to:

- remove the existing concession building;
- place in a much more out-of-view location the main comfort station, snorkel concession and lifeguard safety equipment storage facilities;
- keep the size of the new turn-around to the minimum necessary, and color the pavement so that it will blend in more with the natural surroundings;
- and
- place existing utility lines underground.

With these changes, the beach area will have a much more natural appearance from virtually all vantage points.

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*Views of the marine education center and snack bar from the lower bay area* – These will be minimized by setting the buildings as far back as possible from the edge of the rim, and by using a flat roof. For comparison purposes, the existing office building is set back about 40 feet from the rim, and the setback for the existing education center is approximately 20 feet from the rim. The roof height of the office facility is 18 feet, and that for the education center is 20 feet.

As noted, building roofs for the new marine education will be flat and grassed, and will extend approximately 16 feet above the adjacent grade. Most of the marine education center will not be visible from the portion of the beach area between Comfort Station No. 2 and the beginning of the path to the Folet Bowl, which is where most people stay, because it will be set back 50 feet or more from the edge of the rim. However, the edge of roof area extending over the open-air entry should be visible to those looking up, since it will be set back only 20 feet from the rim.

Extending this portion of the structure this close to the rim is considered acceptable because the entry will then be located where it is convenient for the anticipated traffic flow. Also, the building will then be more effectively utilized to define the boundary of the secure entry area from which people will proceed to the lower bay area. Another constraint limiting the extent of possible building setback is the relatively narrow width of the site area between the rim edge and parking area.

The snack bar will be set back about 40 feet at its closest point from the edge of the rim. As with the marine education center, the amount of possible setback is constrained by the limited width of the site area between the rim edge and parking area.

Overall, these facilities should be less visible from the lower bay area than the existing building, because of the generally greater setbacks and the lower roof heights. Setbacks from the rim could be increased slightly if the natural earth form wall proposed for the mauka side of the buildings was replaced with a more conventional wall. However, the visual and other benefits of using this form of wall are regarded as outweighing the drawback of requiring a somewhat reduced setback from the rim.

In summary, the measures described above will significantly mitigate the potential visual impacts of the planned improvements. Despite the anticipated increase in total building floor area in order to accommodate all desired activities, appropriate design and siting of the new facilities should result in there being less overall visual impacts on the natural environment than is currently the case with existing facilities.

[figures depicting views of the no-longer-proposed Koko Crater summit (unclear) deleted.]

### 7.2.10 Recreational Resources

Impacts of the planned improvements on recreational resources will be minimal and generally beneficial. This is primarily because they will not add any new or remove any existing recreational facilities. Impacts on the use of Hanauma Bay will be minimal.

Visitors going to the lower bay area will be somewhat slowed by the need to first attend the resource awareness training. However, this is not expected to reduce or otherwise impact

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overall park attendance. It should have the distinct benefit of lessening individual impacts on the bay's marine ecosystem.

The planned improvements in the lower park area will also benefit the recreational use of the bay by moving some facilities further back and away from visually prominent and popular beach areas. Public safety will also be improved. Litter and other problems associated with having a food concession on the beach will also be reduced with the relocation of the snack bar to the upper park area.

Other recreational resources in Koko Head Regional Park — Goetz Memorial Ballfield, Koko Head Shooting Complex, Koko Crater Botanical Garden, and Stables, and the three scenic lookouts along Kalanianaʻole Highway — will not be impacted by any of the proposed actions.

**Mitigative Measures** — The primary purpose of the planned improvements is to mitigate adverse impacts on Hanauma Bay resulting from existing recreational uses of the bay. They are intended to accomplish this without significantly impacting public access to the bay or the basic types of uses that are permitted. As such, there should be no adverse impacts on recreational resources that require mitigation.

### 7.2.11 Population and Employment

The planned improvements are not expected to generate any population impacts. As discussed immediately below, the number of new jobs that will be created will be small. The increase will definitely not be at a level that could cause any shift in resident population growth from other areas of Oahu to the East Honolulu region, much less have any impact on Oahu's overall population growth rate.

It is estimated that roughly 10 to 15 new jobs will be created in order to staff the new marine awareness training sessions, exhibit/display area, and museum/bookstore facilities. This number also reflects the potential need to supplement maintenance staff, and possibly to add a position to the cashier staff in order to reduce congestion at the entry during peak arrival times.

There are currently about 40 full-time equivalent City staff positions at Hanauma Bay. The number of concessionaire staff positions is not known.

Current plans are to continue to use the combination of a concessionaire (or concessionaires) and volunteer docents to provide educational exhibits and operate the resource awareness training and other educational programs. The snack bar, beach tram and snorkel rental would continue to be operated by concessionaires. Operation of the museum/bookstore is also likely to be by a concessionaire, although a decision on this has not yet been made. It is expected that other positions would be filled with City and County employees.

Details of the new staffing requirements remain to be worked out. However, this estimate is considered to be realistic and a reasonable indication of the degree of impact.

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**Mitigative Measures** – Employment impacts will be small and largely beneficial. The primary, if not exclusive, impact that will require mitigation is the need for additional employee parking. To accomplish this, the existing employee parking area will be expanded where possible, and where necessary, employees will also be allowed to park in the main parking lots. No other mitigative measures are considered necessary.

#### 7.2.12 Adjacent and Nearby Land Uses

Distance and topography will preclude the planned improvements at Hanauma Bay from having any impacts on other land uses, cultural resources or endangered plant areas or habitats within or bordering or near the Koko Head Regional Park and Nature Preserve. [reference to the no longer proposed central parking area deleted.]

**Mitigative Measures** – [reference to the no longer proposed Koko Crater summit tunicular deleted.] None are considered necessary.

#### 7.2.13 Roads and Traffic

Overall park usage levels and the mix users and times they come to Hanauma Bay are not expected to change as a result of the completion of the planned improvements. As indicated by the traffic impact assessment study conducted by Pacific Planning & Engineering, Inc. (Appendices I and K) the planned improvements at Hanauma Bay Nature Preserve will not require any roadway modifications or changes in existing traffic controls in order to adequately accommodate future traffic volumes resulting from park use.

**Mitigative Measures** – [reference to the no longer proposed signalized park entry intersection deleted.] None are considered necessary.

#### 7.2.14 Utilities

##### 7.2.14.1 Water Supply

*Hanauma Bay Nature Preserve* - SSFM Engineers estimates that water usage at Hanauma Bay Nature Preserve should remain essentially at its current level or possibly increase slightly. It currently averages just under 37,000 gallons per day (gpd). Their analysis and findings are presented in Appendix M.

The domestic demand (i.e. for drinking, food preparation at the snack bar, restroom operation and other people-related use) is not expected to change since planned improvements should not affect average daily visitor counts. (While current metering does not provide separate readings for domestic and irrigation use, it is estimated by SSFM that approximately 8,000 gpd are being used for domestic purposes, and 29,000 gpd for irrigation.) Water use for irrigation may increase slightly in the future in order to sustain the new parking lot landscaping and the grassed roof form on the new marine education center and snack bar. The order of magnitude increase is expected to be no more than 1,000 to 2,000 gpd, or up to 5% more than the total existing water usage.



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*Former Hawaii Job Corps Center Site* – No new uses are proposed at this site. Water consumption at the Parks Department's maintenance yard should continue at existing levels.

Mitigative Measures – Water use should be regularly monitored for leaks, etc. and normal conservation practices should be applied to the irrigation of landscaping. In particular, considerable browning should be acceptable on the grassed slopes and roofs of the new buildings, especially during dry seasons when the natural vegetation in the surrounding area is brownish, as long as this does not kill the grass. No other mitigative measures are considered necessary.

#### 7.2.14.2 Wastewater Disposal

*Hanauma Bay Nature Preserve* – SSRM estimates that the volume of wastewater generated at Hanauma Bay Nature Preserve should not change significantly since the number of daily visitors is not expected to change and there are no new proposed uses that will themselves generate wastewater (Appendix M). Wastewater flows are estimated at 85% of domestic water consumption, or about 6,700 gpd, based on existing estimated consumption. Wastewater generation should not change even if overall water consumption increases as indicated above, since any such increase is expected to be attributable to increased irrigation water needs.

The existing wastewater pumping system has adequate capacity to handle existing wastewater flows, but is showing signs of wear and tear and is due for replacement. All wastewater will continue to be treated off-site at the Hawaii Kai Regional Wastewater System treatment plant mauka of Sandy Beach and disposed of through the plant's ocean outfall that is located 3,000 feet offshore. The operator (Hawaiian American Water Company) has indicated it has sufficient wastewater processing capacity to handle existing and estimated future flows.

*Former Hawaii Job Corps Center Site* – No new uses are proposed for this site in connection with this project. The planned demolition of existing buildings will not generate any wastewater flows or need to install a new or upgrade the existing collection system.

Mitigative Measures – None are considered necessary.

#### 7.2.14.3 Power and Communications

Hawaiian Electric Company and Hawaiian Telephone Company have indicated that no problems are anticipated with the provision of electrical and telephone services to the planned new facilities. Any additional demand resulting from the operation of the marine education center will be relatively small, and adequate service capacity is available. There will be no adverse impacts on existing users.

Mitigative Measures – None are considered necessary.

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### 7.3 SUMMARY OF PROBABLE IMPACTS

#### 7.3.1 Interrelationships and Cumulative Environmental Impacts

Cumulative and interrelated impacts are those associated with existing, approved and foreseeable future projects that may produce related or additive impacts. In the case of the planned improvements to the Koko Head Regional Park and Nature Preserve, the only anticipated impacts that may fit into these categories relate to plans for the development of the Ka Iwi State Park. The goals and plans for this new park are briefly summarized in Section 6.2.3.

The plans for development and use of Ka Iwi State Park are highly compatible and complementary with Hanauma Bay Nature Preserve and other recreational uses and activities in Koko Head Regional Park. Together they will go a long way toward ensuring that this vast and unique open area at the eastern end of Oahu will be permanently maintained as a natural resource park for the enjoyment of residents and visitors alike. Thus, any cumulative and interrelated impacts should for the most part be positive.

If there are any negative impacts, the most likely area where this might occur is an increase in traffic. This could occur because having two major publicly accessible nature parks so near to each other will create a significant opportunity for people to learn about and experience major elements of Hawaii's unique natural environment.

The planned improvements at Hanauma Bay Nature Preserve are not expected to attract more park visitors. However, those at Ka Iwi State Park, while very limited in scope, will likely increase to some degree the area's appeal and accessibility to potential users.

Any such negative impacts resulting from the "synergy" of the two adjoining major nature parks should be considerably outweighed by the resulting natural resource preservation and environmental awareness and educational benefits to the community. They should also be modest, given the lack of plans for any major increase in the overall capacity of the two parks to accommodate additional visitors.

#### 7.3.2 Potential Secondary Effects

Examples of these types of effects include the stimulation of additional development in an area, or of higher density development, as a result of the construction of public facilities such as a new highway or sewerage system. However, it is not expected that the planned improvements at Hanauma Bay Nature Preserve will have any secondary effects. While they certainly will help to protect Hanauma Bay's marine ecosystem, daily attendance levels at the Nature Preserve should remain substantially where they are now.

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#### 7.3.3 Relationship Between Local Short-term Uses of the Environment and the Maintenance and Enhancement of Long-term Productivity

These relationships are described below in the context of the following four specific areas of potential concern:

- Narrowing of the range of beneficial uses of the environment;
- Long-term risks to health and safety;
- Foreclosure of future options; and
- Trade-offs among short-term and long-term gains and losses.

The planned improvements are considered to be beneficial uses of the environment. They utilize areas that have been previously disturbed for several beneficial purposes, including:

- Preserving and protecting an important natural resource, namely, Hanauma Bay, from further degradation by reducing the likelihood of individual users damaging the reef and other elements of the bay's marine ecosystem; and
- [bullet item related to increasing the opportunity for people to experience and enjoy Hawaii's natural environment deleted]
- Creating greater public awareness of and appreciation for the value, uniqueness and, in many respects, the fragility of one of Hawaii's most significant natural resources.

Thus, the planned improvements will help to avoid the possible need for other protective actions that would narrow the range of currently available beneficial uses of Hanauma Bay's environment.

In several cases the improvements will also improve the safety associated with people's use of the bay. No long-term risks to health and safety are anticipated.

No future options will be foreclosed. The demolition of existing structures at the former Hawaii Job Corps Center site will reduce the costs of developing recreational or other appropriate low-impact uses there in the future, and thus will enhance future options. The planned marine education center and other improvements will also enhance future options to implementing additional protective measures at Hanauma Bay should the ongoing carrying capacity studies or other studies indicate this would be appropriate. This is because these new facilities can provide the space needed to support any new required programs and activities, and thus reduce the potential costs of implementing such additional measures.

The only potential substantive trade-off among short-term and long-term gains and losses that is apparent would be the commitment of funds to complete these improvements now, as opposed to waiting or simply leaving this potential funding source for use on another project.



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at some time in the future. The planned improvements are considered to be vital to improving the management of the use of Hanauma Bay so that this extraordinary natural resource will be protected for the enjoyment of future generations.

#### 7.3.4 Irreversible and Irrecoverable Commitments of Resources

The construction and operation of the planned new improvements and facilities will involve the irretrievable commitment of certain natural and fiscal resources. However, this will not include a commitment of any previously undisturbed natural areas.

There will be a permanent commitment of funds and resources to plan, design, construct and operate the new improvements and facilities. Planning, design and construction of the planned improvements will require the expenditure of approximately \$9.9 million. (This amount is \$3.1 million less than the \$13 million that has already been appropriated.) Construction will also involve the use of labor and materials, most of which is non-renewable and irretrievable.

Roughly 10 to 15 new jobs will need to be created to operate the new facilities. No changes in existing park user fees are proposed and it is anticipated that current excess revenues from the existing fees will be more than sufficient to pay for the operation and maintenance of the new facilities and programs.

(reference to an increased consumption of gasoline and electricity deleted)

#### 7.3.5 Adverse Environmental Effects That Cannot Be Avoided

Adverse impacts can be divided into short- and long-term effects. Short-term effects are generally associated with construction, and prevail only for the duration of the construction period. Long-term effects generally follow completion of the improvements, relate either simply to their existence or to the operation of the new facilities, and are permanent. Effects that can be considered both adverse and unavoidable are as follows:

##### 7.3.5.1 Unavoidable Adverse Short-term Effects

- Soils will be temporarily disturbed by grading, excavation and mounding activities at the project sites during construction.
- Temporary increases in soil erosion will also result from construction operations, and minor amounts of soil may be carried beyond construction sites, and possibly into Hanauma Bay, in surface runoff water.
- Previously planted vegetation, and possibly a small amount of natural vegetation, will be removed to allow construction of the planned improvements. (reference to the Job Corps site deleted)
- Wildlife utilizing the project sites and immediate adjacent areas will be displaced, most likely into nearby undeveloped lands, by construction activities. Such operations will also temporarily discourage wildlife from feeding at or migrating through the project sites.

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- Operation of construction equipment, trucks and worker vehicles may temporarily impede traffic in the areas during the construction period.
- Negligible releases of air contaminants will occur from construction equipment emissions. Small amounts of dust may be generated during dry periods as a result of construction operations.
- Minor increases in noise levels may result from construction activities.

#### 7.3.5.2 Unavoidable Adverse Long-term Effects

- Minor modifications to the current topography at each project site will be made to accommodate the planned improvements and facilities.
- Utilization of potable groundwater at Hanauma Bay Nature Preserve for domestic and irrigation purposes will increase from the current use level of approximately 37,000 gallons per day to approximately 38,000 to 39,000 gallons per day, or by up to 2,000 gallons per day.
- There may be a very minor increase in demand on fire protection services. However, as a result of the awareness training, the need for fire rescue services may decrease.
- ~~References to increased demand for police and fire protection and wastewater treatment, increased noise and vehicle emission levels, and possible traffic delays at the no longer proposed signalized park entry, have all been deleted.~~

**Section 8.0**

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**Alternatives to the Proposed Actions**

## 8.0 ALTERNATIVES TO THE PROPOSED ACTIONS

Four alternatives to the planned improvements are described and evaluated in this section. They range from (1) doing nothing, to (2) postponing the planned improvements, to (3) locating the proposed marine education center elsewhere, to (4) providing for more intensive recreational use of Hanauma Bay Nature Preserve. Particular attention in the evaluation of the four alternatives is given to the following criteria:

1. How well each alternative could attain the objectives of the planned improvements;
2. Comparing the probable environmental impacts of each alternative with those of the planned improvements; and
3. How the alternatives might better enhance environmental quality or avoid, reduce or minimize some or all of the environmental effects, costs and risks of the planned improvements.

The purpose and objectives of the planned improvements are discussed in detail in Sections 2 and 3 of this EIS. The discussion in this section of how well each alternative could attain these objectives will focus on the goal statements contained in the 1992 Hanauma Bay Nature Park Master Plan, since these goals summarize very well the essential reasons and basis for proposing the planned improvements. These goals are:

Goal A: Continue to preserve and enhance the natural qualities and opportunities unique to Hanauma Bay and its environs.

Goal B: Optimize the use of Hanauma Bay as an important recreational resource for the people of the State of Hawaii.

Goal C: Promote public education and appreciation of Hanauma Bay Nature Park's natural environment by providing opportunities for the safe enjoyment of park resources.

~~Quote of Koko Head Park Master Plan goals deleted.~~

### 8.1 NO-ACTION ALTERNATIVE

This alternative would involve no changes in the foreseeable future to the existing facilities and management practices at Hanauma Bay Nature Preserve. Thus, it would involve a deliberate decision to not provide any new facilities or make any improvements to existing facilities, or to change any existing management practices, in a way that would help to achieve the above-referenced goals. This in-and-of-itself is sufficient reason to reject and give no further consideration to this alternative.

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As described in Section 7 and summarized in Section 7.3 of this EIS, the beneficial environmental impacts of the planned improvements outweigh by a significant margin the probable adverse environmental impacts. The "no action" alternative will obviously not create any specific beneficial impacts. However, probable adverse impacts include the following:

- Park visitors will continue to be served by inadequate educational and awareness programs that are severely limited in their effectiveness due to the substandard, make-do space that is now available.
  - The reduction in damage to Hanauma Bay's marine environment by individual users of the bay, which is expected if the proposed resource awareness, training, and other new educational programs and exhibits are provided, would not occur.
  - Visitors would continue to regularly experience long lines and waits when trying to pass through the existing make-shift entry area.
  - The litter and other environmental problems associated with operating a snack bar so close to the bay and its precious marine ecosystem would continue to exist.
  - The visual clutter and blight that greets people as they step onto the beach in the lower bay will continue to exist.
  - Visitors to the lower bay area would continue to be served by a substandard main comfort station.
  - The potential safety hazards associated with requiring the beach tram to back up in areas also used by pedestrians, and having pedestrian and beach tram traffic on the beach access road cross-paths, would remain.
  - There would continue to be no safe and reasonably convenient place for lifeguards to store their safety equipment.
- Therefore, in terms of relative environmental impacts, the "no action" alternative has been rejected as having fewer beneficial and more adverse impacts than the planned improvements. Similarly, the discussion in Section 7 demonstrates that the planned improvements will also do more to enhance the overall environmental quality, and reduce or minimize undesirable effects than the "no action" alternative.

### 8.2 POSTPONING ACTION PENDING FURTHER STUDY

This alternative would involve deferring completion of the planned improvements until additional studies concerning, for example, their potential impacts on the physical environment and/or the impacts of alternative resource management practices are completed. A concrete reason for considering this alternative is the carrying capacity study that began in June of this year.

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With respect to the carrying capacity study, this at a minimum will significantly enhance the technical basis for existing and already planned modifications to limits on the types and extent of park visitor impacts on Hanauma Bay's natural resources and marine ecosystems. It will also provide the basis for implementing further improvements in management practices, and possibly imposing greater limits on visitor use of parts of the Nature Preserve, if the study's findings indicate that it would be appropriate or necessary.

It will be important for this study to be completed, and for its recommendations to be implemented. (The anticipated completion date is mid-2000.) However, it is not considered necessary or appropriate to postpone implementation of the planned improvements until it is completed. This is because several of these improvements will have significant beneficial impacts on the physical environment at Hanauma Bay, on the management practices related to people's use of the Preserve's natural resources, and on people's awareness of and appreciation for the importance of maintaining key elements of its natural environment. It is not expected that the carrying capacity study will indicate that retaining the existing facilities or continuing the existing management practices would be preferable to the planned improvements and changes. Rather, the study is expected to support the proposed actions and possibly provide a basis for further physical improvements and/or refinements in management practices.

Postponing the planned improvements would postpone realizing the environmental benefits that will be achieved upon their completion. Completing them is not expected to foreclose any options for facility or management improvements that may be recommended by the carrying capacity study. Postponement is very similar to the "no action" alternative - the primary difference being an implied if not defined time limit - and has many of the same disadvantages as those discussed above. It offers no real advantages over proceeding at this time with the planned improvements and, therefore, has been rejected.

### 8.3 ALTERNATIVE LOCATIONS FOR ~~PROPOSED MARINE EDUCATION CENTER~~

~~Discussions of alternative sites for no longer proposed improvements and of relocating some of the National Park's existing recreational facilities outside of the Park in order to provide additional site options for the no longer proposed improvements have been deleted.~~

Significantly curtailing public use of the lower area and Bay at the Hanauma Bay Nature Preserve, and relocating the marine education center elsewhere on Oahu, is another alternative.

The point of the planned marine education center is to provide interpretive exhibits and educational opportunities that are directly related to the special marine environment offered by Hanauma Bay. The benefits ~~in general, and to Hanauma Bay in particular~~ of providing such a facility would ~~obviously be drastically reduced if it was separated from the Nature Preserve.~~

If there were plans to significantly curtail public use of Hanauma Bay Nature Preserve, it would then make sense to consider relocating the marine education center to another location with a

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comparable marine environment. However, ~~there are no such plans. In addition,~~ there are no other places around Oahu where such a variety and quality of tropical marine environments exist so close to each other and in such a uniquely protected and beautiful setting.

Consequently, the preferred alternative is to continue to permit public use of this special place. ~~An essential part of this continued use will be to more effectively manage it so that serious or permanent damage to the marine environment can be avoided. The proposed marine education centers are a key ingredient to more effective management.~~ It is also possible, through such facilities as the marine education center, to enhance people's enjoyment and increase their understanding and appreciation of the importance of preserving the natural environment.

#### 8.4 MORE INTENSIVE RECREATIONAL FACILITIES DEVELOPMENT

This alternative could, for example, involve expansion of the parking and number of snorkel and scuba concession permits at Hanauma Bay so that the number of people using the Nature Preserve is allowed to increase over current levels. ~~References to expanding Koko Head District Park and relocating the no-longer-proposed nature learning center to Hanauma Bay deleted.~~

These and any other possible alternatives involving more intensive recreational uses and/or a significant increase in ~~Hanauma Bay Nature Preserve~~ attendance have been rejected due to their basic conflict with the goals and objectives that have been established to guide future development, use ~~and management~~ decisions affecting the Nature Preserve. In most if not all cases, ~~various potential forms of~~ more intensive uses of ~~at Hanauma Bay~~ would also increase the probability of adverse environmental impacts, rather than enhance environmental quality in this ~~Nature Preserve~~.

**Section 9.0**

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Summary of Unresolved Issues



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### 9.0 SUMMARY OF UNRESOLVED ISSUES

Two unresolved issues are discussed below that are related to the planning and development of Hanauma Bay Nature Preserve. The discussion focuses on the lack of a need to resolve them prior to completion of the planned improvements, and/or the overriding reasons for proceeding without resolving the issues.

[Discussions of three unresolved issues identified in the DEIS—need for Koko Crater Shooting Complex, safety modifications, public trails and other recreational facilities on Koko Head, and entry location for Koko Crater Botanical Garden and Stables—have been deleted.]

#### 9.1 CARRYING CAPACITY AT HANAUMA BAY

As discussed in Section 8.2, a carrying capacity study was initiated in June and will attempt to establish in measurable terms the impacts of people's use of Hanauma Bay on its marine environment. The anticipated completion date is mid-2000. The purpose of this study is to establish the bay's carrying capacity, or the types and extent of human activities that can be accommodated in the Bay and on the surrounding land area without significant disruption or damage to its natural environment. The results will then, where applicable and appropriate, be used to modify existing limits on the use of the bay's waters and shoreline, etc.

The conduct of this study is driven by a general understanding that the existing body of knowledge on how human activities impact the Bay is not sufficient to provide a definitive basis for appropriate and effective limits on these activities. In other words, this is an unresolved issue. The question, then, is whether existing management practices limiting the number of people admitted to the Nature Preserve should be continued until such time as this carrying capacity study provides a basis for changing them, or whether it is appropriate to institute the proposed changes in management practices without waiting until the completion of the study. The same question applies to whether or not there should be any improvements made to the existing facilities in the upper and lower park areas.

The planned improvements at Hanauma Bay Nature Preserve are described in Section 3.4 of this EIS. The principal proposed change in management practices is to require all visitors wanting to go to the lower bay area to first complete a resource awareness training session. As described in Sections 3.4.1 and 3.4.2, these improvements and changes in management practices will have significant beneficial impacts on the Bay's environment, and will not foreclose any options for further changes that may be indicated by the results of the carrying capacity study. Consequently, despite the fact that there are some unresolved issues about the Bay's carrying capacity, the significant benefits that will result from the planned improvements and management changes indicate they should be completed as soon as possible.

## 9.2 SCOPE AND DESIGN OF EDUCATIONAL EXHIBITS AND PROGRAMS AT THE NEW MARINE EDUCATION CENTER

Other than the specific proposal to require all visitors going to the lower bay area to complete a resource awareness training session, the types and content of educational and interpretive exhibits and programs to be provided in the new marine education center have not yet been determined. This can be regarded to be an unresolved issue in the sense that without having first developed detailed plans for the exhibits and programs that will be used, it may not be considered possible to design a space that will be adequate to house these functions in both the near-term and long-term future.

It is considered appropriate to proceed now with the design and construction of the educational and exhibit space for the following reasons:

The design and content of educational exhibits and programs are dynamic and, while some core elements remain fairly constant, many will be significantly modified and even totally changed over time. In virtually all existing facilities of this kind, exhibits and programs are regularly changed to incorporate new knowledge or techniques, to deal with a greater diversity of subjects than can reasonably be presented at one time, and to continue to stimulate the interest of repeat visitors. Changes can also occur simply as a result of shifts in the personnel responsible for the exhibits and programs, out of a reflection of their particular areas of expertise or interest.

The proposed interpretive exhibit area and educational alcove will have ample space to accommodate the kinds and sizes of exhibits and programs that would be appropriate in a nature preserve of the size of Hanauma Bay. Major increases in existing attendance levels are certainly not envisioned, as long as protection of this special natural resource is a primary objective. The marine education center is intended primarily to support efforts to protect Hanauma Bay and other marine ecosystems in Hawaii by creating greater understanding and awareness among users of their value and fragility. It is not intended to be a major stand-alone museum or education center. As such, the number of people likely to utilize this facility, and the amount of time they are likely to spend there, are pretty well understood. The proposed 3,000 square feet of space is expected to be more than sufficient to support the intended uses and activities. A large outdoor plaza is also available should there be occasions when special exhibits require additional space.

The space can be designed with a high degree of flexibility to respond and adapt to changed conditions and needs. This is normal practice in designing exhibit spaces, and will be done for this project. As noted, dynamic and successful exhibits are regularly being changed. Consequently, exhibits are usually designed to fit the space. Rarely, if ever, are exhibit spaces designed to fit a specific exhibit. The proposed exhibit/educational area will be entirely open to provide for maximum flexibility.

**Section 10.0**

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**Required Approvals and Permits**

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### 10.0 REQUIRED APPROVALS AND PERMITS

The proposed improvements are consistent with and support the intent of the State Conservation District, the City's General Plan, the East Honolulu Sustainable Communities Plan, and provisions of the Special Management Area of the City and County of Honolulu. The following is an approximate list of major approvals and permits and their status required for implementation of the planned improvements. Ministerial permits will be obtained as required such as building, grading, etc.

<b>Approval or Permit</b>	<b>Approving Authority</b>	<b>Status</b>
<u>Sustainable Communities Plan Open Space Map Designation</u>	City Council	<u>Consistent</u>
<u>Sustainable Communities Plan Public Facilities Map Designation</u>	City Council	<u>Consistent</u>
Environmental Impact Statement	<u>City Dept. of Planning &amp; Permitting</u>	In Progress
Special Management Area Use Permit	City Council	In Progress
Conservation District Use Permit	Board of Land & Natural Resources	In Progress

**Section 11.0**

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References

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### 11.0 REFERENCES

Bathen, Karl H. Circulation Atlas for Oahu, Hawaii. April 1978.

Belt Collins & Associates. Koko Head Park Master Plan Final Plan. Prepared for City and County of Honolulu Department of Parks and Recreation. January 1992.

Belt Collins & Associates. Koko Head Park Master Plan Technical Report. Prepared for City and County of Honolulu Department of Parks and Recreation. February 1989.

City and County of Honolulu Department of Parks and Recreation. Hanauma Bay Daily Attendance Summary. July 1995 to July 1996.

City and County of Honolulu Department of Parks and Recreation. Modifications to the Hanauma Bay Nature Preserve Master Plan. December 1996.

Department of Land and Natural Resources, State of Hawaii. State Recreation Functional Plan. May 1991.

Engineers-Surveyors Hawaii, Inc. and Parametrix, Inc. Final Environmental Assessment For The Koko Head Regional Park, Koko Head Rifle Range Safety Improvements. Prepared for City and County of Honolulu Department of Parks and Recreation. 1992.

Federal Emergency Management Agency. FIRM Flood Insurance Rate Map City and County of Honolulu, Panel Number 150001-0125B. Prepared for the National Flood Insurance Program. September 4, 1987.

Giambelluca, Thomas W.; Nullet, Michael A.; and Schroeder, Thomas A. Rainfall Atlas of Hawaii. Prepared for State of Hawaii Department of Land and Natural Resources, Division of Water and Land Development. June 1986.

Hawaii Administrative Rules, Department of Health, Title 11: Chapter 42 (*Vehicular Noise Control for Oahu*); Chapter 43, Section 5 (*Community Noise Control for Oahu*); Chapter 54, (*Water Quality Standards*); and Chapter 60, Section 5 (*Air Pollution Control for Oahu*).

Hawaiian Telephone Company. Oahu Telephone Directory, Civil Defense Tsunami Inundation Maps. June 1998.

INK Architects, Inc. Hawaii Job Corps Site Master Plan. Prepared for City and County of Honolulu Department of Parks and Recreation. September 1, 1995.

Macdonald, Gordon A.; Abbott, Agatin T.; and Peterson, Frank L. Volcanoes in the Sea: The Geology of Hawaii, Second Edition. 1986.

IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

• Final Environmental Impact Statement •

McAllister, Gilbert. The Archaeology of Oahu. Bulletin 104, Bernice Pauahi Bishop Museum, 1933.

Miyabara Associates. Koko Crater Botanical Garden: A Master Plan for the Garden into the 21<sup>st</sup> Century - Summary Report. Prepared for City and County of Honolulu Department of Parks and Recreation. January 1991.

National Rifle Association. Koko Head Range Report. June 14, 1991.

Office of Planning, Department of Business, Economic Development & Tourism, State of Hawaii. The Hawaii State Plan, Chapter 226, Hawaii Revised Statutes, 1996.

Stearns, Harold T. Geologic Map and Guide of the Island of Oahu, Hawaii. August 1939.

Stearns, Harold T. Geology of the State of Hawaii. Second Edition. 1985.

Swezy, O.H. "The Winter Revival of Insect Life in the Arid Region at Koko Head, Oahu" and "Insect Fauna of *Gossypium tomentosum*". Proceedings Hawaii Entomological Society. Vol. IX, No. 1, pp. 93-98. July 1935.

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

U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Environmental Data Service. Climate of Makapu'u Point, Hawaii, Climatology of the U.S. Bulletin No. 20, April 1978.

U.S. Department of Commerce, Weather Bureau. Rainfall-Frequency Atlas of the Hawaiian Islands for Areas to 200 Square Miles, Duration to 24 Hours, and Return Periods from 1 to 100 Years. Technical Paper No. 43, 1962.

U.S. Department of the Interior, Fish and Wildlife Service. "Endangered and Threatened Wildlife and Plants; Review of Invertebrate Wildlife for Listing as Endangered or Threatened Species". Federal Register. Vol. 49, No. 100, pp. 21664-21675. May 1984.

U.S. Department of the Interior, U.S. Geological Survey. Koko Head Quadrangle. 1983.

Wilson Okamoto and Associates, Inc. Hanauma Bay Nature Park Master Plan. Prepared for City and County of Honolulu Department of Parks and Recreation. May 1992.

Wilson Okamoto and Associates, Inc. Hanauma Bay Nature Park Final Environmental Assessment. Prepared for City and County of Honolulu Department of Parks and Recreation. January 1993.

## IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

---

• Final Environmental Impact Statement •

Wilson Okamoto and Associates, Inc. Hanauma Bay Nature Preserve Revised Final Environmental Assessment and Negative Declaration. Prepared for City and County of Honolulu Department of Parks and Recreation. December 1996.

Wilson Okamoto and Associates, Inc. Ka Iwi State Park Master Plan and Final Environmental Impact Statement. Prepared for Department of Land and Natural Resources State of Hawaii. April 1996.

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**Section 12.0**  
**EISPN and DEIS Consulted Parties**

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**12.0 EISPN AND DEIS CONSULTED PARTIES**

The tabulation that begins on the following page lists the agencies, organizations and individuals that were consulted and/or received copies of review documents during:

- The 32-day public review period (October 8, 1998 - November 9, 1998) for the Environmental Impact Statement Preparation (EISPN); and
- The 106-day extended public review period (March 23, 1999 - July 7, 1999) for the Draft Environmental Impact Statement (DEIS).

The letter symbols in the tabulation indicate the following:

- C** indicates parties that were consulted over the telephone concerning the EISPN preparation, received a copy of the written EISPN, and/or received a copy of the DEIS; however, they did not provide written comments during the EISPN and/or DEIS comment periods.
- N** indicates parties that were not involved in the EISPN consultation process.
- W** indicates parties that provided written comments during the EISPN and/or DEIS comment periods.
- X** The Planning Department was eliminated, and its responsibilities and personnel transferred to the Department of Planning and Permitting, as part of a City and County of Honolulu reorganization plan that became effective on January 1, 1999.

All parties who commented in writing on the EISPN and/or DEIS have been provided with a detailed response to their comments. Copies of both the EISPN comment and response letters are provided following the tabulation of consulted parties. Copies of the DEIS comment and response letters follow those for the EISPN.

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Consulted, Commenting and Copied Parties	EISPN (Oct 98)	DEIS (Mar 99)
<b>A. Federal Agencies</b>		
1. Department of Agriculture - Natural Resource Conservation Service	W	W
2. U.S. Army Engineer District, Honolulu	W	W
3. Department of Commerce - National Marine Fisheries Service	C	C
<i>U.S. Department of the Interior:</i>		
4. Fish and Wildlife Service	W	W
5. National Park Service	C	C
6. Department of Transportation - Federal Aviation Administration	W	W
<b>B. State Agencies</b>		
1. Department of Accounting and General Services	W	W
2. Department of Agriculture	C	C
<i>State Department of Business, Economic Development and Tourism:</i>		
3. Office of the Director	C	C
4. Office of State Planning	W	W
5. State Energy Office	C	C
6. Department of Defense - Office of Civil Defense	C	W
7. Department of Education	W	W
8. Office of Hawaiian Affairs	C	W
9. Department of Hawaiian Home Lands	N	W
<i>State Department of Health:</i>		
10. Office of the Director	W	W
11. Commission on Persons With Disabilities	W	W
12. Environmental Management Division	C	C
13. Office of Environmental Quality Control	W	W
<i>State Department of Land and Natural Resources:</i>		
14. Aquatic Resources Division	C	W
15. Forestry and Wildlife Division	C	W
16. Historic Preservation Division	W	W
17. Land Division	C	W
<i>State Department of Transportation:</i>		
18. Office of the Director	W	W
19. Harbors Division	W	C
<i>University of Hawaii at Manoa:</i>		
20. Environmental Center	C	W
21. Sea Grant Extension Service	C	C
22. Water Resources Research Center	C	C
23. Waikiki Aquarium	N	W

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Consulted, Commenting and Copied Parties	EISPN (Oct 98)	DEIS (Mar 99)
<b>C. <u>City and County of Honolulu</u></b>		
1. Department of Design & Construction	C	C
2. Department of Emergency Services - Ocean Safety	C	C
3. Department of Environmental Services	W	W
4. Department of Facility Maintenance	W	W
5. Honolulu Fire Department	W	W
<i>City Department of Parks &amp; Recreation:</i>		
6. Office of the Director	C	C
7. Koko Head Shooting Complex	C	C
8. Planning Department	W	X
9. Department of Planning and Permitting	W	W
10. Honolulu Police Department	W	W
11. Department of Transportation Services	W	W
12. Board of Water Supply	W	W
13. Aina Haina/Hawaii Kai Community Vision Team	N	C
14. Hawaii Kai Neighborhood Board	W	W
15. Waimanalo Neighborhood Board	W	C
<b>D. <u>Private Utility Company</u></b>		
1. Hawaii-American Water Company	N	W
<b>E. <u>Businesses, Community Organizations, and Non-Profit/Special Interest Organizations</u></b>		
1. Atlantis Adventures	W	C
2. Citizens for Ocean Access	N	W
3. East Honolulu Community Coalition	N	W
4. Friends of Hanauma Bay	W	W
5. Friends of Honolulu Botanical Gardens	W	W
6. GTE Hawaiian Tel	C	C
7. Hawaii Bicycling League	N	W
8. Hawaii Citizens' Rights PAC	N	W
9. Hawaii Council of Diving Clubs	W	W
10. Hawaii Historic Arms Association	N	W
11. Hawaii-Kai Youth Baseball	N	W
12. Hawaii Rifle Association	N	W
13. Hawaii's Thousand Friends	N	W
14. Hawaiian Trail and Mountain Club	C	W
15. Hawaiian Association of Botanical Gardens	C	C
16. Hawaiian Botanical Society	C	C

**KOKO HEAD REGIONAL PARK & NATURAL PRESERVE**

**Final Environmental Impact Statement**

<b>Consulted, Commenting and Copied Parties</b>		<b>EISPN (Oct 1998)</b>	<b>DEIS (Mar 99)</b>
<b>E. <u>Businesses, and Community and Non-Profit/Special Interest Organizations (Continued)</u></b>			
17.	Ka Iwi Action Council	N	W
18.	Kamehameha Schools Bishop Estate	W	C
19.	Koko Crater Equestrian Center, Inc.	C	C
20.	Koko Marina Shopping Center	C	C
21.	Life of the Land	N	W
22.	Maunaloa Triangle/Koko Kai Community Association	C	C
23.	The Outdoor Circle	W	W
24.	Plan Pacific	N	C
25.	Portlock Community Association	C	C
26.	Sea Life Park Hawaii	C	C
27.	Sierra Club - Hawaii Chapter	C	C
<b>F. <u>Individuals</u></b>			
1.	Ms. Diane D. Ackerson	W	W
2.	Ms. Eve Anderson	N	W
3.	Mr. Jerry Chang	N	W
4.	Ms. Lisa Keala Carter	W	C
5.	Ms. Cheryl Connett	N	C
6.	Ms. Chester L. Del Santo	N	W
7.	Ms. Sally Drake	N	W
8.	Mr. Robert Donald Gee	N	W
9.	Mr. John B. Hall	N	W
10.	Dr. Suzanne M. Hammer	N	W
11.	Mr. Tom Henderson	N	W
12.	Mr. John P. Hoover	N	W
13.	Mr. Hal Ing	N	C
14.	Ms. Cherie Tsu Kamoto	N	W
15.	Mr. Kevin Kekona	N	W
16.	Mr. Kenneth H. S. Kwak	W	W
17.	Mr. Shu Magota	N	W
18.	Mr. David E. Matthews	W	W
19.	Mr. Gary Miyakawa	N	W
20.	Mr. Doug Meller	N	W
21.	Mr. Rand Montague	N	W
22.	Mr. Bruce C. Mundy	N	W
23.	Mr. David Nickle	N	W

**KOKO HEAD REGIONAL PARK & NATURAL PRESERVE**

**Final Environmental Impact Statement**

Consulted, Commenting and Copied Parties	EISPN	DEIS
	(Oct 1998)	(Mar 99)
<b>F. Individuals (Continued)</b>		
24. Ms. Beverly Palenapa	W	C
25. Mr. Peter Sofman	N	W
26. Mr. Bryan E. Suntheimer	N	W
27. Mr. Wayne C. Thiessen	N	W
28. Mr. Wesley M. Thorsson	N	W
29. Ms. Virginia K. Travis	N	W
30. Mr. and Mrs. David Washino	N	W
31. Ms. Lane Woodall	N	W
32. Ms. Joretta Young	W	C
33. Mr. Alan C. Ziegler		
<b>G. Elected Officials</b>		
1. City Councilmember John Henry Felix	N	C
2. State Senator Sam Slom	N	C
3. State Representative David Stegmaier	N	C
<b>H. Libraries and Depositories</b>		
1. Hawaii Kai Public Library	C	C
2. Waimanalo Public Library	N	C
3. State Library - Hawaii Documents Center	C	C
4. Kaimuki Regional Library	N	C
5. Kaneohe Regional Library	N	C
6. Pearl City Regional Library	N	C
7. Hilo Regional Library	N	C
8. Wailuku Regional Library	N	C
9. Lihue Regional Library	N	C
10. DBEDT Library	N	C
11. University of Hawaii - Hamilton Library	N	C
<b>I. News Media</b>		
1. Honolulu Advertiser	N	C
2. Honolulu Star Bulletin	N	C
3. KGMB-9	N	C
4. Sun Press	N	C

**COMMENT AND RESPONSE LETTERS**

Environmental Impact Statement Preparation Notice  
October 1998



United States  
Department of  
Agriculture

Natural  
Resources  
Conservation  
Service

P.O. Box 50004  
Honolulu, HI  
96850

Our People...Our Islands...In Harmony

RECEIVED

October 28, 1998

OCT 30 1998

RECEIVED

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Draft Environmental Impact Statement (DEIS) - Koko Head Regional Park and Nature Preserve

We have reviewed the above mentioned document and have no comments to offer at this time.

Thank you for the opportunity to review this document.

Sincerely,

KENNETH M. KANESHIRO  
State Conservationist

cc: Mr. Jim Nakasone, Department of Parks and Recreation, 650 S. King St., 9th Floor,  
Honolulu, Hawaii 96813

The Natural Resources Conservation Service works hand-in-hand with the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



GROUP 70  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seman, AIA, ASID  
Harold Hida, AIA  
Roy H. Nibel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Penmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chang, AIA

Paul F. Clonsey, AIA  
Dean H. Kizamura, AIA  
Norma J. Scott, AIA  
Stephen E. Calko, CPA  
George I. Altz, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nunn  
Ray A. Inouye  
Mary J. O'Leary

October 30, 1998

Mr. Kenneth M. Kaneshiro  
State Conservationist  
U.S. Department of Agriculture  
Natural Resources Conservation Service  
P.O. Box 50004  
Honolulu, HI 96850

Dear Mr. Kaneshiro:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 28, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/N) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. - Architecture - Planning - Interior Design - Environmental Services - Building Design - Asset Management  
925 Bethel Street, 5th Floor - Honolulu, Hawaii 96813-4307 - Phone: (808) 522-5866 - FAX: (808) 522-5871 - http://www.group70.com





DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, HONOLULU  
FT. SHAFTER, HAWAII 96859-5440

READY TO  
ATTENTION OF

Civil Works Branch

October 23, 1998

RECEIVED  
OCT 26 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Thank you for the opportunity to review and comment on the Environmental Impact Statement Preparation Notice (EISP/N) for the Koko Head Regional Park and Nature Preserve, Honolulu, Oahu (TMRs 3-9-12: 1, 2, 4, 6, 8-10, 12-14, and 16). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

a. Due to the lack of information provided in the EISP/N, the need for a DA permit could not be determined at this time. A detailed review will be done by this office once the Draft Environmental Impact Statement has been made available. For further information, please contact Mr. Peter Galloway of our Regulatory Section at 438-9258 (extension 15) and refer to file number 99000010.

b. The flood hazard information provided on page 4-4 (paragraph 11) of the EISP/N is correct.

Due to the recent 1998 reorganization of the local Corps of Engineers office, all correspondence concerning comments to environmental and planning documents should be sent to the Honolulu Engineer District, Attention: CEFOH-ED-C. Thank you for your attention to this matter.

Sincerely,

Paul Mizue, P.E.  
Chief, Civil Works Branch



GROUP 70  
INTERNATIONAL

October 28, 1998

Mr. Paul Mizue, P.E.  
Chief, Civil Works Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Fort Shafter, HI 96859-5440

JENNIFER G. M. ACP  
Vernon G. King, MA  
Sheryl B. Scammon, MA, ACP  
Hiroshi Hagi, MA  
Roy H. Nabel, MA, ACP  
James L. Nicholson, MA  
Rajesh K. Parthasarathy, ACP  
Stephen H. Vason, MA  
Linda L. Chang, ACP

P. Chavira, MA  
Jan H. Kikawa, MA  
Nancy J. Nishi, MA  
Stephen E. Gallo, CPA  
George T. Jara, ACP  
Kathleen H. O'Connell, WEP  
Kathleen A. Nani  
Roy A. Iwanaga  
Mary J. O'Leary

Dear Mr. Mizue:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 23, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. We acknowledge your comments that it cannot yet be determined whether a Department of the Army permit is necessary.
2. We acknowledge your comment that the flood hazard information provided on page 4-4 is correct.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, ACP  
Senior Planner

cc Mr. Jim Nakasone  
Department of Design and Construction

Department of the Army  
Honolulu Engineer District - Attention: CEFOH-ED-C

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
925 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone (808) 523-9656 • FAX (808) 523-9671 • http://www.group70.com



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Pacific Islands Ecoregion  
300 Ala Moana Boulevard, Room 3-122  
Box 50088  
Honolulu, Hawaii 96850

In Reply Refer to: CS

NOV - 3 1988

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Re: *Koko Head Regional Park and Nature Preserve - Environmental Impact Statement Preparation Notice*

Dear Ms. O'Leary:

The U.S. Fish and Wildlife Service (Service) has reviewed the *Koko Head Regional Park and Nature Preserve - Environmental Impact Statement Preparation Notice* (EISPN). The proposed action includes the phased development of visitor centers at Hanauma Bay and Koko Head Regional Park, lookouts and nature trails on Koko Head and Koko Crater, a Koko Head botanical preserve, a trolley and tram system, elimination of Hanauma Bay parking lots, and various other park improvements. The proposing agency is the City and County of Honolulu's Department of Design and Construction.

The Service recommends that the Draft Environmental Impact Statement (DEIS) describe project-related impacts to wildlife resources and habitats within the project area. The DEIS should include current maps detailing the distribution of native flora, fauna, and habitat types in and around the project area. Descriptions of natural resources and proposed mitigation should be based on current surveys conducted by qualified biologists.

In particular, the DEIS should address impacts on rare, threatened, and endangered species of plants, insects, and birds. Our records indicate the documented or potential presence of the following rare and/or federally listed, threatened and endangered species:

<i>Marsilea villosa</i> ('ihii' ihii)	Endangered plant
<i>Centaureium seabroideae</i> (no common name (NCN))	Endangered plant
<i>Schiedea adamanitis</i> (NCN)	Endangered plant
<i>Lasianus cinereus semotus</i> ('ope' a, Hawaiian hoary bat)	Endangered bat
<i>Monachus schauinslandi</i> (Hawaiian monk seal)	Endangered seal
<i>Chelonia mydas</i> (Hona, green sea turtle)	Threatened turtle
<i>Asio flammeus sandwichtenis</i> (pueo, Hawaiian owl)	Protected by State Endangered Species Law

The DEIS should describe potential environmental impacts caused by construction activity, habitat loss due to new buildings or infrastructure, and increased human use. It also should describe measures to avoid unnecessary impacts, minimize unavoidable impacts, or compensate for significant unavoidable impacts to rare, threatened, and endangered species and sensitive habitats.

The Service supports the plans to protect and restore native vegetation on the proposed Koko Head Preserve. However, the DEIS should discuss the following associated issues:

- ▶ The area where the *Marsilea villosa* grows is managed by The Nature Conservancy and all plans for activities in the area should be coordinated with them.
- ▶ Establishing trails and increasing foot traffic within the proposed preserve could result in trampling of the *Marsilea villosa* and other native plant species. It could also result in the inadvertent introduction of alien weeds by hikers. The DEIS should analyze these issues and propose appropriate mitigation measures. Appropriate signage is one such measure. Fencing of certain areas may also be necessary.
- ▶ The DEIS should also consider expanding the limits of the proposed preserve and the native plant restoration project to areas outside of the preserve boundaries indicated on the map on page 2-2. Several other unique native plant habitats are present on Koko Head and could be included within a larger preserve.
- ▶ The preserve should be designed to exclude off-road vehicle from sensitive areas, especially where the *Marsilea villosa* is present. For example, it may not be advisable to immediately remove all the kiawe trees surrounding the craters since they prevent off-road vehicle access. The kiawe could, however, be removed once native trees or other appropriate barriers were established.

The Service suggests that at least two additional areas within the park be targeted for native plant restoration: the slopes of Koko Crater and the area just east of Hanauma Bay, including where the parking lots are currently located. Pedestrian trails are proposed for these areas and they would provide excellent opportunities for interpretive displays and educational signage.

Currently, the endangered plant, *Schiedea adamanitis*, is being planted on the slopes of Koko Crater. While the trails present an opportunity for public education, they should also be constructed to avoid negative impacts on these and other native plants.

Agency resources and community volunteer groups could potentially be used to replant large areas with appropriate native species that were historically present. Care should be taken that any native plants (particularly endangered species) brought into the area from the outside are from as genetically similar stock as possible to the plants already there. In general, this translates into using only plants from nearby areas (or at least from Oahu) where populations are not likely to have undergone significant genetic divergence from East Oahu populations. The DEIS should also note that State and Federal permits are required for the possession and handling of listed plant and animal species.

A final but very important point is that park management plans and operating budgets should be structured to insure that all restored areas will be appropriately cared for and maintained in

perpetuity (e.g., weeded, watered, etc.), since it is unlikely that the restored habitats will ever be completely self-supporting and maintenance-free.

The Service appreciates the opportunity to provide comments on the EISPN, and we look forward to reviewing the DEIS. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Chris Swenson at 541-3441.

Sincerely,



Robert P. Smith  
Pacific Islands Manager

cc: Mr. Gary Gill (OEQC, Honolulu)  
Mr. Jim Nakasone (Department of Parks and Recreation, Honolulu)



GROUP 70  
INTERNATIONAL

Francis S. Ota, AIA, ACP  
Naimin G.Y. Hong, AIA  
Sheryl B. Scaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nohet, AIA, CSI  
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Rajesh E. Punnonc, AICP  
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George I. Ahi, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nun  
Roy A. Inouye  
Mary J. O'Leary

January 15, 1999

Mr. Robert P. Smith  
Pacific Islands Manager  
U.S. Department of the Interior  
Fish and Wildlife Service  
Pacific Islands Ecoregion  
300 Ala Moana Boulevard, Room 3-122  
Box 50088  
Honolulu, HI 96850

Dear Mr. Smith:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Nobbe

Thank you for your November 3, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EISPN) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. The Draft Environmental Impact Statement (EIS) will describe the existing flora and fauna characteristics of the project site, and will discuss potential impacts of the proposed project and construction activity on natural resources. The Draft EIS will also recommend appropriate mitigative measures, if necessary, to minimize unavoidable and/or adverse impacts.
2. We acknowledge your comments regarding the endangered plant *Marsilea villosa* (huluh). We are currently awaiting information from the Nature Conservancy regarding their management plans for the area where the *Marsilea villosa* grows. We will coordinate with the Nature Conservancy as appropriate for activities in this area.
3. We acknowledge your suggestions regarding native plant restoration. The Draft Environmental Impact Statement will address landscaping issues.

Letter to Robert P. Smith, Pacific Islands Manager  
US Fish and Wildlife Service  
January 12, 1999  
Page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC

Sincerely,



Mary J. O'Leary, NACP  
Senior Planner

cc: Mr. Jim Nakasone, City Department of Design and Construction  
Ms. Jennifer Crummer, The Nature Conservancy (including the US Fish and Wildlife  
letter dated November 3, 1998)



U.S. Department  
of Transportation  
Federal Aviation  
Administration

Western-Pacific Region  
Real Estate and Utilities Team, AHNL-54B

Box 50109  
Honolulu, HI 96850-4093

RECEIVED  
OCT 14 1998

October 13, 1998

Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307  
Attn: Mary O'Leary

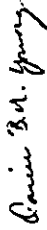
Dear Ms. O'Leary:

Your letter of September 30, 1998, requested information on whether we would like to be a consulted party in the preparation of the Draft Environmental Impact Statement (DEIS) for City and County of Honolulu's comprehensive master plan for the Koko Head area, Oahu, Hawaii.

The Federal Aviation Administration (FAA) is interested in participating as it has a critical navigational aid located within this area. The land used by the Koko Head Very High Frequency Omnidirectional Tactical Air Navigation (VORTAC) facility is granted by a Lease from the City and County of Honolulu (FAA No. FAG-26).

We appreciate your including us in your important work. Please contact me at 541-1236, if there are any questions or ways we may be of assistance.

Sincerely,



Darice B. N. Young  
Really Contracting Officer, AHNL-54B

cc: Department of Parks and Recreation  
650 South King Street, 9th Floor  
Honolulu, HI 96813  
Attn: Jim Nakasone



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

LETTER NO. (P) 1691.8

REKUMANA I. CALETAO  
DIRECTOR

October 28, 1998



GROUP 70  
INTERNATIONAL

Darite B. N. Young  
Realty Contracting Officer, AHNL-54B  
U.S. Department of Transportation  
Federal Aviation Administration  
Western Pacific Region  
P.O. Box 50109  
Honolulu, HI 96850-4983

Francis S. Oka, AIA, ACP  
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L.P. Chancy, AIA  
Jan H. Kamura, AIA  
Norma J. Scott, AIA  
Stephen F. Gallo, CPA  
George J. Aua, ACP  
Kathy H. Green, ACP  
Kathleen A. Van  
Ron A. Iwamoto  
Mary J. O'Leary

Dear Darite Young:  
Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 13, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISPN) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement regarding the Federal Aviation Administration's (FAA) navigational aid located within this area and the lease information you provided.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
925 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone: (808) 523-5666 • FAX: (808) 523-5074 • <http://www.group70int.com>

OCT 28 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve  
Environmental Impact Statement Preparation  
Notice (EISPN)

Thank you for the opportunity to review the subject document which we received as an attachment to your memorandum dated September 30, 1998.

We do not foresee the project impacting any of our existing or proposed facilities. Therefore, we have no comments to offer at this time. However, we welcome the opportunity to review and comment on the project's Draft EIS and Final EIS.

If you should have any questions, please contact Mr. Ronald Ching of the Planning Branch at 586-490.

Sincerely,  
  
GORDON MATSUOKA  
Public Works Administrator

RC/ET:Jy  
c: Mr. Jim Nakasone, Dept. of Parks and Rec.

BENJAMIN J. CAVELAND  
GOVERNOR  
SELIE F. MAYA  
COMMISSIONER  
BRADLEY J. MOSSMAN  
DEPUTY DIRECTOR  
DICK EDGED  
DIRECTOR, OFFICE OF PLANNING



**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**

Tel: (808) 587-2846  
Fax: (808) 587-2824

**OFFICE OF PLANNING**

235 South Beretania Street, 6th Fl., Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Ref. No. P-7774

**RECEIVED**  
OCT 29 1998

October 30, 1998

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

October 29, 1998

Mr. George Ata  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813

**GROUP 70  
INTERNATIONAL**

Francis S. Ouli, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scaman, AIA, ASD  
Hiroaki Hida, AIA  
Roy H. Nibel, AIA, CSI  
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Stephen E. Carlo, CPA  
George I. Aul, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nain  
Roy A. Inouye  
Mary J. O'Leary

Dear Mr. Matsuoaka:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 28, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc Mr. Jim Nakasone  
Department of Design and Construction

Dear Mr. Ata:  
Subject: Koko Head Regional Park and Nature Preserve Environmental Impact Statement (EIS) Preparation Notice

Thank you for the opportunity to review the above-referenced EIS preparation notice. We have the following comments.

Through the development of various natural features into a regional attraction, surrounding sensitive areas would likely be exposed to and used at higher levels of pedestrian and/or vehicular traffic, in particular the Koko Head Crater and 'Ihi Ihihaukaea sites. To address this concern, a discussion of specific management measures intended to minimize adverse impacts on these resources would be appropriate.

Because water supply and waste water treatment capacity are constraints to development relative to these concerns, the draft EIS should discuss the probable impacts of the proposed development relative to these concerns.

The draft EIS may also be made more comprehensive by including a discussion of anticipated State concerns related to vehicular access to and from Kalaniana'ole Highway and possible impacts on the proposed Ka Iwi Scenic Shoreline Project.

Finally, to facilitate the City and County of Honolulu's Department of Planning and Permitting in its review of the required SMA Use Permit application, the draft EIS should include an assessment of the proposed development's compliance with the objectives and policies of the Coastal Zone Management (CZM) Program. (Note that the relevant statute for the SMA Use Permit is HRS 205A, not HRS 205, as indicated on page 3-2 of the EIS preparation notice.)

If there are any questions or concerns on this matter, please contact Ruby Edwards of the Land Use Division at 587-2817 or Jeffrey Walters of the CZM Program at 587-2883.

Sincerely,

Bradley J. Mossman  
Director  
Office of Planning



GROUP 70  
CONSULTANTS

1000 Kalia Road, Suite 1000, Honolulu, HI 96813  
Tel: (808) 531-5966 Fax: (808) 531-5967  
www.group70.com

November 17, 1998

Mr. Bradley J. Mossman  
Director  
Department of Business, Economic Development & Tourism  
Office of Planning  
235 South Beretania Street, 6th Floor  
Honolulu, HI 96813

Dear Mr. Mossman:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 29, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. The Draft Environmental Impact Statement (EIS) will address potential impacts of the proposed project on surrounding areas within the Park, such as Koko Head Crater and Ihihilauea sites, as well as discuss management issues and potential mitigative measures as appropriate to minimize adverse impacts on the area's resources.
2. The Draft EIS will provide information regarding existing conditions, potential impacts and proposed improvements to the proposed project's water and wastewater systems. Water supply and wastewater capacity will be addressed.
3. The Draft EIS will contain a traffic assessment report and will discuss issues related to vehicular access to and from Kalamiana'ole Highway.
4. Regarding the Ka Iwi Shoreline project, the Draft EIS will discuss the proposed project's potential impacts on adjacent uses.
5. We acknowledge your comment regarding inclusion in the Draft EIS of an assessment of the proposed project's compliance with the objectives and policies of the Coastal Zone Management (CZM) Program. The Draft EIS will cite the relevant statute for the SMA Use Permit.

Group 70 International Inc. • Architecture • Planning • Economic Development • Environmental Services • Banking Deposits • Assets Management  
235 South Beretania Street, Honolulu, Hawaii 96813-1000 • Phone: (808) 531-5966 • FAX: (808) 531-5967 • Email: www.group70.com

Letter to Bradley Mossman, Director  
Office of Planning  
17 October 1998  
page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward two copies of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International Inc. • Architecture • Planning • Economic Development • Environmental Services • Banking Deposits • Assets Management  
235 South Beretania Street, Honolulu, Hawaii 96813-1000 • Phone: (808) 531-5966 • FAX: (808) 531-5967 • Email: www.group70.com







WILLIAM J. CAVELAND  
GOVERNOR OF HAWAII



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

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OCT 13 1998

FILED IN 76

LAWRENCE BIRZ  
DIRECTOR OF HEALTH

In reply, please refer to

98-217/epo



GROUP 70  
INTERNATIONAL

October 19, 1998

Mr. Bruce S. Anderson, Ph. D.  
Deputy Director for Environmental Health  
State of Hawaii  
Department of Health  
P.O. Box 3378  
Honolulu, HI 96801

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, Fifth Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Environmental Impact Statement Preparation Notice  
Koko Head Regional Park and Nature Preserve

Thank you for allowing us to review and comment on the subject project. We do not have any comments to offer at this time. However, we would like to receive a copy of the Draft Environmental Impact Statement.

Sincerely,

*Bruce S. Anderson*  
BRUCE S. ANDERSON, Ph.D.  
Deputy Director for  
Environmental Health

- FRANK S. OMB, M.A., ACP
- NORMAN GUY, Ph.D., M.A.
- SHERRY H. SCAMM, M.A., PhD
- HAROLD HALE, M.A.
- BOB H. SPOFF, M.A., CN
- LOUIS L. NICHOLSON, M.A.
- ROBERT E. BURNETT, ACP
- STEPHEN H. YOUNG, M.A.
- LESLIE L. CHUNG, M.A.
- J. DUNN, M.A.
- CHRISTIE H. KRUMHOLTZ, M.A.
- NORMA J. SEAT, M.A.
- STEPHEN F. COLBO, CN
- GEORGE J. JACO, ACP
- KILLEY H. CHAPMAN, ACP
- KATHLEEN A. NUNN
- BOB A. BOWMAN
- MARY J. O'LEARY

Dear Mr. Anderson:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 9, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISNP) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Mary J. O'Leary*  
MARY J. O'LEARY, ACP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction



**COMMISSION ON PERSONS WITH DISABILITIES**

919 Ala Moana Boulevard, Room 101 • Honolulu, Hawaii 96814  
Ph. (808) 586-8121(V/TDD) • Fax (808) 586-8129

November 19, 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. O'Leary:

Thank you for providing us the opportunity to participate in the review of the Environmental Impact Statement Preparation Notice (EISPN). The Commission on Persons With Disabilities would definitely like to be a consulted party in the preparation of the Draft Environmental Impact Statement (DEIS). Please let us know when you want to discuss your objectives.

Sincerely,

Gary L. Batcheller, ASID  
Facility Access Specialist

CC: File  
Department of Design and Construction, City and County of Honolulu



November 23, 1998

Mr Gary L. Batcheller, ASIC  
Facility Access Specialist  
Commission on Persons with Disabilities  
919 Ala Moana Boulevard, Room 101  
Honolulu, HI 96814

Dear Mr. Batcheller:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 19, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISPN) for the Koko Head Regional Park and Nature Preserve project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

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NOV 23 1998

BENJAMIN J. CAVETAWO  
GOVERNOR



GARY GILL  
DIRECTOR

Randall Fujiki  
October 29, 1998  
Page 2

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL

228 SOUTH KOLEA AVENUE  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE (808) 586-4186  
FACSIMILE (808) 586-4186

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NOV -2 1998

3:04 PM '98

October 29, 1998

Randall Fujiki, Director  
Department of Design & Construction  
650 South King Street  
Honolulu, Hawaii 96813

Attention: Jim Nakasone

Dear Mr. Fujiki:

Subject: Environmental Impact Statement (EIS) Preparation Notice for Koko Head  
Regional Park and Nature Preserve, Oahu

In order to reduce bulk and conserve paper, we recommend printing on both sides of the pages in the draft and final EIS. In addition we have the following comments:

1. Integrated planning: Please coordinate the planning for Koko Head Park and Nature Preserve with Ka Iwi State Park. Also describe how the "Golf Course 5 and 6" parcels might be integrated into the park plan should the city purchase them in the future.
2. Phasing: Several phases are mentioned as being funding-dependent. Describe all planned phases so that the project can be analyzed in its entirety. What are the anticipated start and end dates of the project?
3. Contacts: Please include the Ka Iwi Action Council (PO Box 26371, Honolulu HI 96825) in the draft EIS distribution. In the DEIS, be sure to include copies of any correspondence sent or received during the preparation notice phase of this environmental review.
4. Transportation:
  - ▶ Section 4.2 of the EIS preparation notice, *Long Term Impacts*, states that the internal trolley system will reduce the number of cars. If the majority of park

visitors arrive by car, as is currently true, how will the presence of a trolley reduce this number?

- ▶ How will the park management comply with the Americans with Disabilities Act if a trolley system is put into use?
- ▶ Figure 2-1 shows part of the trolley route on Kalaniana'ole Highway along Sandy Beach. How will this impact traffic?
- ▶ The proposed new access road will be built outside the City's property line. Explain why such a road is proposed and what traffic impacts the roadway and intersection would have. The alignment for the new access road goes through a large parcel that has been designated as a "proposed park." Describe what future development is anticipated for this parcel.
- ▶ Will a Federal DOT section 4f review be required?
- ▶ In the draft EIS include a full discussion of traffic impacts and mitigation measures.

5. Maps and figures: Figure 2-1 needs to be retitled to match the listing in the table of contents and the text reference. The figure number needs to be included before the title on the caption. This figure shows several street names that are unreadable. In the draft EIS include a clear copy, and enclose close-up maps of the areas where changes to the park are proposed.
6. Tram/funicular system: In the draft EIS show the visual impacts of this system by superimposing a rendering of the proposed facility onto photographs taken from public vantage points.
7. Funding: The total project cost is not given. Please disclose all state or county funds involved, including any federal funds flowing through the state or county.

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

Sincerely,

GARY GILL  
Director

c: George Atta, Group 70



**GROUP 70**  
INTERNATIONAL

Francis S. Oka, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASD  
Hiroshi Hida, AIA  
Roy H. Nibel, AIA, CSI  
James I. Nishimoto, AIA  
Rajko E. Portnovec, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. Conway, AIA  
Dean H. Kazamura, AIA  
Norma J. Scott, AIA  
Stephen E. Calvo, CIA  
George I. Aza, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Ray A. Bourne  
Mary J. O'Leary

January 15, 1999

Mr. Gary Gill  
Director  
State Office of Environmental Quality Control  
235 South Beretania Street - Suite 702  
Honolulu, HI 96813

Dear Mr. Gill:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 29, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

- 1. Integrated Planning:** The Draft Environmental Impact Statement (EIS) will recognize adjacent uses to the proposed project, but does not plan to coordinate with Ka Iwi State Park or "Golf Course 5 and 6" parcels.
- 2. Phasing and Funding:** The Draft EIS will provide information regarding phasing and construction start dates and project opening dates, as well as project costs and funding sources.
- 3. Contacts:** The Ka Iwi Action Council will be sent a copy of the Draft EIS as requested. All correspondence sent or received during the preparation notice phase of this environmental review will be included in the Draft EIS document.
- 4. Transportation:**
  - Item A: The elimination of private vehicular parking at Hanaua Bay will greatly reduce the number of vehicles entering the Hanaua Bay portion of the Koko Head Regional Park. The proposed trolley system that will operate between the Koko Crater Main Visitor's Center and Hanaua Bay will consolidate travel within the park.
  - Item B: The Draft EIS will address compliance with the Americans with Disabilities Act.
  - Item C/F: The Draft EIS will contain a Traffic Assessment Report that will address existing traffic conditions, traffic impacts associated with the proposed project, and mitigative measures.
  - Item D: The park plan depicted in the Environmental Impact Statement Notice of Preparation (EISP/N) is a draft conceptual plan and its components are still in the early planning stages. Issues such as the proposed new

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
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Letter to Gary Gill, Director  
Office of Environmental Quality Control  
28 December 1998  
page 2

access road and the "proposed park" designated parcel are subject to further revision as the conceptual plan changes. The most current park plan will be fully addressed in the Draft EIS.

Item E: A Federal Department of Transportation Section 4(f) review should not be required because the proposed project does not involve the use of federal transportation funds.

5. **Maps and Figures:** Figure 2-1 and references made to it, as well as legibility, will be corrected in the Draft EIS. The Draft EIS will also contain more graphics related to the proposed project, including close-up graphics of areas where changes to the park are proposed.

6. **Tram/Funicular System:** The visual impacts of the tram system will be depicted in the Draft EIS by superimposing a rendering of the proposed system onto photographs taken from public vantage points.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS, which will be double-sided printed, for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
925 Kelihi Street, Fifth Floor • Honolulu, Hawaii 96813-4507 • Phone: (808) 523-5866 • FAX: (808) 523-5874 • <http://www.group70int.com>

DOMINIC J. CAYE AND  
GOVERNOR OF HAWAII

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OCT 20 1998



MICHAEL D. WILSON, CHIEF EXECUTIVE  
OFFICER  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

October 14, 1998

Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

**SUBJECT:** Chapter 6E-8 Historic Preservation Review -- Environmental Impact  
Statement Preparation Notice - Koko Head Regional Park and Nature  
Preserve  
Maunaloa, Kona, O'ahu  
**TMK: 3-9-10:3: 3-9-12:1, 2, 4, 10, 12 & 13**

LOG NO: 22344  
DOCNO: 9810EJ11

Thank you for the opportunity to provide comment on the EISPN for this project. In  
March 1998, we commented on the City and County of Honolulu's Development Plan  
Public Facilities Map Amendment for the proposed Koko Head Regional Park & Nature  
Preserve (20212/9802ej21). The comments on the Map Amendment are attached.

Our comments for the EISPN remain the same. We look forward to reviewing specific  
development plans in the DEA in order to ensure that park development does not have  
an adverse effect on historic sites.

Should you have any questions, please feel free to call Elaine Jourdane at 587-0014.

Aloha,

DON HIBBARD, Administrator  
State Historic Preservation Division

EJ:jk

Enclosure: SHPD log 20212/9802ej21

c: Jim Nakasone, Department of Parks and Recreation, City & County of Honolulu,  
650 S. King Street, 9th Floor

DOMINIC J. CAYE AND  
GOVERNOR OF HAWAII



MICHAEL D. WILSON, CHIEF EXECUTIVE  
OFFICER  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
STATE HISTORIC PRESERVATION DIVISION  
33 SOUTH KING STREET, 8TH FLOOR  
HONOLULU, HAWAII 96813

March 19, 1998

Patrick Onishi  
Chief Planning Officer  
Planning Department  
City and County of Honolulu  
650 South King Street, 8th Floor  
Honolulu, Hawaii 96813

Dear Mr. Onishi:

**SUBJECT:** Chapter 6E-8 Historic Preservation Review -- Development Plan Public  
Facilities Map Amendment for East Honolulu -- Koko Head Regional Park  
and Nature Preserve 98/EH-1001(IC)  
Maunaloa, Kona, O'ahu  
**TMK: 3-9-10:3: 3-9-12:1, 2, 4, 10, 12 & 13**

LOG NO: 20212  
DOCNO: 9802EJ21

Thank you for the opportunity to review the Development Plan for the proposed Public  
Facilities Map Amendment for the Koko Head Regional Park & Nature Preserve. The  
regional park extends from Koko Head to Sandy Beach and includes, Hanauma Bay  
Nature Preserve, Koko Head District Park, the former Hawaii Jobs Corps Center site,  
Koko Head Rifle Range and the Koko Crater Botanical Gardens.

Our comments for each area are as follows:

Hanauma Bay Nature Preserve -- A review of our records shows that there are no  
known historic sites in the developed areas of the park. Therefore we believe that the  
demolition of the existing public parking lot will have "no effect" on historic sites.  
However, we would like to see the development plans for the proposed landscaping  
and marine education center in order to comment on the effect these project will have  
on historic sites.

Koko Head District Park/Hawaii Jobs Corps Center Site -- A review of our records  
shows that there are no known historic sites in the vicinity of this project.  
Archaeological monitoring for installation of a sewer line in 1987 revealed that this  
area was graded in the past. Since this grading would have destroyed any historic  
sites that might have been present, we believe that re-development of this site, will  
have "no effect" on historic sites.

10 1998


**Koko Head Rifle Range** -- A review of our records shows that there are no known archeological historic sites at this location which has been used as a firing range since 1937. This location in the interior of Koko Head, offered few attractions for traditional Hawaiian settlement, therefore we believe it is unlikely that subsurface habitation or agricultural deposits are present. Consequently, the proposed amendment will have "no effect" on significant historic sites within the current rifle range property.

**Koko Crater Botanical Gardens** -- A review of our records shows that there are three known historic sites at Koko Crater, all on the outer slopes. Site 50-80-15-36, is a house site of undetermined age on the low ridge of Koko Crater, on the Makapu'u side. Site 50-80-15-37 is a series of terraces and a possible house site on the northwest slope of Koko Crater, facing Kamilo Iki Valley. Site 50-80-15-4194 is a human burial of undetermined age on the southeast slope of the crater. We believe that other human burials are likely to be found at Koko Head crater. Koko Head Crater was also known to the Hawaiians as Koholepelepe and is a traditional cultural historic site. The crater interior has not been inventoried for historic sites, so we do not know whether there are other sites present within the crater. Because the environmental conditions make it an unlikely place for traditional Hawaiian settlement, we would not expect extensive remains. Consequently, we cannot provide a determination of effect without more specific information on the locations and natures of the proposed improvements (construction of a research/education/visitor center and development of a horseback/pedestrian trail system through the park).

In summary, while we believe that the undertakings proposed for several areas will likely have "no effect" on significant sites, for other undertakings (specifically, at Koko Crater Botanical Garden and Hanauma Bay Nature Preserve) we request the opportunity to review the specific development plans, if the Map Amendment is approved, in order to ensure that park development does not have an adverse effect on historic sites.

Should you have any questions, please feel free to call Elaine Jourdane at 587-0014.

Aloha,

  
DON HIBBARD, Administrator  
Historic Preservation Officer

E:j:jk



**GROUP 70**  
INTERNATIONAL

FRANK S. ODA, AIA, ACP  
Norman G. Y. Ito, AIA, AIA  
Sheryl B. Scaman, AIA, ASID  
Heohei Hea, AIA  
Roy H. Nibel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Postmore, ACP  
Stephen H. Yuen, AIA  
Linda L. Chang, AIA

Paul P. Churney, AIA  
Dean H. Kamaura, AIA  
Norma J. Scott, AIA  
Stephen E. Calk, CPA  
George I. Aia, ACP  
Jeffrey H. Overton, ACP  
Kathryn A. Nam  
Ray A. Inouye  
Mary J. O'Leary

January 15, 1998

Mr. Don Hibbard  
Administrator  
State Historic Preservation Division  
Department of Land and Natural Resources  
33 South King Street, 6<sup>th</sup> Floor  
Honolulu, HI 96850-4983

Dear Mr. Hibbard:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 14, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your reference to your comment letter dated March 19, 1998 for the Development Plan Public Facilities Map Amendment for East Honolulu regarding the proposed project - Koko Head Regional Park and Nature Preserve. We have prepared the following responses:

1. **Hanauma Bay Nature Preserve** -- We acknowledge your comment that according to your records that there are no known historic sites in the developed areas of the Hanauma Bay Nature Preserve park and that demolition of the existing parking lot will have "no effect" on historic sites. The Draft EIS will contain development plans for the proposed Hanauma Bay project area for your review and comment.
2. **Koko Head District Park/Hawaii Job Corps Center Site** -- We acknowledge your comment that according to your records that there are no known historic sites in the vicinity of this project and that re-development of this site will have "no effect" on historic sites.
3. **Koko Head Rifle Range** -- We acknowledge your comment that according to your records that there are no known historic sites at this location.
4. **Koko Crater Botanical Gardens** -- We acknowledge your comment that there are three known historic sites at Koko Crater, all of which are located on the outer slopes and outside of the proposed project area. We also acknowledge your comment that the crater interior has not been inventoried for historic sites. The Draft EIS will contain project development plans for your review and comment.

KAJU HAYASHIDA  
DIRECTOR  
DEPT. OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

IN REPLY REFER TO:  
HWY-PS  
2.1463



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

OCT 27 1998

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OCT 29 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Ms. O'Leary:

Subject: Environmental Impact Statement (EIS) Preparation Notice for Koko Head  
Regional Park and Nature Preserve

We have the following comments:

1. We agree with the City in mitigating major traffic queues on Kalaniana'ole Highway by closing Hanauma Bay Nature Preserve all day on Tuesdays. On other days, only small traffic queues develop after the Preserve's parking lots are filled and security guards begin turning away cars.
2. Proposed relocation of parking from Hanauma Bay may generate new problems. The Draft EIS should identify necessary measures to mitigate impacts of vehicular and pedestrian traffic on Kalaniana'ole Highway.
3. We support City development/improvement of scenic lookouts, bikeways, and pedestrian paths between Hanauma Bay and Sandy Beach.
4. At this time we do not recommend formal designation of Kalaniana'ole Highway as a scenic route or byway. We are in the process of selecting a consultant to develop the Hawaii Scenic Byways Program. During the development of our Scenic Byways Program, we will consider the inclusion of Kalaniana'ole Highway in our Scenic Byways System.

BSUNUAKI CAVETANO  
GOVERNOR

Letter to Don Hibbard, Director  
State Historic Preservation Division  
Dept. of Land & Natural Resources  
January 12, 1999  
page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc Mr. Jim Nakasone  
Department of Design and Construction

Ms. Mary O'Leary  
Page 2

HWY-PS 2.1463

OCT 27 1998

5. Requests for access to and plans for work within the State highway right-of-way need to be submitted for our review and approval.

Very truly yours,



KAZUHAYASHIDA  
Director of Transportation

c: City and County of Honolulu  
Department of Parks and Recreation



GROUP 70  
INTERNATIONAL

Francis S. Oda, AIA, ACP  
Norman G. Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASD  
Hirotaki Iida, AIA  
Roy H. Nohel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, ACP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. Chorney, AIA  
Dean H. Kaimura, AIA  
Sherma J. Scott, AIA  
Stephen E. Cullio, CPA  
George T. Aita, ACP  
Jeffrey H. Ovenson, ACP  
Kathryn A. Nam  
Ray A. Inouye  
Mary J. O'Leary

January 15, 1999

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

Dear Mr. Hayashida:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 27, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. We acknowledge your comments regarding the City's current practice of closing Hanalei Bay Nature Preserve all day on Tuesdays and its mitigating impact on major traffic queues, and that on other days only small traffic queues develop after the lots are filled and guards turn away cars.
2. The Draft EIS will contain a traffic assessment report which will address existing traffic conditions, the impacts associated with the proposed project and proposed mitigative measures. The issues of parking areas and pedestrian traffic will also be addressed in the Draft EIS.
3. There are no plans to make improvements to State lands between Hanalei Bay and Sandy Beach for bikeways, pedestrian paths, or improve scenic lookouts.
4. We acknowledge your comment that the State is in the process of selecting a consultant to develop the Hawaii Scenic Byways Program. At this time, the City is not recommending formal designation of Kalaniana'ole Highway as a scenic route or byway as part of the Koko Head Regional Park and Nature Preserve project.
5. We acknowledge your comment that requests for access to and for work within the State highway right-of-way need to be submitted to your Department for review and approval.



KAZU HAYASHIDA  
DIRECTOR  
DEPUTY DIRECTOR  
STATE DEPARTMENT OF  
TRANSPORTATION  
GLENN L. OWAKOTO

IN REPLY REFER TO:  
HAR-EP  
4799.99



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
HARBORS DIVISION  
75 SO WHEATZ HWY. • HONOLULU, HAWAII 96813-2000

October 29, 1998

BEVUJUN L. CAETANO  
GOVERNOR

RECEIVED  
OCT 29 1998

Letter to Kazu Hayashida, Director of Transportation  
State Department of Transportation  
December 28, 1998  
Page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for having provided us the Environmental Impact Statement Preparation Notice (EISPN) for the subject project.

While we have no comments to offer, we will forward our copy of the EISPN to the Department of Transportation Statewide Planning Office for their review. They may have some concerns over potential impacts to Kalaniana'ole Highway.

Please call Mr. Glenn Soma at 587-2503 if there are any questions.

Very truly yours,

Thomas T. Fujikawa  
Harbors Administrator

DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 527-6803 • FAX: (808) 527-6875



RECEIVED  
OCT 13 1998

ACCOUNT MANAGER  
By: [Signature]

KENNETH E. SPRAGUE, P.E., Ph.D.  
Director  
OSUNA L. DEGUZA-SITZ, ESQ.  
Deputy Director  
ENV 98-195

October 9, 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bathal Street, 5/F  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Environmental Impact Statement Preparation Notice (EISP/N)  
Koko Head Regional Park and Nature Preserve  
TMK: Various

We have reviewed the subject EISP/N and have the following comments:

1. The EISP/N should address impact on water quality resulting from the subject project.
2. Section 3.7 Land Use Plans, Policies and Controls: Please include City and County Storm Water NPDES requirements (Construction Dewatering, Drain Connection, etc.)

Should you have any questions, please contact Alex Ho, Environmental Engineer, Division of Environmental Quality at 523-4150.

Sincerely,  
*Cheng K. Oshen-Sun*  
KENNETH E. SPRAGUE  
Director

November 2, 1998

Mr. Thomas T. Fujikawa  
Harbors Administrator  
State of Hawaii  
Department of Transportation  
Harbors Division  
79 South Nimitz Highway  
Honolulu, HI 96813-4096

Dear Mr. Fujikawa:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 29, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*[Signature]*  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakazono  
Department of Design and Construction



GROUP 70  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scaman, AIA, ASD  
Hiroshi Hada, AIA  
Roy H. Nohel, AIA, CSI  
James L. Nakazono, AIA  
Eijlth E. Poonnong, AICP  
Stephen H. Yuen, AIA  
Linda L. Cheng, AIA

Paul P. Chorney, AIA  
Dean H. Klamusa, AIA  
Norma J. Scott, AIA  
Stephen E. Calko, CPA  
George I. Aziz, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Bathal Street, 5th Floor • Honolulu, Hawaii 96813-4307 • Phone: (808) 523-5466 • FAX: (808) 523-5471 • http://www.group70.com



**GROUP 70**  
INTERNATIONAL

John S. Oak, AIA, ACP  
Newman G.V. Hong, AIA  
Sheryl B. Scamm, AIA, ACP  
Hiroshi Hata, AIA  
Roy H. Riley, AIA, CFI  
James I. Nelson, AIA  
Ralph E. Parmenter, ACP  
Stephen H. Yuen, AIA  
Linda L. Cheng, AIA  
  
E. Cherny, AIA  
Jan H. Kazama, AIA  
Norma J. Scott, AIA  
Stephen F. Collins, LEA  
George I. Aho, ACP  
Jeddy H. Overton, ACP  
Kathryn A. Nam  
Ray A. Leary  
Mary J. O'Leary

October 28, 1998

Mr. Kenneth E. Sprague  
Director  
Department of Environmental Services  
City and County of Honolulu  
650 S. King Street, 3<sup>rd</sup> Floor  
Honolulu, HI 96813

Dear Mr. Sprague:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 9, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. The Draft Environmental Impact Statement (EIS) will address the impact of water quality resulting from the subject property.
2. We acknowledge your comment regarding the inclusion of City and County Storm Water NPDES requirements. The Draft EIS will address in greater detail the necessary permits required for the project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, ACP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Belbel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone (808) 527-6246 • FAX (808) 527-5874 • <http://www.group70int.com>

DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813  
Phone: (808) 527-4341 • Fax: (808) 527-6667



NOV - 5 1998  
CITY OF HONOLULU

JEREMY HARRIS  
MAYOR

JONATHAN K. SHIMADA, PhD  
DIRECTOR AND CHIEF ENGINEER  
RODRIGO M. BAQUELAR  
DEPUTY DIRECTOR  
BY REFERENCE TO:  
PRO. 98-218

November 4, 1998

Ms. Mary O'Leary  
Group 70 International  
925 Belbel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve - Draft EIS

Thank you for giving us the opportunity to review the Draft Environmental Impact Statement, however we do not have any comments.

If you have any questions, please call Laverne Higa at 527-6246.

Very truly yours,

Jonathan K. Shimada, PhD  
Director and Chief Engineer

FIRE DEPARTMENT  
CITY AND COUNTY OF HONOLULU  
3375 ROYAL A STREET, SUITE 402  
HONOLULU, HAWAII 96817-1889



RECEIVED

OCT 22 1998

ATILOR LEONARD  
FIRE CHIEF  
JOHN CLARK  
DEPUTY FIRE CHIEF

October 16, 1998

JEFFREY HARRIS  
WARDEN

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Environmental Impact Statement Preparation Notice  
Project: Koko Head Regional Park Master Plan  
Location: East Honolulu, Oahu  
TMK: 3-9-12:1, 2, 4, 6, 8, 9, 10, 12, 13, 14, and 16

We received your memorandum dated September 30, 1998, regarding the Koko Head Regional Park and Nature Preserve. We appreciate the opportunity to review the application and have no adverse comments to make regarding this project.

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

Sincerely,

JOHN CLARK  
Acting Fire Chief

JCLN:bh

cc: Jim Nakasone, Department of Parks and Recreation

November 5, 1998

Mr. Jonathan K. Shimada, Ph. D.  
Director and Chief Engineer  
Dept. of Facility Maintenance  
City and County of Honolulu  
650 South King Street, 11th Floor  
Honolulu, HI 96813

Dear Mr. Shimada:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 4, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction



GROUP 70  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hoeg, AIA  
Sheryl B. Seaman, AIA, ASID  
Hiroshi Hida, AIA  
Roy H. Nabel, AIA, CSI  
James I. Robinson, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. Chorney, AIA  
Dean H. Kawanaka, AIA  
Norma J. Scott, AIA  
Stephen E. Callo, CPA  
George L. Aiza, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Ray A. Inouye  
Mary J. O'Leary

PLANNING DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
450 SOUTH KING STREET, 21ST FLOOR • HONOLULU, HAWAII 96813-3017  
PHONE: (808) 923-4333 • FAX: (808) 923-4850



RAINEE I. OHSHI  
CHIEF PLANNING OFFICER  
DONALD HARRIS  
DEPUTY CHIEF PLANNING OFFICER

RR 10/98-1923

JEREMY HARRIS  
MAYOR

RECEIVED  
OCT 21 1998

October 15, 1998

October 23, 1998

Mr. John Clark  
Acting Fire Chief  
City and County of Honolulu  
Fire Department  
3375 Koapaka Street, Suite H425  
Honolulu, HI 96819-1869



FRANK S. OHL, AIA, AICP  
NORMAN G.Y. HOOG, AIA  
SHERYL B. SCAMIN, AIA, AIA  
HERNAN HERRERA, AIA  
ROY H. KUKI, AIA, CSI  
JAMES I. MICHENER, AIA  
RALPH E. TWIMMER, AICP  
STEPHEN H. YUEN, AIA  
LEILA L. CHUNG, AIA

P. CLARKE, AIA  
LEAH H. KAMAU, AIA  
NANCY J. SUE, AIA  
STEPHEN E. CALO, CPA  
GEORGE I. ARA, AICP  
JEFFREY H. OVERTER, AICP  
KATHRYN A. NAM  
ROY A. INOUE  
MARY J. O'LEARY

Dear Mr. Clark:

Subject: **Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice**

Thank you for your October 16, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/NOI) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any adverse comments to make at this time regarding the project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc.  
975 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Attention: Mary O'Leary  
Gentlemen:

Environmental Impact Statement Preparation Notice  
Koko Head Regional Park and Nature Preserve  
Tax Map Key: 3-9-12: 1, 2, 4, 6, 8, 9, 10, 12, 13, 14 and 16

We have reviewed the Environmental Impact Statement Preparation Notice concerning the proposed Koko Head Regional Park and Nature Preserve in light of the City and County of Honolulu's General Plan and its East Honolulu Development Plan.

The proposed park will be a significant generator of traffic throughout the East Honolulu area and will bring concomitant demands on public facilities ranging from wastewater handling to traffic management. These impacts must be addressed in the Environmental Impact Statement (EIS).

Furthermore, a park of this scale may produce significant impacts on surrounding residential communities. These "spillover" impacts should be addressed in the EIS.

Finally, the City is involved with a significant revision to the East Honolulu Development Plan. The final revisions should be acknowledged and incorporated to the degree possible in the analysis of the park's impacts.

Should you have any questions, please contact Robert Reed of our staff at  
523-4402.

Yours very truly,

  
PATRICK T. ONISHI  
Chief Planning Officer

PTO:ft

c: Department of Design and Construction  
Office of Environmental Quality Control



GROUP 70  
INTERNATIONAL

James M. O'Neil, III, M.P.  
Monterey Park, CA  
Shirley S. Quinn, M.P., MUI  
Pasadena, CA  
Ron H. Niles, M.P., MUI  
Forest Hills, NY  
Dolph F. Wilson, M.P.  
San Diego, CA  
Cecilia Chang, M.P.  
Pasadena, CA  
Paul F. DeLoach, M.P.  
Monterey Park, CA  
Scott L. Smith, M.P.  
San Diego, CA  
George E. Van Wert  
San Diego, CA  
Robert A. Voss  
Los Angeles, CA  
Alan J. O'Leary

January 26, 1999

Mr. Patrick Onishi  
Chief Planning Officer  
Planning Department  
City & County of Honolulu  
650 South King Street, 8<sup>th</sup> Floor  
Honolulu, HI 96813

Dear Mr. Onishi:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

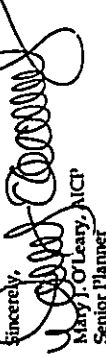
Thank you for your October 15, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/N) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. Regarding your comments about the project's impacts on traffic and demand for public facilities, a traffic impact assessment report will be included in the Draft Environmental Impact Statement. The traffic report will address existing traffic conditions, the impacts associated with the proposed project and proposed mitigative measures. The existing conditions and future requirements of public facilities will also be addressed in the Draft EIS.
2. The Draft EIS will address the proposed project's impacts on adjacent uses and, if necessary, propose mitigative measures.
3. We acknowledge your comment that the City is undergoing a revision to the East Honolulu Development Plan. To the extent possible and dependent upon when the City completes the Development Plan revision process, the East Honolulu Development Plan's final revisions will be addressed in the analysis of the Koko Head Regional Park and Nature Preserve project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Mary J. O'Leary, M.P.  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

DEPARTMENT OF PLANNING AND PERMITTING  
CITY AND COUNTY OF HONOLULU

850 SOUTH KING STREET • HONOLULU, HAWAII 96813  
PHONE: (808) 933-4114 • FAX: (808) 933-9743



RECEIVED

JAN MAOE SULLIVAN  
DIRECTOR

NOV - 6 1998

LORETTA K.C. CHEE  
DEPUTY DIRECTOR

98-07550 (AC)

98-07550 (AC)

November 5, 1998

November 6, 1998

Ms. Jan Maoc Sullivan, Director  
Dept. of Planning and Permitting  
City & County of Honolulu  
650 South King Street  
Honolulu, HI 96813



GROUP 70  
INTERNATIONAL

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Environmental Impact Statement Preparation Notice For  
Koko Head Regional Park and Nature Preserve

Tax Map Keys: 3-9-12, 1, 2, 4, 6, 8, 9, 10, 12, 13, 14 and 16

We have reviewed the above-referenced document and do not have any comments to offer at this time.

Thank you for the opportunity to comment. Should you have any questions, please contact Art Challacombe of our staff at 523-4107.

Very truly yours,

JAN MAOE SULLIVAN  
Director of Planning  
and Permitting

JNS:am

cc: Jim Nakasone, Department of Parks  
and Recreation

91zd4etp1ok.mde

Frank S. Oki, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASD  
Hiroshi Hida, AIA  
Roy H. Nibel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. Chorney, AIA  
Dean H. Klamura, AIA  
Norma J. Scott, AIA  
Stephen E. Callo, CPA  
George I. Aul, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Naim  
Roy A. Inouye  
Mary J. O'Leary

Dear Ms. Sullivan

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 2, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

POLICE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**

801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 528-3111



JEREMY HARRIS  
MAYOR

LEE O. DONOHUE  
CHIEF

WILLIAM B. CLARE  
MICHAEL CARVALHO  
DEPUTY CHIEFS

OUR REFERENCE CS-DL

October 14, 1998

RECEIVED  
OCT 14 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

We have reviewed the Draft Environmental Impact Statement for the Koko Head Regional Park and Nature Preserve and have the following comments.

The Honolulu Police Department currently conducts training and testing for pistols as well as rifles and other long guns at the Koko Head Range. An indoor pistol range is planned for construction at Ke Kula Maka'i, the Police Training Academy at Waipahu. It is tentatively scheduled for completion in early 2001.

In spite of an indoor pistol range, police officers will still require a site to train and test for rifles and other long guns. These weapons cannot be fired in an indoor range. Long guns are generally used when an officer is required to maintain a greater distance from a perpetrator than a pistol would allow, so they are used in hostage and stand-off situations as well as for incidents of terrorism.

Therefore, as long as the rifle range can be retained for police use or a suitable outdoor firing range site can be secured in exchange, we have no objection to the proposed project as it will otherwise have minimal impact on the services provided by this department.

If there are any questions, please call me at 529-3175 or Major Forrest Broome of the Police Training Academy at 677-1474.

Ms. Mary O'Leary  
Page 2  
October 14, 1998

Thank you for the opportunity to review and respond to this document.

Sincerely,

LEE O. DONOHUE  
Chief of Police

BY *James Femia*  
JAMES FEMIA  
Assistant Chief  
Administrative Bureau

cc: Mr. Jim Nakasone,  
Dept. of Parks & Recreation  
Training Division  
District 7



DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**  
 PACIFIC PARK PLAZA • 711 KAPOLANI BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813  
 PHONE: (808) 523-4529 • FAX: (808) 523-4750



JEREMY HARRIS  
 MAYOR

CHEYLD BOON  
 DIRECTOR  
 JOSEPH M. MACALON, JR.  
 DEPUTY DIRECTOR

RECEIVED  
 DIV 9 11/5  
 11/5 9 11:4

November 5, 1998

TPD10/98-05837R

Ms. Mary O'Leary  
 Group 70 International, Inc.  
 925 Bethel Street, 5th Floor  
 Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve

In response to the September 30, 1998 letter from Mr. George Alta, the environmental impact statement (EIS) preparation notice for the subject project was reviewed. The following comments are the result of this review:

1. The document identifies in several places the Director of the Department of Design and Construction as the Accepting Authority. This should be verified as it is this department's understanding that environmental impact statements prepared for projects proposed by the City are to be accepted by the Mayor or his designee.
2. Section 6.0 states that a draft EIS will be prepared, but that a Finding of No Significant Impact (FONSI) is anticipated. This discussion appears to confuse the preparation of a draft EIS with a draft environmental assessment. This section should be revised to clarify which document is being prepared.
3. The proposed project must follow the Americans with Disabilities Act (ADA) guidelines to provide accessibility to the disabled community. In addition to the buildings and facilities complying with the specific ADA guidelines, the following should also be considered:
  - The availability of accessible transportation to and from the project site, such as accessible buses and TheHandi-Van vehicles.
  - The availability of accessible transportation within the project site, such as the proposed trolley system.
  - The availability of access to scenic points, such as if walking trails are not accessible, alternate means of transportation should be considered.

January 26, 1999

Mr. James Femia, Assistant Chief  
 Administrative Bureau  
 Police Department  
 City & County of Honolulu  
 801 South Beretania Street  
 Honolulu, HI 96813

Dear Mr. Femia:

Subject: Koko Head Regional Park and Nature Preserve  
 EIS Preparation Notice

Thank you for your October 14, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/N) for the Koko Head Regional Park and Nature Preserve project.

We appreciate the information you have provided regarding the Police Department's plans for completion in early 2001 of a new indoor pistol range at Ke Kula Makai, the Police Training Academy in Waipahu. We acknowledge your comments regarding the Department's requirement for an outdoor site to train and test rifles and other long guns. There are no plans to terminate or move the Koko Head Rifle Range at this time while making improvements to Koko Head Regional Park.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
 Senior Planner

cc: Mr. Jim Nakasone  
 Department of Design and Construction



GROUP 70  
 INTERNATIONAL

1000 KALANANAKUWAHALE DRIVE, SUITE 1000, HONOLULU, HI 96813  
 808-523-4529  
 808-523-4750  
 808-523-4751  
 808-523-4752  
 808-523-4753  
 808-523-4754  
 808-523-4755  
 808-523-4756  
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 808-523-4769  
 808-523-4770

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
 925 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone: (808) 523-4529 • FAX: (808) 523-4750 • http://www.group70.com

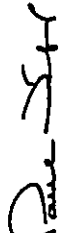
Ms. Mary O'Leary  
November 5, 1998  
Page 2

- Project services offered to the general public should be made available and accessible to disabled visitors, such as multi-media presentations in alternate formats for persons with visual and hearing impairments.
- The following agencies and organizations should be consulted for valuable input:
- Commission on Persons with Disabilities - on implementation of ADA.
  - Committee on Accessible Transportation - on issues relating to transportation.
  - Department of Education - on providing educational experiences for the disabled.
  - Department of Parks and Recreation - on recreational needs of the disabled.
  - Hawaii Centers for Independent Living - on general needs of the disabled.
  - Hawaii Visitors Bureau - on needs of disabled visitors.
  - Mayor's Committee for Persons with Disabilities - on ADA implementation.

We look forward to reviewing the draft EIS. In order to facilitate this review, please provide us with two copies of the document.

Should you have any questions regarding this matter, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

  
for CHERYL D. SOON  
Director

cc: Mr. Jim Nakasone  
Department of Parks and Recreation  
Mr. Gary Gill, Office of  
Environmental Quality Control  
Planning Department



January 26, 1999

Ms. Cheryl D. Soon, Director  
Department of Transportation Services  
City and County of Honolulu  
Pacific Park Plaza  
711 Kapiolani Boulevard, Suite 1200  
Honolulu, HI 96813

Dear Ms. Soon:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

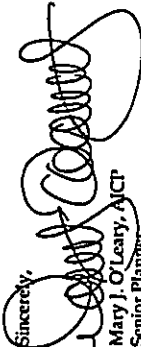
Thank you for your November 5, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EISP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. The statements in item #1 and #2 of your letter are correct. The Draft Environmental Impact Statement (EIS) will be corrected to reflect that the Accepting Authority is the Mayor or his designee, and Section 6.0 will clarify the type of document being prepared.
2. The Draft EIS will address the proposed project's compliance with the Americans with Disabilities Act (ADA) guidelines to provide accessibility to the disabled community. We acknowledge and appreciate your suggested list of agencies and organizations to be consulted for input regarding accessibility issues.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward two copies of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

**BOARD OF WATER SUPPLY**

CITY AND COUNTY OF HONOLULU  
830 SOUTH BERTANAMA STREET  
HONOLULU, HAWAII 96843  
PHONE (808) 527-6180  
FAX (808) 530-2714



November 17, 1998

JEREMY HARRIS, Mayor  
EDDIE FLORES, JRL, Chairman  
FORREST C. MAFFRA, Vice Chairman  
KAZUHIWASHIDA  
JANILLY ANN  
JOYATHAIK SHAMADA, PRO  
BARBARA IMA STANTON  
CHARLES A. STED  
CLIFFORD S. JAMILE  
Manager and Chief Engineer

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Your Transmittal of September 30, 1998 of the Environmental Impact Statement Preparation Notice for the Koko Head Regional Park and Nature Preserve

Thank you for the opportunity to review and comment on the Environmental Impact Statement Preparation Notice (EISP/N) for the Koko Head Regional Park and Nature Preserve.

We provide the following comments to the EISP/N:

- 1. There are existing water services to the following:

TKM	Meter Size
3-9-12: 01	4-inch compound meter
3-9-12: 02	2-inch meter

However, there are no existing water services to TKMs: 3-9-12: 04, 6, 8, 9, 10, 12, 13, 14, and 16. The water service limit for the area is the 300-foot elevation.

- 2. A water master plan should be submitted for our review and approval. The master plan should include the proposed water requirements and any proposed water system improvements.
- 3. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
- 4. If a three-inch or larger meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.
- 5. The proposed project is subject to Board of Water Supply cross-connection control requirements prior to the issuance of the building permit application.
- 6. We reserve further comment until we review the DEIS.

If there are any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,

*Barry Usagawa*  
Barry Usagawa  
Manager and Chief Engineer

cc: Jim Nakasone, Department of Parks and Recreation

Pure Water... our greatest need - use it wisely



**GROUP 70**  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hoang, AIA  
Sheryl B. Scanlon, AIA, ASD  
Hitoshi Hida, AIA  
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Stephen E. Calko, CPA  
George I. Aho, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Num  
Roy A. Inouye  
Mary J. O'Leary

November 23, 1998

Mr. Clifford S. Jamile  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, HI 96843

Dear Mr. Jamile:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 17, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. The Draft Environmental Impact Statement will address water service supply and demand, and fire protection requirements.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
*Mary J. O'Leary*  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
1025 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone (808) 527-5235 • FAX (808) 527-5235 • http www.group70.com

HAWAII KAI NEIGHBORHOOD BOARD NO. 1  
DECEMBER 2, 1998  
PAGE 2

HAWAII KAI NEIGHBORHOOD BOARD NO. 1

• HONOLULU, HAWAII 96813



MAYOR'S OFFICE  
CITY & COUNTY  
HONOLULU

98 DEC -4 P4:39

December 2, 1998

Mr. William Balfour, Director  
Department of Parks and Recreation  
650 S. King Street  
Honolulu, Hawaii 96813

Dear Mr. Balfour:

As per the letter from the Hawaii Kai Neighborhood Board's Park Committee Chair, Lisa Carter, dated November 9, 1998, you were notified that we had not had a chance to review and vote on comments of the Koko Head Regional Park and Nature Preserve Prep Notice for a Draft Environmental Impact Statement before now. At this time, we are ready to make comments to the Prep Notice.

We would like for the Mayor and the power of his office to put on hold any further work on developing this EIS process until after a suitable time for public comment and input is received from the Hawaii Kai Neighborhood Board. Since this park is in our neighborhood and will have direct impacts with our community, it is only fair that this Board is allowed more time. We feel strongly about this for these three reasons:

1. It is wrongfully stated in the Prep Notice that the Hawaii Kai Neighborhood Board was consulted. This is actually the first time we have seen the plan or have discussed its contents or concepts. As the community in which this Regional Park resides, we feel we should be part of the planning process.
2. The contents of this impact notice are unclear and inconsistent. The Prep Notice is too conceptual in nature for us to have a proper notion as to what the impacts of this Park will actually be. How can we make comments on an impact notice that's unclear and gives no statement of number of visitors expected?
3. The Prep Notice has been sent to us after our last meeting and we have not had an audience with the authorities who have put this impact notice together and so the community has not had an opportunity to submit our input about the process. This is top-down management in the highest order. A workable plan for the Park would be a win-win situation for us all.

Please give us the utmost consideration to our proposal to put the EIS process on hold until further meetings can occur with input from the Hawaii Kai Neighborhood Board. We would also like to each receive a copy of the said Prep Notice.

Mahalo.

Sincerely,

  
Charlie Rodgers  
Chair

cc: Mayor Jeremy Harris  
Mary O'Leary, Group 70 Architects  
Jim Nakasona, Parks and Rec



Oahu's Neighborhood Board System - Established 1973

DEPARTMENT OF DESIGN AND CONSTRUCTION

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 2ND FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 523-4564 • Fax: (808) 523-4567

JEREMY HARRIS  
MAYOR



RECEIVED  
DEC 30 1998  
ANDREW D. LIBBY, JR., AIA  
DEPUTY DIRECTOR

GROUP 70

December 28, 1998

Mr. Charlie Rodgers, Chair  
Hawaii Kai Neighborhood Board No. 1  
1230 Honokahua Street  
Honolulu, Hawaii 96825

Dear Mr. Rodgers:

Subject: Koko Head Regional Park and Nature Preserve

Thank you for your letter of December 2, 1998 expressing your concern about providing input into the Environmental Impact Statement (EIS) Preparation Notice. This is a formal notice to initiate the EIS process, which will include several opportunities for public input. Agencies that received copies of the notice were listed as consulted parties.

Currently, we are developing conceptual plans to delineate ideas to protect and enhance this important resource. We are also compiling data and projections, such as the number of visitors expected, to enable us to describe likely impacts.

Please be assured that your Neighborhood Board will have an opportunity to provide input and be involved in the planning of this exciting project. A community meeting will be arranged in the near future through the 21st Century Oahu - A Shared Vision For Our Future, Aina Haina/Hawaii Kai group as chaired by Cynthia Bond.

We look forward to your participation and if you have any questions, please call me at 523-4564.

Sincerely,

RANDALL K. FUJIKI  
Director

RKF:ct

cc: Mayor Jeremy Harris  
William D. Balfour, DPR  
Cynthia Bond, DHR  
Group 70 International



WAIMANALO NEIGHBORHOOD BOARD NO. 32

44 NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 403 • HONOLULU, HAWAII 96813

November 2, 1998

Jim Nakasone, Project Manager  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street, 10th Floor  
Honolulu, HI 96813

Re: Koko Head Regional Park and Nature Preserve  
Dear Sir:

I remember a similar plan that was introduced to the people of East Oahu wanting to do the very same changes that your present plan calls for. Almost everything in the new plan is the same as the plan introduced in 1990 or 1992, I not sure which year.

The booklet gives utopian views of how you want to design and change the present area into a "world class natural attraction". I am confused, having lived in Waimanalo for the past 50+ years, that you do not know that this area is and has been for the past 50 years, a truly world class natural attraction. Without adding the plants that you want, or taking out a parking lot, or improving the scenic lookouts, this will be the same Koko Head area we have lived with for years.

You outline all the beautiful things you want to do, with total tourism in mind, with no accounting to the windward neighborhoods of Waimanalo, Kailua and Kaneohe that you will directly affect. We are also confused because you want to beautify this area, the same area that has it plants dying from no water, uncut grass, and plants that receive no care in the way of trimming. For months the iron fencing is rusted, rotting and broken and has not had any attention until a female driver drove her car through the fence. Who is caring for the area now and why will it be different when the park is built?

You want to close the Kalaniana'ole Highway to hundreds of people in the area who use the highway to commute to work and back, each day. You want to direct all of this traffic through Kealahou Street (Queen's Gate and Kalama Valley) and onto Hawaii Kai Drive into the hordes of residential traffic already there. You surely know that the four, eight and sixteen wheel trucks will be driving downhill past Kamiloiki Elementary School and Kaiser High School with the danger it will present to hundreds of school kids plus the traffic gridlock it will create. Do you not know this because you have not read the objections in the earlier plans they had for this area or is it because members of the Design and Construction Department do not live in the East Oahu area?




Oahu's Neighborhood Board System - Established 1973

In Section 4.0 Probable Impacts and Mitigative Measures of your booklet, none of this is mentioned. You want to remove the vehicular traffic from coming into Hanauma Bay and bring them in by trolley, but at 10,000 visitors a month? How many trolleys do you intend to put into use? That shows a need for 80 to 100 trolleys needed to get swimmers to the bay. Now, just say you intend to leave the road open to regular, commuting traffic with the mix of trolleys...now I know you do not live in this area.

I propose that you add to, "Other Parties to be consulted in Preparation of Draft EIS", the neighborhood boards of Kailua and Kaneohe and the Waimanalo Hawaiian Home Association.

Sincerely,



Wilson Kekoa Ho  
Chairman

cc: George I. Alta, Group 70 International, Inc.  
Mayor Jeremy Harris, City and County of Honolulu  
Councilman John Henry Felix  
Michael Wilson, Department of Land and Natural Resources  
Claudine M. Tomasa, Kailua Neighborhood Board  
Elaïne Murphy, Kaneohe Neighborhood Board  
Paul Richards, Waimanalo Hawaiian Homes

DEPARTMENT OF DESIGN AND CONSTRUCTION  
**CITY AND COUNTY OF HONOLULU**

650 SOUTH KING STREET, 2ND FLOOR  
HONOLULU, HAWAII 96813  
Phone: (808) 523-4564 • Fax: (808) 523-4567



JEREMY HARRIS  
MAYOR

RECEIVED  
NOV 17 1998

RANDALL K. FUJIKI, AIA  
DIRECTOR  
ROLAND D. LEECH, SR., AIA  
DEPUTY DIRECTOR

November 13, 1998

Mr. Wilson Kekoa Ho, Chair  
Waimanalo Neighborhood Board No. 32  
c/o Neighborhood Commission  
City Hall, Room 400  
Honolulu, Hawaii 96813

Dear Mr. Ho:

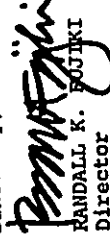
Thank you for your letter of November 2, 1998, regarding your review of the Environmental Impact Statement Notice of Preparation for the Koko Head Regional Park and Nature Preserve.

Our consultant, Group 70 International, Inc., will submit a formal response to you after coordinating with us.

The project is still in its conceptual stage and your concerns will be addressed as the plan is further developed after receiving input from the various communities, organizations and agencies.

Thank you for your concern and we look forward to your participation in this project.

Sincerely,



RANDALL K. FUJIKI  
Director

RFK:ct

cc: Mary O'Leary, Group 70 International, Inc.  
Mayor Jeremy Harris



**GROUP 70**  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scaman, AIA, ASID  
Hirosaki Hida, AIA  
Roy H. Nohel, AIA, CSI  
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Norma J. Scott, AIA  
Stephen E. Calko, CPA  
George I. Aza, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

February 15, 1999

Mr. Wilson Kekoa Ho  
Chairman  
Waimanalo Neighborhood Board No. 32  
C/o Neighborhood Commission  
City Hall - Room 400  
Honolulu, HI 96813

Dear Mr. Ho:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 2, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We apologize for the delay in responding in detail to your comment letter. However, the project has been in the conceptual design stage and some of the project elements have been modified since the publication of the EIS/NP and the receipt of your letter. Therefore, we have prepared that following responses based on the most current project information which will be presented in the forthcoming Draft Environmental Impact Statement.

1. We appreciate your comments that the Koko Head Regional Park area is a world class attraction. The proposed improvements will enhance the Park visitors' (both local residents and tourists) experience through educational exhibits, and programs and activities related to the natural and recreational resources contained within the Park. Proper management and protection of these resources will be emphasized.
2. The Koko Head Regional Park & Nature Preserve project does not propose to designate Kalaanāʻōle Highway as a scenic highway at this time. We have been informed by the State Department of Transportation (DOT) that the DOT is in the initial stages of selecting a consultant to develop the Hawaii Scenic Byways Program. Therefore, this project is not designating Kalaanāʻōle Highway as a scenic highway and is not proposing to re-direct traffic.
3. The project proposes to remove visitor parking at Hanauma Bay and restore the parking lots to a natural landscaped setting to enhance the viewing experience and setting of the Bay. Parking will be provided at the former Hawaii Job Corps Site where the Koko Crater nature learning center will be developed. A shuttle transportation system will operate between the nature learning center and the Hanauma Bay marine education center. The number of shuttles required will depend on the design capacity of the selected shuttle system. A realigned four-way signalized intersection is proposed on Kalaanāʻōle Highway at the entrance to Hanauma Bay and Koko Head Park Road to facilitate traffic safety and movement.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Building Design • Environmental Services • Building Design • Assets Management  
925 Kalia Street, Fifth Floor • Honolulu, Hawaii 96813-1307 • Phone: (808) 525-5665 • FAX: (808) 525-5874 • http://www.group70int.com

Letter to Mr. Wilson Kekoa Ho  
Waimanalo Neighborhood Board No. 32  
February 15, 1999  
Page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Building Design • Environmental Services • Building Design • Assets Management  
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0001/001

11/09/98 MON 17:24 FAX 808 973 9840 ATLANTIS ADVENTURES

RECEIVED  
NOV 10 1998

Atlantis  
ADVENTURES

GROUP 70

TO: George Aita VIA FAX 523-5874

FROM: Terry O'Halloran 1600 Kapiolani Boulevard, Suite 1630  
Honolulu, Hawaii, U.S.A. 96814

DATE: November 9, 1998 Phone: (808) 973-9839  
Fax: (808) 973-9840

SUBJECT: Koko Head Regional Park and Nature Preserve E-mail: TOHalloran@atlantisadventures.com  
Draft Environmental Impact Statement



November 11, 1998

Mr. Terry O'Halloran  
Director of Project Development  
Atlantis Adventures  
1600 Kapiolani Boulevard, Suite 1630  
Honolulu, HI 96814

- Frank S. Oda, AIA, AICP
- Norman G.Y. Hoog, AIA
- Sheri B. Scamm, AIA, ASD
- Hiroshi Hida, AIA
- Roy H. Nibel, AIA, CSI
- James L. Robinson, AIA
- Ralph E. Pommer, AICP
- Stephen H. Yuen, AIA
- Linda L. Chung, AIA
- Paul P. Chorney, AIA
- Dean H. Kaumara, AIA
- Norma J. Scott, AIA
- Stephen E. Callo, CPA
- George I. Aua, AICP
- Jeffrey H. Overton, AICP
- Kathryn A. Nam
- Roy A. Inouye
- Mary J. O'Leary

Dear Mr. O'Halloran:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 10, 1998 facsimile regarding your request to be included in the review of the Draft Environmental Impact Statement for the Koko Head Regional Park and Nature Preserve project.

Your facsimile and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Dear Mr. Aita,

We understand that Group 70 is preparing the Draft EIS for the above project. Atlantis Adventures would like to be included on your mailing list and have an opportunity to review the document when it is available.

Thank You,  
  
Terry O'Halloran  
Director of Project Development

Jungle Trek  
Newest Attraction at

Waimea Valley  
AN ADVENTURE PARK

Celebrating 10 Years  
in Hawaii

Atlantis  
DUBUAPINES

Pirates Lagoon  
Newest Attraction at

Sea Life Park  
HAWAII

USS Missouri  
Open January '99

MISSOURI  
MEMORIAL





## Friends of Hanauma Bay

P.O. Box 25841  
Honolulu, Hawaii 96825-0841

November 7, 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813-4307

Re. Koko Head Regional Park and Nature Preserve;  
Environmental Impact Statement Preparation Notice

Dear Ms. O'Leary,

This letter responds to yours of October 15 conveying a copy of the above plan to the Friends of Hanauma Bay (FOHB) as one of the "consulted parties" in the preparation of the Draft Environmental Impact Statement (DEIS). Confirming our phone conversation, the FOHB does wish to be a consulted party in this process.

Our Board next meets Nov. 12, and so will not be able to formally consider the Preparation Notice prior to the advertised deadline for comments of Nov. 9. However, we previously reviewed the Koko Head Nature Preserve Committee Report commissioned by the Mayor, which we understand will be a planning resource for Group 70 in preparing the design plans for the Preserve. Although the two documents differ somewhat in both form and content, the major subject matter overlaps. Therefore, I am attaching a summary of our comments on the Committee Report, which identify the major areas where the FOHB has views or concerns regarding the proposed Regional Park/Nature Preserve.

I trust these comments will be of use to you as you prepare the draft EIS, and we look forward to participating in the review of that draft.

Sincerely,

Richard W. Baker  
President

cc: Mr. Jim Nakasone  
Department of Parks and Recreation, City and County of Honolulu  
650 South King Street, 10<sup>th</sup> Floor, Honolulu, Hawaii 96813

*Committed to the conservation of the fragile natural resources of Hanauma Bay, a unique marine life preserve*

### FOHB Board Member Comments on Koko Head Nature Preserve Committee Report

#### 1. Access to Hanauma Bay by local residents.

Is it the intention to eliminate direct access by local residents to the bay, especially those who now regularly swim in the bay in the early mornings and late afternoons?

Will there be charges for local residents to gain access to the bay (e.g., via the new trolley), or will bona fide local residents be allowed in free of charge, as is the case now?

Finally, what if any provision is intended to permit local residents (who may already have been through the educational and instructional portions of the snorkel tour) to join snorkel tour groups either without cost or without going through the full educational/training portion again?

#### 2. Access from Nature Center to Hanauma Bay for observation purposes.

Is there an intention to transport some visitors from the Nature Center to the bay by tram only for viewing from the top rim, not for snorkeling or other guided activities at the bay? And if so, would these people be limited to 15-minute stops like the current tourist bus visitors, and would they be allowed to visit the proposed Hanauma Bay satellite educational exhibits, etc.?

#### 3. Visitor capacity estimates.

The Koko Head Nature Preserve Committee Report did not make clear the basis for the numerical estimates for visitor traffic to the various facilities in the new park complex (Nature Center, Hanauma Bay, or the Botanical Gardens). Current visitor numbers at Hanauma Bay are approximately 3000 per day on the beach, plus another 1000 "view only" visitors to the upper level of the bay who arrive on commercial tour coaches. The utilization estimates are clearly a fundamental factor both in planning the facilities and in assessing their environmental impact. Therefore we believe the draft EIS should specify whether the visitor traffic estimates are extrapolations of current usage figures or whether an independent market survey has been done - in which case the full report of the study should presumably be included with the EIS.

In the specific case of the Botanical Gardens, it appears that the project anticipates a significant increase in visitor traffic, so the projected utilization rates and the impact of this increase clearly warrant detailed consideration in the study.

probably not be suitable in this location. A mini-Imax theater or some other smaller theater arrangement, however, would be an appropriate and valuable part of any educational center of this sort.

8. Management:

The Committee Report called for professional management of the complex. While recognizing the need for professionalism in the management of the expanded park/preserve complex, the members of the FOHB board consider it very important that the management arrangement (on whatever basis - commercial, public, or mixed) recognize the central educational purpose of the facility. For example, an organization that specializes in managing museums might be better suited to this project than an organization whose primary background and expertise lies in recreational facilities or operations.

9. The Rifle Range

The FOHB has assumed that the existing rifle range would not be a part of the actual park/preserve complex in the sense of being one of the incorporated activities (although we recognize that in its existing location it lies physically within the boundaries of the regional park area). We believe, however, that if at some point the range itself should be relocated, the land it now occupies should be included in the learning center complex.

3. Flora:

The Committee Report emphasized the use of "endemic" plants in the new park complex. A more accurate categorization of plants that would be desirable and acceptable in the complex is "indigenous" (i.e., those occurring naturally in Hawaii or the region) rather than "endemic" (which means found only in this area); Hawaii has relatively few "endemic" plant species but many that found their way here and have a long association with the islands.

4. Commercial activity:

The Friends of Hanauma Bay have been developing plans for a gift shop at the bay. Does the current plan include the possibility of such an FOHB-run shop at the bay, and if so, how would a shop at the bay be distinguished in terms of stocks etc. from whatever shop may be envisaged for the Nature Center site? If the Friends ran a shop, they would want to have the proceeds accrue to the Friends (for use in supporting the park through FOHB-initiated projects, etc.) rather than being allocated to the park's annual operating costs.

5. Energy saving:

To the extent that is economically feasible, it would be desirable to utilize alternate energy sources such as solar power as well as water conserving fixtures (composting or highly efficient toilets) throughout the park complex.

6. Security services:

Insofar as the EIS deals with security services either as part of the project design or mitigation measures, we note that the functions of security personnel can be problematic. If it is envisioned that the traditional type of security services or personnel will be used at the facility, there is a question as to what powers they will have to enforce regulations, etc. Alternatively, if it is intended that the security personnel will serve more as Park Rangers, with a primary educational/protective function, we would note that in practice, it is hard to recruit a security force that is equipped to perform both functions.

7. Features of Main Visitor/Nature Center:

Consideration should also be given to having educational displays at the Nature Learning Center on reefs/marine life etc. for visitors who will not be going to Hanauma Bay. Otherwise the opportunity to educate this potentially large group on this important subject area would be lost.

If and when a theater is constructed at this site, a major consideration in terms of visual impact and community acceptance will be the size of the facility. The Committee Report made reference to an Imax theater. Presumably a full-scale Imax theater is not envisaged, but in any case a theater of this scale would



**GROUP 70**  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
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Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

February 17, 1999

Mr. Richard W. Baker  
President  
Friends of Hanauma Bay  
P.O. Box 25841  
Honolulu, HI 96825-0841

Dear Mr. Baker:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 7, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We apologize for the delay in responding in detail to your comment letter. However, the project has been in the conceptual design stage and some of the project elements have been modified since the publication of the EISP/N and the receipt of your letter. Therefore, we have prepared that following responses based on the most current project information which will be presented in the forthcoming Draft Environmental Impact Statement.

1. Access to Hanauma Bay by local residents:  
The Draft Environment Impact Statement will address the issue of fees and proposed activities for the beach level at Hanauma Bay.
2. Access from Nature Center to Hanauma Bay for observation purposes:  
Parking for the Koko Head Regional Park and Nature Preserve will be provided at the former Hawaii Job Corps Center site and the public parking lots removed and the area re-landscaped at Hanauma Bay. A shuttle service will transport Park visitors (local residents and tourists) between the planned new Koko Crater nature learning center and the Hanauma Bay marine education center. Park visitors using the shuttle system will not be limited to a 15-minute stop like the current tourist bus visitors and they will be able to visit exhibits. The Draft EIS will elaborate on this in somewhat greater detail.
3. Visitor capacity estimates:  
The Draft Environment Impact Statement will discuss the estimated visitor attendance figures and the basis for the attendance estimates.
4. Flora:  
The Draft Environment Impact Statement will contain a discussion and vegetation map which summarizes the contents of a botanical study that was conducted for the Park. The study will be included as an appendix in the Draft EIS.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Access Management  
925 Heketa Street, Fifth Floor • Honolulu, Hawaii 96813-1307 • Phone (808) 525-5866 • FAX (808) 525-5874 • <http://www.group70.com>

Letter to Mr. Richard Baker, President  
Friends of Hanauma Bay  
February 17, 1999  
Page 2

5. Commercial activity Management:

The management and operations for each of the Koko Head Regional Park's facilities will be coordinated by the City's Department of Parks and Recreation and Department of Enterprise Services.

6. Security Services:

An environmental impact statement document addresses the potential impacts of a proposed project on the natural and human environment and proposes mitigative measures where necessary. The issue of security services will be addressed by the City as a component of the Park's operations. We appreciate your observations.

7. Features of Main Visitor/Nature Center:

The Koko Crater nature learning center and the Hanauma Bay marine education center will feature displays, exhibits and educational programs which will highlight the geography, natural environment and marine resources within the Park.

9. The Rifle Range:

There are no plans to terminate or relocate the Koko Head Shooting Complex at this time while making improvements to Koko Head Regional Park and Nature Preserve. It will not be one of the incorporated activities.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Access Management  
925 Heketa Street, Fifth Floor • Honolulu, Hawaii 96813-1307 • Phone (808) 525-5866 • FAX (808) 525-5874 • <http://www.group70.com>

# Friends of Honolulu Botanical Gardens

180 N. Vineyard Boulevard, Honolulu, HI 96817 • Phone (808) 537-1708 • Facsimile (808) 537-6274

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John M. Binick  
2nd Vice President  
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Secretary  
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Frank Seltys  
Kasia Tam  
Geraldine Tom  
Dana Anne Yee

ex officio:  
City & County  
of Honolulu

William D. Balfanz, Jr.  
Director of  
Parks & Recreation

Craig Mabeck  
Acting Director of  
Honolulu  
Botanical Gardens

RECEIVED  
OCT 26 1998

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

SUBJECT: KOKO HEAD REGIONAL PARK AND  
NATURE PRESERVE DRAFT EIS

Dear Ms. O'Leary:

Thank you for including the Friends of Honolulu Botanical Gardens as a party to be consulted in preparation of the Draft EIS. As the non-profit support group for all four of the City's Botanical Gardens, we are especially interested in how the Koko Crater Botanical Garden will be incorporated and utilized as a feature of the Regional Park and Nature Preserve plan.

If it is possible within the planning process, our Board of Trustees would welcome the opportunity to discuss the plans with you prior to completing the Draft EIS. A special meeting could be arranged if this is a possibility.

The Koko Crater Botanical Garden was developed under the direction of one of our members (past Director of the Botanical Gardens), Mr. Paul Weissich. His knowledge of the collection and past plans may be useful in the formulation of the master plan. Our trustees have also been very interested in exploring opportunities to increase the economic sustainability of the gardens by introducing private uses that would be compatible while generating income for use in maintaining and expanding the collections. As an example, an "eco-camp" facility has been proposed at Hoomaluhia Botanical Garden by a non-profit organization that may also have applications for Koko Crater.

Again, thank you for consulting with the Friends, and we hope to have an opportunity to provide meaningful input in the planning and environmental review process. You may reach me at 521-5631.

Sincerely,

FRIENDS OF HONOLULU BOTANICAL GARDENS

*Thomas S. Whitten*  
Thomas S. Whitten, ASLA  
President

tbj/ls-04.wsl



GROUP 70  
INTERNATIONAL

January 26, 1999

Mr. Thomas S. Whitten, ASLA  
President  
Friends of Honolulu Botanical Gardens  
180 N. Vineyard Boulevard  
Honolulu, HI 96817

Dear Mr. Whitten:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 22, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NO) for the Koko Head Regional Park and Nature Preserve project. We acknowledge your organization's role as the non-profit support group for all four of the City's Botanical Gardens and we appreciate your interest in the role of the Koko Crater Botanical Garden within the overall proposed project. The Director of Honolulu Botanical Gardens or designate will be the Department of Parks & Recreation's liaison with your organization and will coordinate your involvement with this proposed plan.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Mary J. O'Leary*  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

October 2, 1998

Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813-4307

Re: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Dear Ms. O'Leary:

The Hawaii Council of Diving Clubs (HCDC) appreciates this opportunity to review the Koko Head Regional Park and Nature Preserve (KHRPNP) EIS Preparation Notice and kindly requests to be consulted in the preparation of the Draft Environmental Impact Statement (DEIS).

HCDC was founded in 1962 to promote safe SCUBA and skin diving sports; to act on behalf of the diving community for the development of ocean resources and conservation of marine life; to act as a liaison to promote the common good in aquatic endeavors; and to encourage and promote the education of divers and the general public.

Of particular interest to the members of HCDC are those issues including:

- Development of access and transportation to swimmable and diveable waters within the KHRPNP.
- Policy proposals and jurisdiction of the KHRPNP into any waters of the State.
- Identification of any proposed policies or use restrictions which could impact diving and fishing adjacent to the KHRPNP outside of the MCLD.
- Hanauma Bay education facilities and interpretive signage promoting aquatic conservation.

Upon review of the EIS Preparation notice, HCDC has the following comments:

Section 2.2.8 of the Project Description, "Sandy Beach & Kahauloa Crater" does not contain any information regarding the environmental and man-made impacts associated with the Koko Head Shooting Complex within the KHRPNP, as identified in the EIS Preparation Notice table of contents. In fact, no discussion or information regarding the compatibility of, or the integration of, the Shooting Range is provided for the proposed action. Shooting Range issues should be addressed in the DEIS.

Although the EIS Preparation Notice is not, at all, the DEIS—surely there must be some statement of existing patronage of facilities and the master plan target usage goals. Shouldn't patronage information accompany the EIS preparation notice?

HAWAII COUNCIL OF DIVING CLUBS • P. O. BOX 298 • HONOLULU, HAWAII 96809



RECEIVED  
OCT - 5 1998

GROUP 70

Group 70 International, Inc.  
Koko Head Regional Park and Nature Preserve  
October 2, 1998  
Page 2

Please do not hesitate to call if questions remain. HCDC looks forward to working with you and the City in development of the DEIS.

Sincerely,  
HAWAII COUNCIL OF DIVING CLUBS

Robert W. Purdie, Jr.  
Corresponding Secretary

c: Mike Byrnes & Frank Farm w/o EIS Notice of Preparation  
Jim Nakasono, DPR, 650 S. King Street, 9th Floor, Honolulu, HI 96813



**KAMEHAMEHA SCHOOLS BERNICE PAUAI BISHOP ESTATE**

October 28, 1998



Mr. Robert W. Purdie, Jr.  
Corresponding Secretary  
Hawaii Council of Diving Clubs  
P.O. Box 298  
Honolulu, HI 96809

JOHN S. OHL, AIA, ACP  
Nathan G.Y. Hong, AIA  
Steve R. Scamm, AIA, ASD  
Hiroshi Iida, AIA  
Ray H. Niles, AIA, CN  
Lance E. Schmitt, AIA  
Rajih E. Ibrahim, AICP  
Stephen H. Yuen, AIA  
Linda L. Chang, AIA

V. Chantey, AIA  
John H. Kanara, AIA  
Nancy J. Sirel, AIA  
Stephen E. Calk, AIA  
George L. Aul, ACP  
Jeffrey H. O'Connell, AICP  
Kathryn A. Nam  
Ray A. Inouye  
Mary J. O'Leary

Dear Mr. Purdie:

Subject: **Koko Head Regional Park and Nature Preserve**  
EIS Preparation Notice

Thank you for your October 2, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISNP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. We acknowledge the issues identified in your letter that are of particular interest to the Hawaii Council of Diving Clubs.
2. We acknowledge your comment regarding the EISNP's Table of Contents and the Koko Head Shooting Complex. The Draft Environmental Impact Statement (EIS) will address the Koko Head Shooting Complex.
3. The Draft EIS will provide greater details regarding existing conditions and patronage of facilities. Projected attendance and usage will also be provided in the Draft EIS.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4907 • Phone: (808) 523-5866 • FAX: (808) 523-5874 • http://www.group70inc.com

BOARD OF TRUSTEES

RICHARD SHELBY  
CHAIRMAN

O.K. STENGER  
PRESIDENT

LUCILLE LINDSEY  
SECRETARY

GERALD A. JAVIS  
SECRETARY

HENRY H. PETERS  
TREASURER

October 20, 1998

Mr. George Atta  
Group 70 International  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813-4307

Dear Mr. Atta:

EIS Preparation Notice, Koko Head Regional Park, Hawaii Kai

This is in reference to your request for our comments on the above document.

We understand that the planning objective for Koko Head Regional Park is to convert the area into a world class nature park. In general, we have no objections to this purpose as long as the proposed activities comply with the public parks use requirement contained in the December 29, 1928 deed from Kamehameha Schools Bishop Estate (KSBE) conveying the park to the City and County of Honolulu. However, with specific regard to the proposed new access road to the Botanical Garden and horse stables area, we strongly object to the road being planned on KSBE lands known as Golf Course 21/A. As you may be aware, a portion of Golf Course 21/A is zoned residential and KSBE has spent considerable time, effort, and monies planning for the higher use of this parcel.

Since we are nearing the completion of lease negotiations for a continuing care retirement community, the confidentiality of the project precludes us from providing any site plans for your review. In any event, we will vigorously oppose any effort to further take away or diminish the usability of this parcel considering the thousands of acres of former KSBE owned land in Hawaii Kai already dedicated or condemned for public use.

We ask that you reconsider the need to locate the proposed access road so that it skirts only the edge of the parcel and not bifurcate the parcel.

Please call me at 523-6243 if you have any questions.

Very truly yours,

Rochelle Arquette  
Land Manager, Hawaii Kai  
Asset Management Group

RA:gg

Enclosure

567 SOUTH KING STREET HONOLULU HAWAII 96813 TELEPHONE (808) 523-6270 FAX (808) 523-6174

Our Business is Education



GROUP 70  
INTERNATIONAL

January 26, 1999

Ms. Rochelle Arquette  
Land Manager, Hawaii Kai  
Asset Management Group  
Kamehameha Schools Bernice Pauahi Bishop Estate  
567 South King Street  
Honolulu, HI 96813

Dear Ms. Arquette:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 20, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We have prepared the following responses to your comments:

1. Koko Head Regional Park will continue to be maintained as a public park as delineated in the 1928 deed conveying these lands to the City.
2. Alternative road alignments to the Koko Crater Botanical Garden and horse stable area will be explored.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

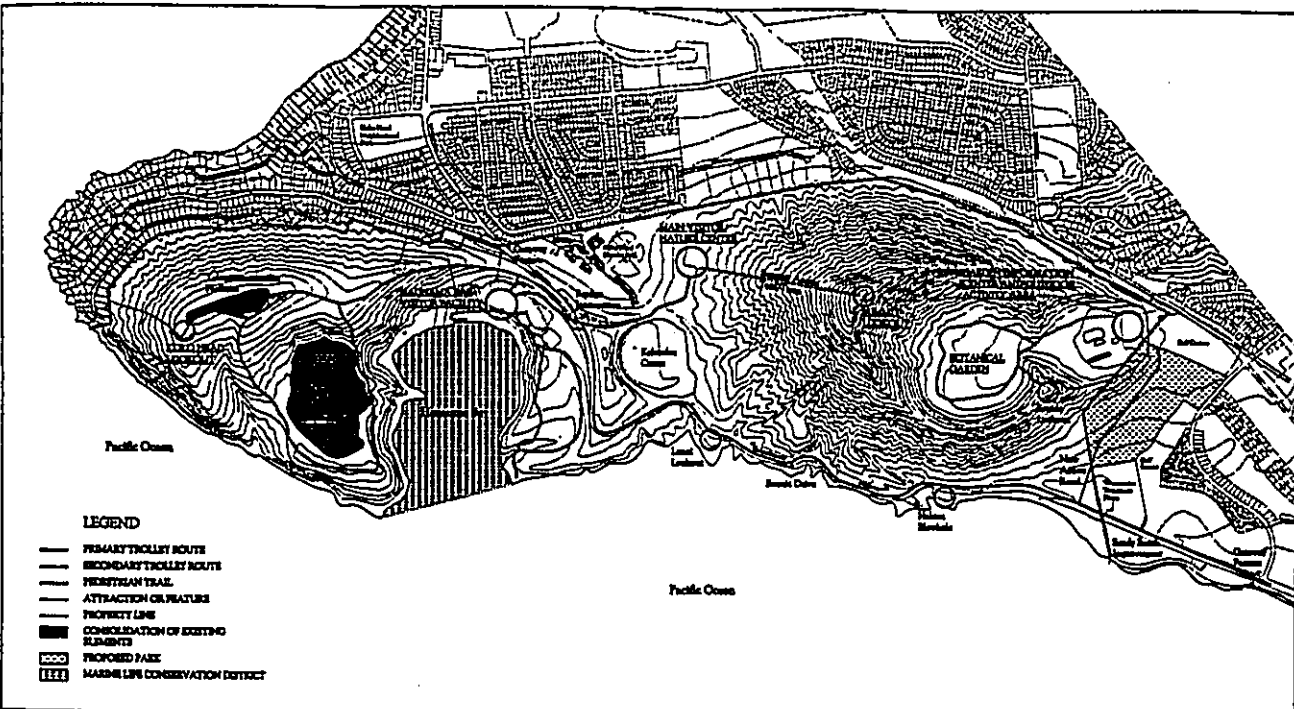
Sincerely,

Mary J. O'Leary, JCP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

1000 Kalia Ave. #100  
 Honolulu, HI 96813  
 Phone: (808) 551-5666  
 Fax: (808) 551-5667  
 Email: info@group70.com  
 Website: www.group70.com

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
 1000 Kalia Ave. • Honolulu, Hawaii 96813-1007 • Phone: (808) 551-5666 • Fax: (808) 551-5667 • Email: info@group70.com • Website: www.group70.com



Overall Koko Head Regional Plan Master Plan: Overall Long Range Plan

Koko Head Regional Park and Nature Preserve Master Plan  
Department of Parks and Recreation  
City and County of Honolulu

GROUP 70 INTERNATIONAL  
2010 Kalia Ave.



**THE OUTDOOR CIRCLE**

1314 South King St., Suite 205 • Honolulu, HI 96814  
Phone: 808-593-0300 Fax: 808-593-0525

**RECEIVED**  
OCT 27 1998

Established 1912  
A Non-profit Organization

**BRANCHES**

**OAHU**

- Kaunohi
- Lani-Kaiha
- North Shore
- Waialeale
- Waialeale

**HAWAII**

- Ilihi
- Kaunohi
- Kaunohi
- Kaunohi
- Waialeale

**MAUI**

- Kaunohi
- Kaunohi
- Kaunohi

**MOLOKAI**

- Kaunohi
- Kaunohi

**GARDEN CIRCLE**

- Lani-Kaiha

October 26, 1998

City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 2<sup>nd</sup> Floor  
Honolulu, HI 96813  
Attn: Jim Nakasone

**RE: Koko Head Regional Park and Nature Preserve  
Environmental Impact Statement Preparation Notice**

Dear Mr. Nakasone:

Thank you for including The Outdoor Circle on the list of those to review the Environmental Impact Statement Preparation Notice (EISP/N) for the Koko Head Regional Park and Nature Preserve. This entire area is one which will benefit greatly from the master planning concept. We feel that by focusing on themes of nature, the land and sea in this part of East Honolulu will be preserved and protected.

I look forward to receiving the Draft Environmental Impact Statement for review.

Sincerely,

Mary Steiner  
CEO

cc: Planning Department, City and County of Honolulu  
George Atta, Group 70 International, Inc.  
Gary Gill, Office of Environmental Quality Control



**GROUP 70  
INTERNATIONAL**

- Frank S. Oda, AIA, AICP
- Norman G. Y. Hong, AIA
- Sheryl B. Scaman, AIA, ASID
- Hiroshi Hiji, AIA
- Roy H. Nishi, AIA, CSI
- James I. Nickerson, AIA
- Ralph E. Portmore, AICP
- Stephen H. Yuen, AIA
- Linda L. Chung, AIA

- Paul P. Cheney, AIA
- Dean H. Kuzawa, AIA
- Norma J. Scott, AIA
- Stephen E. Cabo, CPA
- George I. Altz, AICP
- Jeffrey H. Overton, AICP
- Kathryn A. Nunn
- Roy A. Hooley
- Mary J. O'Leary

November 16, 1998

Ms. Mary Steiner, CEO  
The Outdoor Circle  
1314 South King Street, Suite 205  
Honolulu, HI 96814

Dear Ms. Steiner:

**Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice**

Thank you for your October 26, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EISP/N) for the Koko Head Regional Park and Nature Preserve project. We appreciate your comments regarding the master planning concept and themes for the Koko Head Regional Park and Nature Preserve project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction



Diane D. Ackerson  
808 Koko Isle Circle  
Honolulu, HI 96825  
Phone (808) 395-7878

RECEIVED

NOV - 6 1998

GROUP #1

MEMO TO: Group 70 International, Inc.  
Attn: Mr. George Atta  
FROM: Bob and Diane Ackerson  
DATE: November 5, 1998  
RE: Koko Head District Park & Nature Preserve, project #98055-11

We are in receipt of the EIS Preparation Notice dated September 1998 and would like to be put on the list as a "consultant party" for future information on the Koko Head District Park & Nature Preserve project.

Mahalo mui loa!

*Bob & Diane Ackerson*



GROUP 70  
INTERNATIONAL

Francis S. Oaki, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scannan, AIA, ASID  
Hiroshi Hiji, AIA  
Roy H. Nihel, AIA, CSI  
James I. Nishimoto, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA  
Paul P. Cheney, AIA  
Dean H. Klamann, AIA  
Norma J. Scott, AIA  
Stephen E. Calk, CPA  
George I. Metz, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

November 6, 1998

Bob & Diane Ackerson  
808 Koko Isle Circle  
Honolulu, HI 96825

Dear Mr. & Mrs. Ackerson:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your letter we received on November 6, 1998 regarding your receipt of the Environmental Impact Statement Notice of Preparation (EIS/N) for the Koko Head Regional Park and Nature Preserve project.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Mary J. O'Leary*  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

**Lisa Keala Carter**  
**1197 Kahului Street, Honolulu, HI 96825**  
**(808) 366-8727**

November 9, 1998


RE: KOKO HEAD REGIONAL PARK & NATURE PRESERVE  
Environmental Impact Statement Notice of Preparation, 9/98

Dear Ms. O'Leary:

As a result of our phone conversation this morning, I am writing this letter to you, as the Group 70 contact, and c.c'ing it to Mr. Nakasone, as the Project Manager for the City and County of Honolulu.

This letter serves as the notification to you that I intend to submit detailed comments on the Koko Head Regional Park & Nature Preserve after the Hawaii Kai Neighborhood Board discusses and votes on the plan at its next regularly scheduled meeting, November 24. I am the Chair of the Parks Committee and we had not had sufficient time before this to be able to submit our comments in a timely fashion.

Please forgive our tardy response but rest assured that the Hawaii Kai Neighborhood Board is very interested in the Plan for the area, as it lies in our geographic boundaries. Thank you for your patience.

Sincerely,  
  
Lisa Keala Carter

cc: Mr. Jim Nakasone, C&C of Honolulu  
Councilmember John Henry Felix, District 3  
Mr. Charlie Rogers, Chair, Neighborhood Board #1



November 16, 1998

Ms. Lisa Keala Carter  
Parks Committee Chair  
Hawaii Kai Neighborhood Board  
1197 Kahului Street  
Honolulu, HI 96825

Frank S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hiroshi Hida, AIA  
Roy H. Nabe, AIA, CSI  
James I. Nishimoto, MA  
Rajit E. Parimore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. Cheney, AIA  
Dean H. Kazama, AIA  
Norma J. Scott, AIA  
Stephen E. Gallo, CPA  
George I. Aua, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

Dear Ms. Carter:

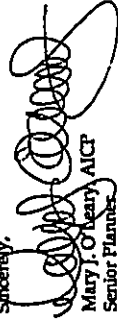
Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 9, 1998 letter regarding notification that the Hawaii Kai Neighborhood Board will review the proposed Koko Head Regional Park and Nature Preserve project at their next meeting on November 24, 1998, and that you will be submitting detailed written comments following that meeting.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

DEC-20-98 TUE 17:05

FAX NO. 808 523 4767

P. 02

**Kenneth H. S. Kwak**

7144 Kalia Street, Honolulu, Hawaii 96823  
Tel: 808-595-8129 Fax: 808-595-8404  
E-mail: Kwak@Pac.com

MAILING OFFICE  
SITKA, ALASKA  
HONOLULU HI

December 9, 1998

'98 DEC 10 P 2:36

Mayor Jeremy Harris  
City Hall  
530 South King Street  
Honolulu, Hawaii 96813

Dear Mayor Harris:

I am writing to voice serious concerns that your plans for a Nature Park at the Job Corp area jeopardize one of Hawaii Kai's best community resources, the Hawaii Kai Regional Park and adjacent Job Corp area. I have not seen any of these concerns mentioned in any of the newspaper articles I have read. It is disappointing that your planning department and the Neighborhood Board seem to have failed to even notice these concerns.

The regional park is a well-used community and family playground. It is often filled with youngsters of all ages including toddlers, siblings of children playing sports at the park. Specifically, Hawaii Kai youth baseball uses the park from February to August, youth football and youth girls softball use the park during other times of the year. Youth basketball occupies the gym and outdoor courts from November to February. In addition, for all of these sports, the teams and their families often enjoy get-togethers in the park after practices and games. These social events are used for team bonding and contribute to the healthy development of the Hawaii Kai community.

I fear your Nature Park will change all of this. My specific concerns are the following:

1. Traffic safety for the children playing in the park and often crossing the street to and from the gym, outdoor basketball courts, children's playground, tennis courts, outdoor exercise gym area and the baseball fields. Picnic areas are located on both sides of the street, including some bordering the street. Becoming the site of a major tourist attraction completely changes the traffic patterns in the park.
2. Personal safety of the children will be jeopardized with the introduction of a large volume of new users of the location when the Nature Park center is established. With a large number of "strangers" roaming the park, it will be more difficult to monitor the park for the physical safety of our children. Currently, we recognize most everyone at the park and suspicious strangers are easily noticed, monitored and reported to police as necessary. With the added population of tourists, drivers, tour guides, and the criminals that follow them, this will be impossible.

DEC-20-98 TUE 17:07

FAX NO. 808 523 4767

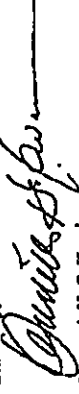
P. 03

3. Parking spaces are not sufficient for added activities.

4. Currently, the job corp area has a baseball field that is exclusively used by youth ages 5-7 years of age. What will be the status of that field which has been restored and maintained by volunteer parents? The four baseball fields in the park are already heavily used.

Before plans for your Nature Park proceed, I would expect that these concerns will be addressed thoroughly. I would also hope that the many users of the park would be consulted.

Sincerely,



Kenneth H. S. Kwak

Copies: Council Member John Henry Felix  
Hawaii Kai Neighborhood Board Chairman Mr. Charley Rodgers

DEC-29-89 TUE 17:05

RECEIVED

DEC 20 1998

GROUP 70

FAX NO. 808 523 4787

P. 01

PostNet Fax Note	7871	Date 12/24/98	1430-3
To Group 70		From Jim N.	
Subject (Mary O'Keefe)		On 12/16/98	
From 523-5772		From 523-5772	
To 523-5772		To 523-4767	

December 24, 1998

Mr. Kenneth H. S. Kwak  
7144 Kukui Street  
Honolulu, Hawaii 96825

Dear Mr. Kwak:

Mayor Jeremy Harris has asked me to respond to your letter regarding the Koko Head Nature Preserve and its potential impact on the former Job Corp site.

The department is in the process of developing a revitalization plan for Hanalei Bay Nature Preserve. We are concerned about preserving the entire Koko Head region including the shoreline, Koko Head Crater, Koko Head Botanical Gardens and the former Job Corp site.

We have hired a consultant, Group 70, to assist in planning, designing and preparing the necessary permits for improving this area. It is premature at this time for me to present all the details but I wish to assure you that the list of concerns outlined in your letter are being addressed. Protecting for public safety, especially for children, will not be neglected. Providing for adequate public parking is a priority. The Job Corp baseball field however, is under consideration for development. This is preliminary and we are planning to present this project to the Hawaii Kai Neighborhood Board and hold other public meetings beginning next year. I encourage you to attend and present your comments at that time.

Should you have further questions, please feel free to call my assistant, Mr. Jerome Harr at 527-6042.

*William D. Balfour, Jr.*

WILLIAM D. BALFOUR, JR.  
Director

MBB:cu (J Harr)

cc: Mayor Jeremy Harris

bcc: Toni Robinson  
James Nakasone  
Group 70

Testimony Regarding Koko Head Regional Park and Nature Preserve

City and County Of Honolulu  
Department of Design and Construction  
650 South King Street, 2nd Floor  
Honolulu, HI. 96813  
Attn. Jim Nakasone

Dear Sir,

As a founder and member of both the Save Sandy Beach Coalition and the Ka Iwi Action Council, I have been involved for the last 10 years in the preservation of the Koko Head/Ka Iwi coastline. I am both encouraged by and anxious about the proposed development projects.

As a long time resident of the area I have seen what careless attention to planning and lack of control have done to places such as Hanauma Bay, the "Alan Davis" area of Queen's Beach, and Makapuu Point and Lighthouse. In my opinion one of the greatest single factors of the problem is the unrestrained and unrestricted access of tourists and tourism companies to these locales. I believe that in future planning several measures must be taken to insure access to and usage by the citizens of Honolulu and East Honolulu. These are some of the suggestions that I have toward that end.

Access to these areas to tour buses should be strictly limited and controlled. At a recent highway cleanup done by my organization, there were as many as nine tour buses at the Halaona Blowhole at one time, this made access by non-commercial vehicles almost impossible. In the future plans, the number of buses at a given area should be strictly controlled by the number of spaces allocated to bus parking.

Strict guidelines as to trails and other walking areas should be established at the Botanical Garden, and a firm visitation hour established for non-local people.

As a member of the Mayor's task force on use of the Job Corps Site, it was apparent there was strong community sentiment for youth

recreational facilities such as baseball diamonds, basketball courts and roller blade areas with a plaza for roller blade hockey. To convert this area to a tram/bus stop or parking area, gives absolutely no consideration to the wishes of the area residents.

Restaurants, unrestrained visitor access ( a fee should be charged for any facility use to non residents) totally ignores the rights of the local population for which these facilities should be intended,

The improvements to this park will be financed with tax payers money, and their use and enjoyment should be the primary consideration.

Lengthy public hearings regarding every aspect of this improvement should be held every step of the way. Nobody wants to give birth to another Hanauma Bay and the disservice that has been done to local people as a result of allowing it to become just another tourist trap.

*David E. Matthews*

David E. Matthews  
7909 Makaaoa Pl.  
Honolulu HI, 96825  
(808) 395-7600  
FAX 395-1743



GROUP 70  
INTERNATIONAL

Francis S. Ode, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scanzon, AIA, ASD  
Hiroshi Hida, AIA  
Roy H. Niker, AIA, CSI  
James I. Nishimoto, AIA  
Rajaji E. Perumoo, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA  
  
Paul P. Chomney, AIA  
Dean H. Kizamura, AIA  
Norma J. Scott, AIA  
Stephen E. Cullis, CPA  
George L. Aza, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Nam  
Roy A. Inouye  
Mary J. O'Leary

February 15, 1999

Mr. David E. Matthews  
7909 Makaaoa Place  
Honolulu, HI 96825

Dear Mr. Matthews:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your letter ("testimony") regarding the Koko Head Regional Park and Nature Preserve project. We apologize for the delay in responding in detail to your comment letter. However, the project has been in the conceptual design stage and some of the project elements have been modified since the publication of the EISFN and the receipt of your letter. Therefore, we have prepared that following responses based on the most current project information which will be presented in the forthcoming Draft Environmental Impact Statement.

1. The Koko Head Regional Park's planned improvements and new facilities will be accessible to all visitors - local residents and tourists.
2. Although the Malona Blowhole lookout is located within the City and County of Honolulu's Koko Head Regional Park boundary, the parking area and Kalamanaole Highway are under the State Department of Transportation's jurisdiction.
3. Currently, the area proposed changes to the existing operations of the Koko Crater Botanical Garden. A self-guided two-mile loop trail is clearly marked and it is open daily to the general public from 9:00 am to 4:00 pm.
4. The former Hawaii Job Corps Site is proposed to be re-developed as the Koko Crater nature learning center and parking area for the Koko Head Regional Park. The nature learning center facility will contain exhibits that will orient all visitors to the various natural resources, activities, attractions and amenities within the Park. It is intended to be an educational facility with information on the Park's landforms, unique features and environment.
5. The Draft Environmental Impact Statement will discuss the preliminary fee structures for the various Park activities.
6. In addition to the public review and comment period for the Draft Environmental Impact Statement, the Special Management Area Permit and Conservation District Use Permit processes for the proposed Koko Head Regional Park & Nature Preserve improvements will include public hearings.

Letter to Mr. David E. Matthews  
February 15, 1999  
Page 2

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

RECEIVED

NOV 17 1998

Beverly J. Palenapa  
7256 Kauhako Street  
Honolulu, HI 96825  
Phone/Fax: (808) 395-1188

November 6, 1998

Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96814-4307  
Attn: Mary O'Leary

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. O'Leary:

Thank you for sending me a copy of the Draft Environmental Impact Statement (DEIS).

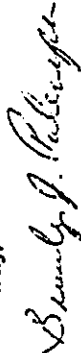
I would like to be a consulted party in the preparation of the DEIS.

I have been a resident of Hawaii Kai for over 30 years and a committee member of Mayor Harrison's Koko Head Regional Park Task Force chaired by Ann Kobayashi.

Because of my long involvement with Koko District Park, both in Little League and a member of the Koko District Park Task Force, I was allowed to improve the baseball field in the Job Corp renaming it for Coach Mike Goetas. This field was abandoned years ago and is currently being used by the children.

I look forward to being an active member of this project.

Sincerely,



Beverly J. Palenapa

CC: Dept. of Design and Construction  
650 South King Street, 9<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Attn: Jim Nakasone

RECEIVED  
OCT 15 1998

ALAN C. ZIEGLER, Ph.D.  
Zoological Consultant

Telephone:  
(808) 247-5318

45-636 Link Place  
Kaneohe, Hawaii 96744  
11 October 1998

George Atta  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Mr. Atta,

I am writing in regard to the Koko Head Regional Park and Nature Preserve Master Plan EIS. I would like to be considered a consulted party in regard to this Group 70 undertaking, and hope the following information may be considered my public comments on the EIS Preparation Notice.

My primary concern is for bones of prehistorically extinct Hawaiian birds that possibly lie in the soil partially filling both Koko and Koko Head Craters after originally eroding from the inner slopes of the respective cones.

As you undoubtedly know, these two (compound) craters both lie in volcanic tuff cones formed during the O'ahu Posterosional Eruption Series. Ulupa'u Head, on the Windward Mōkapu Peninsula is of similar origin, and its crater sediments have been found to contain a wealth of fossil bird remains. I have enclosed here for your possible interest the Abstract and Discussion sections of a 1987 paper by Helen F. James giving details of this scientifically and educationally important Windward site.

To my knowledge, the Koko Crater/Koko Head sediments have never been examined for such prehistoric bird bones, but it seems quite reasonable to expect that these might occur there. Thus, if the Koko Head Regional Park and Nature Preserve Master Plan envisions any significant excavations within the Park's craters (such as for water or sewer lines, building foundations, and the like), I hope provision will be made to have such work monitored by a local archaeological consultant firm to document any fossil items encountered.

May I thank you very much for your attention in this matter, and for consideration of my request to be a consulted party. Please just telephone me (afternoons) at the number on this letterhead if it seems there is any more information I might provide at this time.

Continued best of everything in all of your work !!

Sincerely,

  
Alan C. Ziegler

encl.

November 9, 1998

Ms. Beverly J. Palenapa  
7256 Kaunaloa Street  
Honolulu, HI 96825

Dear Ms. Palenapa:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your November 6, 1998 letter regarding your review of the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We appreciate your comments regarding your involvement with the Koko Head Regional Park Task Force and Koko Head District Park.

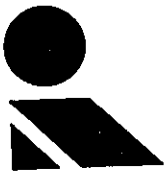
Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction



GROUP 70  
INTERNATIONAL

- Francis S. Ochi, AIA, AICP
- Norman G.Y. Hoang, AIA
- Sheryl B. Seaman, AIA, ASID
- Hiroshi Hida, AIA
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- Stephen E. Calko, CFA
- George I. Aiza, AICP
- Jeffrey H. Overton, AICP
- Kathryn A. Nam
- Roy A. Hooye
- Mary J. O'Leary

L'EVOLUTION DES OISEAUX D'APRES LE TEMOIGNAGE DES FOSSILES

Table Ronde internationale du CNRS  
Lyon-Villeurbanne, 18-21 Septembre 1985

C. Mourer-Chauviré (Coordinateur)

A LATE PLEISTOCENE AVIFAUNA  
FROM THE ISLAND OF OAHU, HAWAIIAN ISLANDS

Helen F. JAMES

A LATE PLEISTOCENE AVIFAUNA  
FROM THE ISLAND OF OAHU, HAWAIIAN ISLANDS

UNE AVIFAUNE DU PLEISTOCENE SUPERIEUR  
DE L'ILE D'OAHU (HAWAII)

Helen F. JAMES \*

Abstract

Fossils from an eroding sea cliff on the Mokuapu Peninsula of the island of Oahu constitute the oldest vertebrate fauna known from the Hawaiian Islands. These bones apparently accumulated in a lake that once occupied the crater of the Uluapu Head tuff cone, probably during the Illinoian Glacial. The fossil avifauna from this locality comprises an ecologically diverse assortment of birds, including seabirds, shorebirds, waterfowl, and large and small land birds. At least two species of seabirds from Uluapu Head are not known historically or in Holocene fossil deposits from the Hawaiian Archipelago. The presence of migratory shorebirds and waterbirds is evidence that migratory routes of these species over the Pacific Ocean have endured for more than 120,000 years. Preliminary morphological comparisons of the land and fresh water birds from Uluapu Head with a Holocene fossil avifauna from Barber's Point, Oahu, suggest that many, if not all, of the major adaptations found in the endemic Hawaiian species had already evolved at the time the Uluapu Head fossils were deposited.

KEY-WORDS : Fossil birds, Hawaiian Islands, Late Pleistocene, migration, evolution.

Résumé

Les fossiles provenant d'une falaise érodée par la mer de la presqu'île de Mokuapu, dans l'île d'Oahu, représentent la plus ancienne faune de Vertébrés connue dans l'archipel des Hawaï. Ces ossements se sont apparemment déposés dans un lac qui occupait le cratère du volcan Uluapu Head, probablement au cours de la glaciation d'Illinoïis. L'avifaune fossile de ce gisement comprend des formes appartenant à des biotopes variés, incluant des oiseaux de mer, de rivage, d'eau douce et des formes terrestres de grande et de petite taille. Parmi les oiseaux de mer, deux espèces au moins n'ont pas été connues durant les périodes historiques ni dans les faunes fossiles d'âge holocène de l'Archipel des Hawaï. La présence de formes migratrices parmi les oiseaux d'eau ou de rivage indique que les voies de migration de ces espèces à travers l'Océan Pacifique étaient déjà établies il y a plus de 120.000 ans. Les premières comparaisons morphologiques entre les formes terrestres et d'eau douce et l'avifaune fossile holocène de Barber's Point, Oahu, suggèrent que la plupart sinon toutes les adaptations majeures trouvées dans les espèces endémiques des Hawaï étaient déjà apparues au moment de la formation du gisement d'Uluapu Head.

MOTS-CLES : Oiseaux fossiles, Des Hawaï, Pléistocène supérieur, Migration, Evolution.

Docum. Lab. Géol. Lyon, n° 99, 1987, p. 221-230, 1 fig., 1 tabl.

\* Dept. of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, U.S.A.



## DISCUSSION

The fossils from Ulupau Head include remains of at least 28 species of birds, although some of them could not be positively identified at the specific level. This total includes representatives from all major habitats exploited by birds in the Hawaiian Islands, with 6 seabirds, 2 shorebirds, 4 waterbirds, 2 predatory species, 3 terrestrial flightless species, and 11 to 12 passerine species. The size of the current fossil collection from Ulupau Head is small compared to other major Hawaiian collecting localities (Olson and James, 1982b), and there can be little doubt that more species will be found as collecting at the site continues. Future collecting should also fill in morphological details for many taxa in the fauna that are at present known from only one or a few skeletal elements. With sufficient fossils from Ulupau Head, it should be possible to study turnover and morphological evolution in the endemic avifauna of Oahu over a period of more than 120,000 years.

Even this preliminary study has yielded much useful information about the history of Hawaiian birdlife. Relatively few seabird bones have been collected from Ulupau Head so far, yet these include *Neofregata fuliginosa* and at least one other species of seabird that has not been in the Hawaiian Islands during history. Pleistocene turnover in breeding seabirds of oceanic islands has already been observed on St. Helena (Olson, 1975) and Bermuda (S. L. Olson, pers. com.), and fossils from Ulupau Head may eventually show that the phenomenon was not restricted to the Atlantic. The fossils of *Muscivora takitensis*, *Phaethon dominicensis*, and migratory fescs in the deposit constitute the oldest available evidence for the antiquity of the migratory routes of these species over the Pacific Ocean. As for the endemic land birds of Oahu, which are well represented in this preliminary fossil collection, no striking examples of morphological evolution were found in comparing the Pleistocene and Holocene avifaunas. Although *Anas wyvilliana* has possibly become larger, and the species of scoter-like gapers may not be the same in the Ulupau Head and Barber's Point deposits, these apparent changes are minor and perhaps illusory, since they could also be explained as artifacts of sampling or of recent human-caused extinctions. The weight of the evidence here indicates that remarkably little morphological evolution or turnover in species composition has occurred in the endemic avifauna of Oahu during the Late Pleistocene and Holocene.

Most vertebrate fossil sites that have been found on volcanic, oceanic islands date to the Wisconsinan Glacial or the Holocene (e.g. Olson and James, 1982b; Steadman and Olson, 1986; Steadman, 1986). In fact, I do not know of another fossil vertebrate site on a volcanic, oceanic island that would compare with Ulupau Head as a well-documented older deposit containing remains of birds from all major habitats found on the island. In view of the important role islands have played in the development of modern evolutionary and ecological principles, more effort should be spent in locating and studying ancient fossil sites on these and other oceanic islands.

## ACKNOWLEDGEMENTS

Permission to collect fossils at Ulupau Head was kindly granted by the Commander of the United States Marine Corps Air Station at Kaneohe Bay. I am particularly grateful to Diane Dugot for helping scientists gain access to the site. Gustav Paulsy discovered the vertebrate fossils at Ulupau Head, and originated the reinterpretation of the older alluvium as a lacustrine sediment. I thank Carla Kishinoue, Alan Ziegler, and Allen Allison of the Bishop Museum for collecting and loaning many of the specimens used in this study. My research at Ulupau Head is part of an ongoing research project under the direction of Storrs L. Olson at the Smithsonian Institution. Jonathan Becker, Gustav Paulsy, Storrs L. Olson, and David Steadman provided helpful criticisms of a previous draft of the manuscript.

## LITERATURE

- BERGER A.J. (1981). — Hawaiian Birdlife. Second edition. *Univ. Press Hawaii*, Honolulu, XV + 260 p., 137 fig.
- GRAMLICH J.W., LEWIS V.A. & NAUGHTON J.J. (1971). — Potassium-Argon Dating of Holocene Basalts of the Honolulu Volcanic Series. *Geol. Soc. America Bull.*, Boulder, Colorado, vol. 82, p. 1399-1404, 1 fig.
- JOUANIN C. & MOUGIN J.-L. (1979). — Order Procellariiformes. In Mayr E. & Cottrell G.W., eds.: Check-list of Birds of the World, vol. 1, second edition. *Museum Comparative Zoology*, Cambridge, Massachusetts.
- KING W.B. & GOULD P.J. (1967). — The Status of Newell's race of the Maui Shearwater. *Living Bird*.



**GROUP 70**  
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Roy A. Inouye  
Mary J. O'Leary

January 15, 1999

Mr. Alan C. Ziegler, Ph. D.  
Zoological Consultant  
45-636 Lihula Place  
Kaneohe, HI 96744

Dear Mr. Ziegler:

Subject: Koko Head Regional Park and Nature Preserve  
EIS Preparation Notice

Thank you for your October 11, 1998 letter regarding the Environmental Impact Statement Notice of Preparation (EIS/NP) for the Koko Head Regional Park and Nature Preserve project. We appreciate your concerns and interest in prehistorically extinct Hawaiian birds and the information you provided in your letter and attachment regarding this matter.

The proposed Koko Head Regional Park and Nature Preserve project will involve standard construction procedures for the provision of utilities, building foundations and parking areas. The location of proposed development areas will be depicted in the development plans in the Draft Environmental Impact Statement. In the event that any previously unidentified archaeological sites or remains are encountered during site work and construction phases, work in the immediate area will cease and the State Historic Preservation Office will be contacted and would assess the find.

Your letter and this response letter will be included in the Draft Environmental Impact Statement (EIS). We will forward a copy of the Draft EIS for your review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Mary J. O'Leary, AICP  
Senior Planner

cc: Mr. Jim Nakasone  
Department of Design and Construction

**COMMENT AND RESPONSE LETTERS**

Draft Environmental Impact Statement  
March 1999

**REVISED PROJECT DESCRIPTION**  
**Koko Head Regional Park and Nature Preserve EIS**  
 July 30, 1999

**REVISED PROJECT DESCRIPTION**  
**Koko Head Regional Park and Nature Preserve EIS**  
 July 30, 1999

**NOTE**

A copy of this document was attached to each individual response letter that referred to it and indicated it is attached. However, only this single copy has been provided in the FEIS, rather than duplicating it with the copy of each response letter that follows.

The new facilities that are planned as part of this project have been changed significantly, as described below, since the preparation of the Draft Environmental Impact Statement. These changes involve only the deletion of several previously proposed improvements. No substantive new improvements have been added.

It should be noted that plans for the retained new facilities and improvements are currently undergoing extensive community review and input. They are also subject to the review and approval of the City Council in connection with the issuance of a Special Management Area Use Permit. These processes could potentially result in the modification or deletion of some of the improvements as currently planned and described in the Final EIS.

**I. Former Hanalei Job Corps Site and Koko Crater**

**A. Deleted Improvements**

1. New Nature Learning Center and Snack Bar.
2. New Summit Funicular and Lookout.
3. New Central Parking Area.
4. Demolition of Coeas Memorial Ballfield (i.e., this existing ballfield will be retained).

**B. Retained Improvements**

1. Demolition of all existing buildings except those occupied by the Parks Department's East Honolulu District Maintenance Facility.

**II. Hanauma Bay Nature Preserve**

**A. Retained Improvements in the Upper Park Area**

1. New Marine Education Center and Operations Support Facility.
2. New Snack Bar and Restroom Facility.
3. Reconfiguration and re-paving of adjoining Observation Plaza and pedestrian circulation areas.
4. Demolition of existing buildings on the site to be occupied by the above-described new facilities.
5. Landscaping of the new facilities area and the existing parking areas.
6. Reconstruction of the beach tram turnaround area.

**Retained Improvements Between the Upper Park and Lower Beach Areas**  
 1. Undergrounding of utilities within the Lower Beach Access Road.

**Retained Improvements in the Lower Beach Area**

1. Reconstruction of the beach tram turnaround.
2. Demolition and replacement of existing concession stand with a new Beach Activities Support Building.
3. Demolition and replacement of existing Comfort Station No. 1 with a new comfort station.
4. Upgrade of existing and addition of new landscaping.

**Deleted Improvements in the Upper Park Area**

1. Demolition of existing parking areas and re-landscaping of the previously paved areas (i.e., the existing parking areas will be retained and landscaped).
2. Inclusion of a major live reef interpretive exhibit in the Marine Education Center.

**III. Transportation Facilities and Operational Practices**

**A. Retained Improvements**

1. Beach tram service between the Hanauma Bay upper park and lower beach areas.
2. Existing parking and loading/unloading areas in the upper park area.
3. Construction of new beach tram turnarounds at both the lower beach area and upper park area ends of the tram route.

**B. Deleted Improvements/Changes in Operational Practices**

1. New Park Shuttle Transportation System – both the "Main Shuttle Route" between the previously planned/new deleted Nature Learning Center and Hanauma Bay, and the "Scenic Shuttle Route" between the previously planned/new deleted Nature Learning Center and Koko Crater Botanical Garden.
2. Reconstruction/realignment of existing Kalaniana'ole Highway intersections with Koko Head Park Road and Hanauma Bay Road.
4. Improvements to existing Job Corps Site entry road ("Koko Head Park Road")
5. Prohibition against walking to the lower beach area, with a requirement that everyone instead use the beach tram.



Our People...Our Islands...In Harmony

May 6, 1999

Mr. Jim Nakasone, Project Manager  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 9th Floor  
Honolulu, Hawaii 96813

Dear Mr. Nakasone:

Subject: Draft Environmental Impact Statement (DEIS) - Koko Head Regional park and Nature Preserve, Koko Head, Oahu, Hawaii

We have reviewed the above mentioned document and have no comments to offer at this time.

Thank you for the opportunity to review this document.

Sincerely,

KENNETH M. KANESHIRO  
State Conservationist

cc: Ms. Mary O'Leary, AICP, Group 70 International, Inc., 925 Bethel Street, 5th Floor,  
Honolulu, Hawaii 96813-4307

The Natural Resources Conservation Service works hand-in-hand with the American people to conserve natural resources on private lands.

AN EQUAL OPPORTUNITY EMPLOYER



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INTERNATIONAL

Francis S. Oda, AIA, AICP  
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Christine M. Ruetzel, AICP  
Stuart M. Jew, AIA

GROUP 70 INTERNATIONAL, INC.

Ralph E. Portmore, AICP  
Principal

cc Mr. Jim Nakasone  
Department of Design and Construction

May 10, 1999

Mr. Kenneth M. Kaneshiro  
State Conservationist  
Natural Resources Conservation Service  
U.S. Department of Agriculture  
P.O. Box 50004  
Honolulu, HI 96850

Dear Mr. Kaneshiro:  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your May 6, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward to your office a copy of the Final EIS upon its completion. We appreciate your taking the time to review the Draft EIS.

Sincerely,

P:\Planning\1995-11 Koko Head Regional Park\DEIS\Responses\James\DEIS NO COMMENT\11-10-99\10-10-99\10-10-99.doc

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • AEC Management  
925 Bethel Street, 5th Floor • Honolulu, Hawaii 96813-4307 • Phone: (808) 433-9474 • FAX: (808) 433-9476 • E-mail: info@group70.com • www.group70.com



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

REPLY TO  
ATTENTION OF

April 9, 1999

Civil Works Branch

RECEIVED

APR 12 1999

GROUP 70

Mr. Jim Nakasone, Project Manager  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 9<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Nakasone:

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve, Honolulu, Oahu (TKRS 3-9-12: 1, por. 2, 4, 8, 10, 12, 14 and 16). The following comments are provided in accordance with Corps of Engineers authorities to provide flood hazard information and to issue Department of the Army (DA) permits.

- a. Based on the information provided, a DA permit will not be required for the project.
- b. The flood hazard information provided on page 4-19 of the DEIS is correct.

Sincerely,

Paul Mizue, P.E.  
Chief, Civil Works Branch

Copy Furnished:

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813



April 23, 1999

Mr. Paul Mizue, P.E.  
Chief, Civil Works Branch  
Department of the Army  
U.S. Army Engineer District, Honolulu  
Fort Shafter, HI 96858-5440

Dear Mr. Mizue:

Subject Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your April 9, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We have prepared the following responses to your comments:

1. We acknowledge your comment that a Department of the Army permit will not be required for the project.
2. We acknowledge your comment that the flood hazard information provided on page 4-19 is correct.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction  
Department of the Army  
Honolulu Engineer District - Attention: CEFOH-ED-C



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Pacific Islands Ecoregion DIVISION  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, Hawaii 96813-5 P 2 3 4

In Reply Refer to: CS

FACILITIES DESIGN & ENG.  
MAY - 4 1999

Mr. Jim Nakasone, Project Manager  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 9th floor  
Honolulu, Hawaii 96813

Re: Draft Environmental Impact Statement for Koko Head Regional Park and Nature Preserve, Oahu, Hawaii

Dear Mr Nakasone:

The U.S. Fish and Wildlife Service (Service) has reviewed the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement (DEIS). We received the DEIS on March 23, 1999. The proposed action includes the phased development of visitor and educational centers at Hanauma Bay and Koko Head Regional Park, a tram system on Koko Head, elimination of Hanauma Bay parking lots, and various other park improvements. The proposing agency is the City and County of Honolulu's Department of Design and Construction. We note that the DEIS does not propose any actions on Koko Head or in Koko Crater, although these were discussed in the Environmental Impact Statement Preparation Notice. The Service offers the following comments for your consideration.

1. The DEIS adequately describes the biological resources in the proposed project area, including federally listed threatened and endangered species and other native plants and animals. Provided that the proposed erosion controls will be carried out, implementation of the proposed should not adversely impact any federally protected species.
2. Section 3.6.2, page 3-29. With regard to the plans for landscaping around Hanauma Bay, the Service suggests that the proposed action be modified. Rather than planting non-native species such as ironwood and silver buttonwood, we suggest you substitute indigenous or Polynesian introduced species that are tolerant of salt and wind. Loulu (*Pritchardia* spp.), milo (*Thespesia populnea*), and tree heliotrope (as suggested in the DEIS) would all be good choices. These species would provide shade as well as educational and interpretational opportunities. The introduction of ironwood, in particular, is undesirable since it is a fast-growing, easily spread alien species that is difficult to eradicate. Ironwood could rapidly spread around the rim of Hanauma Bay and onto Koko Head, potentially affecting native plants

currently growing on Koko Head, especially since ironwood has the effect of preventing other plants from growing around its base.

The Service appreciates the opportunity to provide comments on the DEIS. If you have questions regarding these comments, please contact Fish and Wildlife Biologist Chris Swenson at 541-3441.

Sincerely,

Robert P. Smith  
Pacific Islands Manager

cc: Ms. Mary O'Leary, Group 70 International, Inc. (Honolulu, HI)



July 30, 1999

Mr. Robert P. Smith  
Pacific Islands Manager  
Fish and Wildlife Service  
United States Department of the Interior  
P.O. Box 50068  
Honolulu, HI 96850

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Smith:

Thank you for your May 4, 1999 letter to Mr. Jim Nakasono of the Department of Design and Construction regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

We appreciate your acknowledgment that biological resources are adequately described in the DEIS, and that with implementation of the proposed erosion controls, the proposed actions should not adversely impact any federally protected species.

We also appreciate your suggestion concerning the replacement of any proposed ironwood or silver boltwood trees with indigenous or Polynesian introduced landscape species that are tolerant of salt and wind. Ms. Heidi Bornhorst, Director of Botanic Gardens for the City Department of Parks and Recreation, will assist in final plant selection.

Your letter and this response letter will be included in the Final EIS. We will forward to your office a copy of the Final EIS upon its completion. We appreciate your taking the time to review the Draft EIS.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Fortimore*  
Ralph Fortimore, AICP  
Principal

cc: Mr. Jim Nakasono  
Department of Design and Construction

USGPO: 1998 O-519-983

GROUP 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
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U.S. Department of Transportation  
Federal Aviation Administration

Box 50109  
Honolulu, HI 96850-5009  
Telephone No.: (808) 541-1256  
Facsimile: (808) 541-5462

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FACILITIES DESIGN & ENG.  
DEPT OF DESIGN & CONSTRUCTION  
HONOLULU, HI

May 18, 1999  
Mr. Randall K. Fujiki  
Director, Department of Design and Construction  
City and County of Honolulu  
650 South King Street, 2nd Floor  
Honolulu, HI 96813

Dear Mr. Fujiki:

Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve Tax Map Key: 3-9-12: 1,2,4,6,8,9,10,12,13,14 & 16 East Honolulu, Oahu, Hawaii

The Federal Aviation Administration (FAA) has reviewed the subject DEIS and requests that your plans maintain the controlled access and the required restricted area or clear zone for its Koko Head Very High Frequency Omnidirectional Range Tactical Air Navigation (VORTAC) facility. There appears to be no other issues of concern to the FAA regarding this proposal.

We appreciate this opportunity to comment on your proposal. Please contact me if there are ways we may be of assistance.

Sincerely,

*Darice B. N. Young*  
Darice B. N. Young  
Realty Contracting Officer



**GROUP 70**  
INTERNATIONAL

- Francis S. Oda, AIA, AICP
- Norman G.Y. Hoeg, AIA
- Sheryl B. Seaman, AIA, ASID
- Hiroshi Hida, AIA
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- Linda L. Chung, AIA
- Paul P. Chorney, AIA
- Dean H. Kamura, AIA
- Narumi J. Scott, AIA
- Stephen F. Calko, CPA
- George I. Aiza, AICP
- Jeffrey H. Overton, AICP
- Kathryn A. Nam
- Ray A. Inouye
- Mary J. O'Leary

June 4, 1999

Ms. Darice B. N. Young, Realty Contracting Officer  
Property and Services Branch, AFNL-54B  
Western Pacific Region  
Federal Aviation Administration  
U.S. Department of Transportation  
P.O. Box 50109  
Honolulu, HI 96850-5000

Dear Ms. Young:  
  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your May 18, 1999 letter to Mr. Randall Fujita, Director of the Department of Design and Construction, regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement.

We acknowledge your request that plans for Park improvements be done in a manner that maintains the controlled access and the required restricted area or clear zone for the FAA's VORTAC facility. As described in Section 3.1 of the Draft EIS, none of the planned improvements will be in the vicinity of the VORTAC facility or other activities located on Koko Head. The existing uses and access restrictions will not be impacted. A statement to the effect that no new facilities or changes to existing uses are planned for the top of Koko Head will be included in the Final EIS.

Your letter and this response letter will be included in the Final EIS. We will forward to your office a copy of the Final EIS upon its completion. We appreciate your taking the time to review the Draft EIS.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

FA/Planning/0005-11 Koko Head Regional Park (DES, Imp, Plan) (DES AND CONSTRUCTION) (Working) (06/04/99) J.A.A.R.



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

APR 12 1999

City and County of Honolulu  
Department of Design and Construction  
650 South King Street, 9th Floor  
Honolulu, Hawaii 96813

Attention: Mr. Jim Nakasone, Project Manager  
Gentlemen:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement  
East Honolulu, Island of Oahu, Hawaii  
TMK 3-9-12: 1, Por. 2, 4, 8, 10, 12, 14, and 16

This is in response to your letter of March 15, 1999, requesting our comments on the subject project.

The project will not impact any of our existing or proposed facilities. Therefore, we have no comments.

In the future, when actions described by Environmental Assessments, Environmental Impact Statement Preparation Notices, Environmental Impact Statements, Plan Review Use, etc., do not impact on specific Department of Accounting and General Services plans or facilities, we for workload reasons will not provide a "no comment" or "good planning principles evaluation" type of response. But, since we are still interested in knowing what is going on planning-wise, we would still appreciate the opportunity to review all such documents.

Should you have any questions, please contact Mr. Alan Sanborn of the Planning Branch at 586-0499.

Sincerely,  
*Gordon Matsuoaka*  
GORDON MATSUOKA  
Public Works Administrator

JT:jy  
c: Group 70

LETTER NO (P) 1269.9

DEPT OF DESIGN AND CONSTRUCTION  
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DEPUTY DIRECTOR  
DAVID W. BLAKE  
DIRECTOR, OFFICE OF PLANNING  
Telephone: (808) 587-2848  
Fax: (808) 587-2824

**DEPARTMENT OF BUSINESS,  
ECONOMIC DEVELOPMENT & TOURISM**



OFFICE OF PLANNING  
235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813  
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96904

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MAY 11 1999  
GROUP 70

Ref. No. P-8063

May 6, 1999

Ms. Mary J. O'Leary, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

We have reviewed the above-referenced document and have no concerns at this time regarding compliance of the proposed development with State coastal zone management (CZM) objectives and policies. We acknowledge the revisions that were made in response to our comments on an earlier draft.

Please contact Jeffrey Walters of our CZM Program at 587-2883 if there are any questions.

Sincerely,

David W. Blake  
Director  
Office of Planning

April 23, 1999

Mr. Gordon Matsuoka  
Public Works Administrator  
State of Hawaii  
Department of Accounting & General Services  
Planning Branch  
1151 Punchbowl, Room 430  
Honolulu, HI 96813

Dear Mr. Matsuoka:  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your April 12, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction



**GROUP 70**  
INTERNATIONAL

Francis S. Ode, AIA, AICP  
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Roy A. Inouye, AIA, CSI  
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BENJAMIN J. CAVETTANO  
GOVERNOR  
MAJOR GENERAL EDWARD V. BROUDROSKO  
DIRECTOR OF CIVIL DEFENSE  
ROY C. PRICE, JR.  
VICE DIRECTOR OF CIVIL DEFENSE



STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE  
3943 DUALOHO HEAD ROAD  
HONOLULU HAWAII 96816-5595

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MAY 15 1999

GROUP 70

TO: Mr. Jim Nakasone, Project Manager  
Department of Design and Construction  
City and County of Honolulu

FROM: Roy C. Price, Sr.  
Vice Director of Civil Defense

SUBJECT: KOKO HEAD REGIONAL PARK AND NATURE PRESERVE, DRAFT  
ENVIRONMENTAL IMPACT STATEMENT

State Civil Defense (SCD) appreciates this opportunity to comment on the Environmental Impact Statement for the Koko Head Regional Park and Nature Preserve, East Honolulu, Oahu, Hawaii, THK 3-9-12: 1, Por.2, 4, 8, 10, 12, 14 and 16.

SCD recognizes the importance of Koko Head Regional Park and Nature Preserve remaining as pristine as possible for the citizens of the State and for all the tourists that visit, but we must also protect all the people who visit this site. There are two (2) aging sirens beside the road leading to the "County Radio Building." These sirens provide minimal warning for the area based upon its undeveloped state. Development of the area as a "Regional Park and Nature Preserve" would require warning system improvements to serve the populations drawn into the area.

Request that the "Regional Park and Nature Preserve" project upgrade the existing sirens with solar powered "voice capable" electronic sirens.

If there are any further questions, please have your staff call Mr. Norman Ogasawara of my staff at 733-4300.

c: Ms. Mary O'Leary, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, HI 96813

May 11, 1999

Mr. David W. Blane, Director  
Office of Planning  
Department of Business, Economic Development and Tourism  
State of Hawaii  
P.O. Box 2359  
Honolulu, HI 96804

Dear Mr. Blane:  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your May 6, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that your office does not have any concerns at this time.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward to your office a copy of the Final EIS upon its completion. We appreciate your taking the time to review the Draft EIS.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction



Francis S. Odi, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Seaman, AIA, ASID  
Hitoshi Hida, AIA  
Roy H. Nibel, AIA, CSI  
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Roy A. Lourey, AIA, CSI  
Mary J. O'Leary, AICP  
Frank B. McCook, AIA  
Chad N. Anderson, AIGA  
Christine M. Boudet, AICP  
Stuart M. Jow, AIA

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- Paul P. Clancy, AIA
- Dean H. Korman, RA
- Norma J. Scott, RA
- George J. Allen, AICP
- John H. O'Brien, AICP
- Kathleen A. Yain
- Ron A. Sawyer, AIA, CM
- Frank B. McGee, RA
- Christine M. Burdick, AICP
- Stuart M. Joss, AIA

July 30, 1999

Mr. Roy C. Price, Sr.  
Vice Director of Defense  
Department of Defense  
State of Hawaii  
3949 Diamond Head Road  
Honolulu, HI 96816-4495

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Price:

Thank you for your May 11, 1999 letter to Mr. Jim Nakasone of the City Department of Design and Construction regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. As with the original project, no new facilities or other improvements are planned for the top of Koko Head at this time.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community and agency concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process - especially the planning sessions for the Regional Park, which will address existing and potential future uses of Koko Head as well as all other areas of the Park - is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of

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Letter to Mr. Roy C. Price, Sr.  
Office of the Director of Civil Defense, State of Hawaii  
July 30, 1999  
Page 2

community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSE TO YOUR COMMENTS**

We share your concern for the protection of those who visit the Park, and appreciate your request that the existing warning sirens beside the road leading to the "County Radio Building" be upgraded as part of any park improvement plans. However, given the reduced scope of the existing project and the above-described program to prepare a master plan for the Regional Park, the City and County considers it appropriate to defer decisions on any changes in use or improvements to existing facilities on Koko Head until they can be considered in the context of this planning process.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the Final EIS will be forwarded to your office upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Jim Nakasone*  
Ralph Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/10/2000 10:00 AM Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Aesthetics Management

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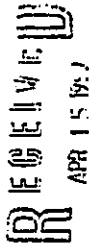
BOALUANA J. CRISTIANO  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF EDUCATION  
P.O. BOX 2280  
HONOLULU, HAWAII 96820

OFFICE OF THE SUPERINTENDENT

April 8, 1999



GROUP 70

PAUL G. LAMARQUE, Ph.D.  
SUPERINTENDENT



GROUP 70  
INTERNATIONAL

April 23, 1999

Mr. Paul G. LeMahieu, Ph. D.  
Superintendent of Education  
State of Hawaii  
Department of Education  
P.O. Box 22460  
Honolulu, HI 96804

Dear Mr. LeMahieu:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your April 8, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

Mr. Jim Nakasone, Project Manager  
Department of Design and Construction  
City and County of Honolulu  
650 South King Street - 9<sup>th</sup> Floor  
Honolulu, Hawaii 96813

Dear Mr. Nakasone:

Subject: Koko Head Regional Park & Nature Preserve - Draft EIS

The Department of Education has no comment on the subject draft environmental impact statement.

Thank you for the opportunity to respond.

Very truly yours,

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

PLEM:hy

cc: A. Suga, OBS  
M. Shishido, HDO  
M.O'Leary, Group 70 International, Inc.

FRANK S. OLS, AIA, AICP  
NORMAN G.Y. HONG, AIA  
SHERYL B. SCAMM, AIA, ASID  
HAROLD HIDA, AIA  
ROY H. NIHEI, AIA, CSI  
JAMES J. NINJUNO, AIA  
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STEPHEN F. COLLETTA, CPA  
GEORGE L. VITA, AICP  
KERRY H. COVATON, AICP  
KATHY A. NAM  
ROY A. FORESTER, AIA, CSI  
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GOVERNOR  
STATE OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF HAWAIIAN HOME LANDS  
70 BOKER  
HONOLULU, HAWAII 96813

RAYNARD C. SOON  
INTERIM CHAIRMAN  
HAWAIIAN HOMES COMMISSION  
JOSE M. DE YANAGUCCI  
DIRECTOR  
DEPT. OF DESIGN & CONSTRUCTION

March 31, 1999

The Honorable Randall K. Fujiki, Director  
City and County of Honolulu  
Department of Design and Construction  
Honolulu Municipal Building  
650 South King Street, Second Floor  
Honolulu, Hawaii 96813

Attn: Jim Nakasone, Project Manager

Dear Mr. Fujiki:

Subject: Koko Head Regional Park and Nature Preserve Draft  
Environmental Impact Statement, TMK 3-9-12-01, 02  
por., 04, 08, 10, 12, 14, & 16, East Honolulu, Oahu,  
Dated March, 1999

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

If you have any questions, please call Daniel Ornellas at  
586-3636.

Aloha,

*Raynard C. Soon*  
Raynard C. Soon, Interim Chairman  
Hawaiian Homes Commission

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99 MAR 31 P2:54  
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- Sheryl H. Norman, MA, AND
- Hiroko Hada, MA
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- Frank B. McCue, MA
- Clad M. Anderson, AICP
- Christine M. Rouse, AICP
- Stuart M. Kim, MA

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph E. Fortmore*  
Ralph E. Fortmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

April 23, 1999

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

Dear Mr. Soon:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your March 31, 1999 letter regarding your review of the Koko Head  
Regional Park and Nature Preserve Draft Environmental Impact Statement. We  
acknowledge your statement that you do not have any comments to offer at this time  
regarding the project.

Your letter and this response letter will be included in the Final Environmental Impact  
Statement (EIS). We will forward your office a copy of the Final EIS upon its completion.  
We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
1000 Kalia Road, Suite 1000, Honolulu, HI 96813 • Tel: 531-2200 • Fax: 531-2201 • Email: info@group70.com

Mr. Jim Nakasone  
City and County of Honolulu  
June 7, 1999  
Page 2 of 4

PHONE (808) 594-1888

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JUN - 9 1999 FAX (808) 594-1888

GROUP 70



STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
711 KAPOLANI BOULEVARD, SUITE 500  
HONOLULU, HAWAII 96813

June 7, 1999

Mr. Jim Nakasone, Project Manager  
City and County of Honolulu  
Department of Design and Construction  
650 South King Street - 9<sup>th</sup> Floor  
Honolulu, HI 96813

doc. # EIS 289

Re: Koko Head Regional Park and Nature Preserve Draft Environmental Impact  
Statement (EIS), East Honolulu, Island of Oahu, Hawaii  
TMK (1) 3-9-012: 001, Por. 002, 004, 008, 010, 012, 014, and 016

Dear Mr. Nakasone:

Thank you for the opportunity to comment on the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement (DEIS). The Office of Hawaiian Affairs (OHA) has the following comments about the proposed project. We understand that parts of the project (tunicular, nature center, and parking lot) have recently been scrapped. (The Honolulu Advertiser, June 2, 1999, Front page.) However, we submit these comments on the original document in hopes that they will become part of a better plan.

OHA is concerned about what this proposal will do to the natural and cultural heritage of the Koko Head Regional Park and Nature Preserve (hereafter, "Park"), because we believe that cultural significance is strongly linked to the *aina*. The natural environment and cultural heritage go hand-in-hand, and is therefore of equal importance to the Hawaiian people.

Bias in Report Preparation

While claiming to integrate park resources, DEIS constantly makes excuses for not including, or downplaying, certain facts and viewpoints into consideration. Its use of

gathered information is selective and biased, at best. For example, it claims in several different sections that some "improvements can be undertaken completely independently at some future date." (Page 1-7) It also assumes:

"[c]ompleting [the proposed improvements] as soon as possible is not expected to foreclose any options for possible future facility or management improvements that may be recommended by the on-going Hanalei Bay carrying capacity study or any other future studies." (Page 1-6)

Moreover, the integrity and credibility of the intended carrying capacity study is undercut by far-reaching and questionable assumptions such as the following:

"It is not expected that the carrying capacity study will indicate that retaining the existing facilities or continuing the existing management practices would be preferable to the planned improvements and changes. Rather, the study is expected to support the proposed actions and possibly provide a basis for further physical improvements and/or refinements in management practices." (Page 8-3. *Italics mine.*)

One should not and can not assume that a study that *has yet to commence* will "support the proposed actions." The document is also short-sighted in implying that any possible future adjustments will call for *increased* "physical improvements."

These unsupported and highly premature statements above ignore the fact that rushing a development project without understanding the area's carrying capacity could do a great deal of harm to the natural environment that will require costly fixes in the future. Even allowing for "refinements in management practices," they overlook the reality that once some "improvements" are made, their continued existence will take precedence over removal and/or restoration to pre-development conditions, especially if a niche market has been created and encouraged by the initial construction. This situation is likely to occur even if a study subsequently determines that these promotions of over-utilization of the Park have detrimental impacts.

While parts of the project have already been abandoned, the fact that these kinds of assumptions described above have gone into the preparation of this DEIS calls into question the accuracy, objectivity, and validity of the entire document. Is the plan really as "beneficial" as it proclaims? Repeatedly claiming it is so, does not make it so.

Public Access

The DEIS says that access to the lower beach area will be limited. The document fails to address how this statement will mesh with the PASH rights recognized by the Hawaii

Mr. Jim Nakasone  
City and County of Honolulu  
June 7, 1999  
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Supreme Court. Hawaiian gathering rights may exist in the project area and must be addressed. They are not addressed in the DEIS. OHA strongly suggests that the preparers seek expert opinion from the local Hawaiian community before the establishment of any limitations on public access. Moreover, the City and County should be prepared to mollify other local residents about this proposal that in general limits public access to the natural resources within the Park boundaries.

Cultural and Archaeological Significance

In our view, the discussion on cultural and archaeological sites is shoddy. Section 4.2.3 on "Cultural, Historic and Archaeological Resources" would be more useful if it included an integrated summary of the three reports, rather than reiterating points from each of the separate reports.

Moreover, not only is the PHRI study over 10 years old, its primary recommendation is that "a full-scale inventory level survey of the entire Koko Head Regional Park project area should be carried out as part of the subsequent planning and development of the park." (Paul H. Rosendahl, Ph.D., Inc. DEIS Appendix C, Page 9.) Despite this clear call for further research, especially in certain significant areas, the DEIS blatantly ignores this recommendation from the report which the preparers themselves chose to include in the DEIS.

Instead, the DEIS uses the disclaimer that none of the documented traditional Hawaiian archaeological sites known to exist within the Park and Nature Preserve "are located in or near any of the areas that will be impacted by the construction of the planned improvements." (Page 7-8) This logic is faulty for at least two reasons. First, the document does not appear to address the issue of how the known archaeological sites located within the Park premises will be protected. Second, as stated above, it does not address the issue that additional archaeological sites are likely to be found in certain areas of the Park. Moreover, without protection, these areas may be destroyed by land modification activities, as is described of some sites in the PHRI report. (Appendix C, page 6) Without discussing these points, the DEIS cannot claim to be a comprehensive and integrated plan for the Park.

Addressing The Economic Motivation

One major focus of this project is clearly economic motivation. Improvements at the Park are desired by some because of what is commonly called "under-utilization" of the land and a perceived need for improved tourism destinations. Good planning can strike a balance between development and preservation/protection, but not when the central impetus for development is economic gain.

OHA feels that good planning has not occurred in this case. The DEIS asserts that despite the lack of a carrying capacity study, it should not prevent "unresolved issues" to


Mr. Jim Nakasone  
City and County of Honolulu  
June 7, 1999  
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prevent development from occurring. (DEIS, Section 9.0) However, it seems that the discussion on carrying capacity is necessary, precisely because of the overwhelming tourism and local demand to "utilize" the Park.

Rather than bending purely to the will of the profit-motive often in the form of tourism dollars at the expense of the natural environment, the DEIS should also strive to address community concerns. Recent reports and local experience suggest that the local community has been all but disenfranchised from the Park area; the visitation numbers cited in the DEIS attest to this fact (see Pages 3-24 to 3-26). One should keep in mind that while visitation by Hawaii State residents to Hanauma Bay may have been as high as 14% in 1997, many residents go there only when entertaining visitors.

We hope that these serious analytical deficiencies built into the DEIS will be addressed and rectified prior to the publication of a FEIS. We look forward to reviewing the completed EIS or a revised DEIS. Should you have any questions concerning our comments, please contact Nami Ohtomo, Natural Resources Specialist at 594-1755. Please refer to the document number noted at the top of this letter in any future correspondence.

Sincerely,

  
Colin Kippen  
Deputy Administrator

  
Sebastian Aloot  
Land and Natural Resources Division Officer

cc: BOT  
Ralph Portmore, Group 70



**GROUP 70**  
INTERNATIONAL

Frank S. Olli, AIA, AICP  
Norman G.Y. Hwang, AIA  
Sheryl B. Seaman, AIA, ASID  
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Susan M. Jewell, AIA

July 30, 1999

Mr. Colin Kippen, Deputy Administrator  
Mr. Sebastian Aboot, Land and Natural Resources Division Officer  
Office of Hawaiian Affairs  
State of Hawaii  
711 Kapiolani Blvd., Suite 500  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Kippen and Mr. Aboot:

Thank you for your June 7, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hananuma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail

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Letter to Mr. Colin Kippen and Mr. Sebastian Aboot  
Office of Hawaiian Affairs, State of Hawaii  
July 30, 1999  
Page 2

(CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Bias in Report Preparation**

We do not agree with your characterization of the DEIS as "selective and biased". A case in point is your citing as an example our assertion that completing the proposed improvements "as soon as possible is not expected to foreclose any options for possible future facility or management improvements that may be recommended by the on-going Hananuma Bay carrying capacity study or any other future studies." (Page 1-6 in the DEIS) While the overall project scope, as presented in the DEIS, did involve an overall increase in physical improvements, the bulk of this increase would have been located at the former Job Corps site, where they would have no impact on or relationship to the Hananuma Bay carrying capacity study. (As noted in the attachment, all of the proposed improvements at the former Job Corps site, except demolition of existing unused and unsafe structures, have been deleted from the project.)

Secondly, the proposed improvements at Hananuma Bay Nature Preserve, as described in the DEIS, would result in a net decrease of physical improvements there, especially in the lower bay area. Further, they would provide the physical facilities necessary to more effectively manage the number of people permitted to go down to and use the lower bay area. In particular, they would support effects to inform and educate those who go to the lower bay area as how they can avoid harming the natural environment while using the bay, thereby reducing the current potential adverse impacts.

Such improvements will not compromise the ability to implement the carrying capacity study's recommendations, whatever they may be. On the contrary, they will allow a more timely implementation of any recommended changes in use and/or management of the bay than would be possible if the improvements were not already in place.

In addition to the community planning process initiated for the Koko Head Regional Park that is described at the beginning of this letter, City representatives met weekly through June and July with a "Hananuma Bay Improvements Task Force" consisting of over 25 concerned residents and users of the bay. Most of these were designated representatives of other community and public interest groups.

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Letter to Mr. Colin Kippen and Mr. Sebastian Albot  
Office of Hawaiian Affairs, State of Hawaii  
July 30, 1999  
Page 3

The purpose of the Task Force meetings was to determine, first, whether or not the City should proceed before completion of the carrying capacity study with any improvements at Hanalei Bay Nature Preserve, and if so, what those improvements should be. This Task Force endorsed the completion of a significant number of improvements. The revised project scope, as described in the Final EIS, substantially reflects the consensus of this group. The only major exception is the snack bar, where the Task Force had "strong differences of view" as to whether or not and what type food concession should be provided in the upper park area.

As noted in the attachment, the current proposed improvements include retention of the existing automobile parking areas, rather than their removal as proposed in the DEIS. Consequently, the current plans do involve a slight overall increase in the disturbed or improved area in the Nature Preserve. As noted just above, the facilities and uses that are proposed closely reflect the consensus of the Hanalei Bay Improvements Task Force.

#### Public Access

Discussion of the impact of the proposed improvements on public access will be expanded in the FEIS to specifically reference any impacts on Hawaiian gathering rights. The revised project proposes no major changes to general public access to the lower beach area. The primary proposed change is to require those going to the lower bay area to attend a brief "resource awareness training" on their first visit following the establishment of this training. Those who take the training will then be issued an annual pass that allows them to bypass these sessions for the next 12 months. No changes whatsoever are proposed to the current practice of providing free access for Hawaiians entering Hanalei Bay Nature Preserve to exercise their traditional and customary rights for subsistence, cultural and religious purposes.

#### Cultural and Archaeological Significance

Here again, we do not agree with your characterization of the DEIS discussion on cultural and archaeological sites as "shoddy", and urge you to contact and discuss your concerns with the responsible parties before putting such sweeping and negative generalizations in a formal letter.

Please note that the DEIS was never intended or presented as being "a comprehensive and integrated plan for the Park", as you state in the last sentence in this section of your letter. Rather, as stated on page 1-3 of the DEIS, "the planned improvements ... represent steps to implement the goals of the Koko Head Park Master Plan". This is even more the case under the current, significantly reduced project scope.

We believe that it is neither necessary nor appropriate to require that detailed surveys done in connection with a specific project proposal also include areas that are remote from and will not be impacted by the proposed improvements. Where such surveys are appropriate, they should be done in a more coordinated and comprehensive fashion, rather than on a piecemeal basis that is tacked on to an essentially unrelated project proposal.

Letter to Mr. Colin Kippen and Mr. Sebastian Albot  
Office of Hawaiian Affairs, State of Hawaii  
July 30, 1999  
Page 4

#### Economic Motivation

The same points made above about the manner in which you choose to state what is essentially a viewpoint apply here as well. In any event, the scope of this project has been significantly reduced to include only improvements to Hanalei Bay Nature Preserve that will allow more effective management and mitigation of the environmental impacts of existing users. None of the new improvements that are planned at this Nature Preserve are intended to increase its "attraction" for potential users or substantially alter the existing operations that impact accessibility. No improvements to other areas of the Koko Head Regional Park and Nature Preserve are included in this project. There is no economic motivation behind any of the planned improvements.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. We will forward to your office a copy of the Final EIS upon its completion. We appreciate your interest in this project and look forward to a more productive dialogue with your office on the upcoming program to prepare master plans for the entire Koko Head Regional Park and Nature Preserve.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakazono  
Department of Design and Construction

BENJAMIN J. CATTIANO  
GOVERNOR OF HAWAII



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

April 30, 1999

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MAY 10 1999

GROUP 70

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

IN REPLY, PLEASE REFER TO:  
File #

98-217A/epo

Mr. Jim Nakasone  
April 30, 1999  
Page 2

Under the NESHAP regulation, the owner or operator of the project would be required to file a notification of Demolition/Renovate ten working days prior to the demolition of each building or the disturbance of regulated asbestos-containing material. All regulated quantities and types of asbestos-containing materials would be subject to emission controls, proper collection, containerization, and disposal at a permitted landfill.

Lead-Based Paint Concerns

All lead-based paint that is to be disturbed shall be done so by properly trained persons as required by the State Department of Labor and Industrial Relations, Occupational Safety and Health Office (HIOSH). HIOSH can be reached at 586-9090.

Disposal of lead-based paint debris shall be done in accordance with the State Department of Health, Solid and Hazardous Waste Branch (SHWB). SHWB can be reached at 586-4226.

Should there be any questions regarding noise, asbestos or lead-based paint matters, please contact Mr. Jerry Haruno, Environmental Health Program Manager, Noise, Radiation and Indoor Air Quality Branch at 586-4701.

Wastewater

Wastewater from Hanauma Bay, Koko Head District Park, and the former Hawaii Job Corps Center site is handled by the privately owned and operated East Honolulu Community Wastewater System, and on-site cesspools are used for the Koko Head Shooting Complex and the Koko Head Equestrian Center. We have no objections to the planned Koko Head Regional Park and Nature Preserve, however, should a sewer system become available in the future to the Koko Head Shooting Complex and the Koko Head Equestrian Center, connection will be required.

All wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems."

Should you have any questions on this matter, please contact the Planning/Design Section of the Wastewater Branch at (808) 586-4294.

Vector Control

Some property may be harboring rodents which will be dispersed to the surrounding areas when it is cleared. The applicant is

Mr. Jim Nakasone  
Project Manager  
Department of Design  
and Construction  
City and County of Honolulu  
650 S. King Street, 9th Floor  
Honolulu, Hawaii 96813

Dear Mr. Nakasone:

Subject: Draft Environmental Impact Statement (DEIS)  
Koko Head Regional Park and Nature Preserve  
East Honolulu, Oahu  
TRK: 3-9-12: 1, Por. 2, 4, 8, 10, 12, 14 & 16

Thank you for allowing us to review and comment on the subject document. We have the following comments to offer:

Noise Concerns

Chapter 11-43 "Community Noise Control" was incorrectly referenced on page 7-4 of the Draft Environmental Impact Statement. Chapter 11-43 was superseded by Chapter 11-46, Hawaii Administrative Rules, "Community Noise Control" on September 23, 1996.

Activities associated with the construction of the project must comply with the Department of Health's Administrative Rules, Chapter 11-46, "Community Noise Control."

Asbestos Concerns

For projects that include demolition and renovation activities, the Federal Register, 40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants, Asbestos NESHAP Revision; Final Rule, November 20, 1990, requires inspection of all affected areas to determine whether asbestos is present.

Mr. Jim Nakasone  
April 30, 1999  
Page 3

98-217A/epo

required by Chapter 11-26, "Vector Control," Hawaii Administrative Rules to eradicate any rodents prior to clearing a piece of property and to notify the Department of Health by submitting Form VC-12 to the local vector control office when such action is taken.

The vector control office phone numbers are as follows:

Oahu: 831-6767  
Kauai: 241-3306  
Hawaii--Hilo: 974-4238, Kona: 322-7011  
Maui (includes Molokai and Lanai): 873-3560

Sincerely,



GARY GILL  
Deputy Director for  
Environmental Health

C: NR&IQB  
WMB  
Group 70 International, Inc.



July 30, 1999

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

Subjects: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Gill:

Thank you for your April 30, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

Noise Concerns

The chapter reference to the "Community Noise Control" section in DOH's Administrative Rules will be corrected in the Final EIS. Thank you for pointing this out.

Asbestos Concerns

This project will involve the demolition of all unoccupied buildings at the former Hawaii Job Corps Center site, and the demolition and replacement of existing administrative, exhibit and food/snorkel concession structures at Hanauma Bay Nature Preserve. Dames and Moore has been engaged to conduct an asbestos survey of these structures. While we are confident that they are well aware of the regulations regarding demolition activities, we have nevertheless provided them with a copy of your letter. We have also referred copies to the architects for this project.

Lead-Based Paint Concerns

A copy of your letter has been referred to the architects for this project.

Wastewater

A copy of your letter has been referred to the civil engineers for this project.

Vector Control

We appreciate the information provided on requirements and contact phone numbers related to vector control. However, a contractor (or contractors) for this project has not been selected at this early stage of the project planning and design process, so we are not in a position to refer your letter to them at this time. We will include this information in the project specifications.


Letter to Mr. Gary Gill  
Department of Health, State of Hawaii  
July 30, 1999  
Page 2

**Conclusion**

Your letter and this response letter will be included in the FEIS. The appropriate number of copies of the FEIS will be provided to your office upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,



Ralph Portimore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction  
City and County of Honolulu

Mr. Paul R. Weber, P.E.  
Dames & Moore

Mr. Dennis Nakamoto, AIA  
INK Architects, Inc.

Mr. Roy Nihel, AIA  
Group 70 International, Inc.

Mr. Warren Sato, P.E.  
SEEM Engineers, Inc.



**COMMISSION ON PERSONS WITH DISABILITIES**

919 Ala Moana Boulevard, Room 101 • Honolulu, Hawaii 96814  
Ph. (808) 586-8121 (V/TDD) • Fax (808) 586-8129

**RECEIVED**

APR 19 1999

April 16, 1999

GROUP 70

Ms. Mary J. O'Leary, AICP  
Senior Planner  
Group 70 International, Inc.  
925 Bethel Street  
Fifth Floor  
Honolulu, Hawaii 96813-4307

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement  
East Honolulu, Island of Oahu, Hawaii  
TMK: 3-9-12: Por. 2, 4, 8, 12, 14 and 16

Dear Ms. O'Leary,

The Draft Environmental Impact Statement for the Koko Head Regional Park and Nature Preserve has been submitted to our office for comment. The purpose of our review is to ensure that the planning and design development phases of this proposed project takes into account accessibility for person with disabilities. The following areas for the planned Park improvements are listed below:

Former Hawaii Job Corps Center Site (Nature Learning Center, Snack Bar)  
Koko Crater Summit Lookout (Lookout and Funicular)  
Hanauma Bay Nature Preserve (Marine Education Center)  
Shuttle Transportation System

We offer the following comments:

1. General accessibility statement: The accessibility requirement is addressed in general on page 3-2, Section 3.0 Project Description, Part 3.2 Facilities and Functional Areas, as follows:

*"All facilities will be designed to meet the requirements of the Americans with Disabilities Act Accessibility Guidelines."*

This statement should be amended to read as follows:

*"All facilities will be designed to meet the requirements of the Americans with Disabilities Act Accessibility Guidelines and the requirements of §103-50 Hawaii Revised Statutes. Buildings, facilities, and sites shall also incorporate best design practices as noted in the recommendations from the U.S. Access Board's Regulatory Negotiation Committee on Access to Outdoor Developed Areas, or other more current document providing guidelines for outdoor recreation areas."*

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925 Bethel Street, Fifth Floor • Honolulu, Hawaii 96813-4307 • Phone (808) 435-9466 • FAX (808) 433-9471 • http://www.group70.com • email: mail@group70.com

This project falls within the scope of the Americans with Disabilities Act (ADA), Title II, covering state and local governments, and §103-50 Hawaii Revised Statutes (HRS). Although the technical requirements are nearly identical, there may be areas of difference. Also, §103-50 HRS, contains a requirement for a review process by the Commission on Persons with Disabilities.

Also, your proposed facility will contain many outdoor recreation areas, including, but not limited to picnic areas, lookouts, outdoor recreation access routes, beaches, and perhaps trails. The plan should ensure that all the features and routes will incorporate appropriate walking surfaces starting not only from accessible parking to the required accessible shuttle transportation and the interior facilities, but also to the applicable outdoor features of interest. For your reference, the U.S. Access Board's Regulatory Negotiation Committee on Access to Outdoor Developed Areas is preparing to have a report ready mid-July of 1999. It will provide you with information that may be helpful in your overall planning of the park in areas for which best practices must be considered when final guidelines are not yet published.

2.

Transportation: The plan proposed to eliminate currently existing public parking at Hanauma Bay and replace it with a shuttle system from the new parking facility at Koko Crater. The new Nature Learning Center will be a new building at the former Job Corps Site. ADAAG requires an accessible route from the accessible building(s) to the nearest parking and public transportation bus stops. There is no indication in the plan of the commitment to access to the public transit route. The plan should commit to the regular city bus which provided service to that portion of the island having a bus stop within the new Center's ground, rather than on Kalaniana'ole Highway, where there may not be an accessible route to the Center or the shuttle stop to the Bay. Your plan has already noted that the shuttle bus system will be an accessible city bus. This, along with an accessible bus stop at the Center, are essential to persons with disabilities, given the absence of car parking at the Bay.

Although not explicitly stated as accessible or not accessible, we have concerns that the plan reflects a commitment that the funicular be accessible to persons with disabilities, unless it is determined to be structurally impracticable.

The above reflects staff's technical assistance comments. They do not reflect our board's approval or disapproval of the plan, per se. There are no further comments to offer at this time. Thank you for giving us this opportunity to provide comment.

If you have questions or concerns, please feel free to contact Mr. Gary Baichter, Facility Access Specialist, or Mr. Ben Gorospe, Facility Access Coordinator, at 586-8121.

Sincerely,

FRANCINE WAI  
Executive Director



July 30, 1999

Ms. Francine Wai  
Executive Director  
Commission on Persons with Disabilities  
919 Ala Moana Blvd., Room 101  
Honolulu, HI 96814

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Wai:

Thank you for your April 16, 1999 letter to Ms. Mary J. O'Leary of Group 70 International regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results.

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Letter to Ms. Francine Wai  
Commission on Persons with Disabilities  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**General Accessibility Statement**

The reference in Section 3.2 of the EIS to accessibility requirements will be modified in the Final EIS to include the wording specified in your letter. Copies of your letter have also been referred to the architects and engineers for this project for their information and consideration.

**Transportation**

As noted above and in the attachment, the plans for this project have been changed significantly. They now retain the existing parking at Hanama Bay Nature Preserve, and the City bus stop within the Nature Preserve. The new "Nature Learning Center" and funicular at the former Hawai'i Job Corps Center site are no longer part of this project.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction  
Mr. Dennis Nakamoto, AIA  
INK Architects, Inc.  
Mr. Roy Nibbel, AIA  
Group 70 International, Inc.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100.

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**REUWID**  
JUN - 7 1999  
GROUP 70

STATE OF HAWAII  
OFFICE OF ENVIRONMENTAL QUALITY CONTROL  
238 SOUTH BENTLEY STREET  
SUITE 702  
HONOLULU, HAWAII 96813  
TELEPHONE: (808) 586-4186  
FACSIMILE: (808) 586-4186  
June 7, 1999

Randall Fujiki, Director  
Department of Design & Construction  
850 South King Street  
Honolulu, Hawaii 96813  
Attention: Jim Nakasone

Dear Mr. Fujiki:

Subject: Draft Environmental Impact Statement (EIS) for Koko Head Regional Park and Nature Preserve, Oahu

Please include the following in the final EIS:

- 1. Summary section -- Include in this section:**
  - > a brief summary of the project's compatibility with land use plans and policies, rather than, as found in the draft EIS, a simple declaration that it is in compliance.
  - > a list of permits and approvals.
- 2. Cumulative impacts:** Your statement in section 3.2.2, *General Policies*, that "... with respect to Sandy Beach Park, the Golf Course 5 and 6 properties are not considered to be a part of the Koko Head Regional Park and Nature Preserve for the purposes of the planning, design and analysis of potential impacts for the proposed actions covered by this EIS" is not sufficient. An analysis of their cumulative impacts is required by HAR 11-200-17 (f), which states, "... The interrelationships and cumulative environmental impacts of the proposed action and other related projects shall be discussed in the draft EIS." In this situation the relationship is geographic proximity. Please include this analysis in the final EIS.
- 3. User fees:** Discussions in Section 3, under *Lower Park Area Facilities* (3.2.4.2), *Central Parking* (3.3.2), and the *Park Shuttle System* (3.3.3), mention user fees. What fees will be charged for entrance to the park, parking, and shuttle use? If exact fees are not yet known, within what range of dollar amounts will those fees be found?
- 4. Alternative transportation modes:** State policy (HRS Chapters 26, 226, 264, 344) requires the promotion of alternative forms of transportation systems that reduce reliance on the private

GENEVIVE SALMONSON  
DIRECTOR

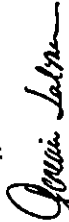
Randall Fujiki  
June 7, 1999  
Page 2

automobile, conserve energy, decrease pollution and provide safe accommodation for their users. Pursuant to this policy, please discuss what provisions are being made to create bicycle lanes or facilities, promote pedestrian safety and/or encourage other non-motorized modes of transportation.  
In particular, indicate the type and location of facilities planned for visitors arriving on bicycles, mopeds and motorcycles. Will these users have to pay for parking? If so, how much?

5. **Coastline access:** Denial of pedestrian access to the Hanauma Bay beach area may be in violation of HRS 205A, which requires full public access to the shoreline. Explain how the "shuttle-system-only" access adheres to the spirit and letter of this law.
6. **New public trails:** Section 4.4.5.2, *Vegetation Along Koko Crater Summit Funicular Route and at Summit Lookout*, mentions that development for 4 of 5 potential public trails had been deferred "due to funding constraints and the need for further studies to address potential adverse impacts and safety concerns." Development of public trails would seemingly be much less costly compared to the \$3.4 million estimated for the installation of the funicular tram, and have many fewer safety concerns. What are the reasons for the trails deferral and when will their development be reconsidered?
7. **Signature page:** The final EIS needs to include a statement on the signature page declaring that the preparation of the document and all ancillary sections were under the signatory's direction.
8. **Preparers of the EIS:** A section needs to be included that lists all persons, firms and agencies that prepared the EIS, including the technical appendices.

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

Sincerely,

  
GENEVIEVE SALMONSON  
Director

c: Ralph Portmore, Group 70  
Eugene Takahashi, Dept. of Planning & Permitting



- Francis S. Ode, AIA, AICP
- Norman G.Y. Hung, AIA
- Sheryl D. Scaman, AIA, ASID
- Hiroaki Hida, AIA
- Ray H. Nicks, AIA, CN
- James J. Nishimura, AIA
- Ralph E. Pevnec, AICP
- Nathan H. Yuen, AIA
- Ernie L. Chang, AIA
- Paul P. Conway, AIA
- Dean H. Kizumura, RA
- Naomi J. Kern, RA
- George T. Ura, AICP
- John H. Chynoweth, AICP
- Kathryn A. Nam
- Ray A. Jenney, AIA, CN
- Frank H. McKee, RA
- Christine M. Rowland, AICP
- Stuart M. Jow, AIA

July 30, 1999

Ms. Genevieve Salmonson, Director  
Office of Environmental Quality Control  
State of Hawaii  
235 S. Beretania St., Suite 702  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Salmonson:

Thank you for your June 7, 1999 letter to Mr. Randall Fujiki, Director of the Department of Design & Construction regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new Koko Head Regional Park and Nature Preserve master plan.

**RESPONSES TO COMMENTS**

**Summary Section**

The requested summary of the project's compatibility, and a list of permits and approvals, will be added to the summary section in the FEIS.

Cumulative Impacts

The revised project scope now includes only improvements to Hanalei Bay Nature Preserve that are intended to change the manner in which the bay environment is used so that the potential environmental impacts of users can be reduced. None of the new improvements are intended to increase its "attractions" for potential users or substantially alter the existing operations that impact accessibility. No improvements to other areas of the Koko Head Regional Park and Nature Preserve are included in this project.

Consequently, we are not aware of any cumulative impacts of these improvements on Sandy Beach or the Golf Course 5 and 6 properties. Please note also that the City Department of Parks and Recreation, while having prepared a master plan for Sandy Beach Park, currently has no immediate plans for new improvements at either of these sites.

We agree that potential cumulative impacts of this project and other potentially related projects, such as Ka Iwi State Park, should be addressed, and we will revisit how this was handled in the DEIS and make appropriate changes if necessary. In this regard, it is our preliminary conclusion that, given the limited impacts of the Hanalei Bay only improvements encompassed by this project and given the modest scope of the planned Ka Iwi State Park improvements, there are not likely to be any substantive cumulative impacts of either a beneficial or adverse nature.

User Fees

Given the reduced scope of the planned improvements, no changes in existing user fees are planned at this time. The existing fee structure will be described in the FEIS. Any future changes will be considered in connection with the preparation of a new master plan for the entire Koko Head Regional Park and Nature Preserve. (Any changes in fees will require City Council approval.) A process for its preparation is tentatively scheduled to begin in September 1999.

Alternative Transportation Modes

Given the reduced scope of the planned improvements, no changes in existing modes of access to the Hanalei Bay Nature Preserve are planned at this time. The existing modes of access will be described in the FEIS. Any future changes will be considered in connection with the upcoming master plan preparation process for the entire Koko Head Regional Park and Nature Preserve.

Coastline Access

Given the revised scope of the planned improvements, no changes in modes of access to the lower beach area at Hanalei Bay Nature Preserve are planned at this time. Pedestrian access will continue to be available. However, it should be noted that existing management practices restrict the available points of access and limit access to times when the Nature Preserve is open. These restrictions have been adopted in appropriate ordinances, rules and regulations, and we do not believe this violates HRS Section 205A.

The existing modes of access will be described in the FEIS. Any future changes will be considered in connection with the upcoming master plan preparation process for the entire Koko Head Regional Park and Nature Preserve.

New Public Trails

The funicular has been dropped from the current improvement plans. The provision of any new public trails in the Koko Head Regional Park and Nature Preserve, as well as the possible re-introduction of the funicular, will be considered in connection with the upcoming master plan preparation process for the entire park area.

Signature Page

The specified statement will be added to the signature block.

Preparers of the EIS

A new section that lists all persons, firms and agencies involved in the preparation of the EIS will be added to the FEIS.

CONCLUSION

Your letter and this response letter will be included in the FEIS. Once completed, copies of the FEIS will be provided to your office and other appropriate parties, as indicated by your office's distribution list. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,



Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction





STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION  
FOI BOX 21  
HONOLULU, HAWAII 96820  
JUN 8 1999



GROUP 70

REF:PB:LT

File No.: Koko Head DEIS

Mr. Ralph E. Portmore, AICP  
Group 70 International, Inc.  
925 Bethel Street, Fifth Floor  
Honolulu, Hawaii 96813-4307

Dear Mr. Portmore:

Subject: Draft Environmental Impact Statement (EIS) for Koko  
Head Regional Park and Nature Preserve; TMK: 3-9-12:  
01, por. 02, 4, 8, 10, 12, 14 and 16 at Honolulu,  
Hawaii

The following are our comments on the subject project:

**Aquatic Resources**

Significant impacts adverse to aquatic resource values are not expected from the planned improvements, including proposed activities at Hanauma Bay Nature Preserve. The site improvements would expand and enhance public recreational opportunities at the park.

Although appropriate mitigation measures are proposed, precautions should be required to prevent debris, construction material, landscaping chemicals (fertilizers, herbicides, pesticides, etc.), eroded soil, petroleum products and other potential contaminants from flowing, blowing or leaching into coastal waters.

We suggest that construction activities be restricted to periods of minimal rainfall and areas denuded of vegetation which could be susceptible to erosion are appropriately stabilized.

Any future plans for improvements or modifications along the shoreline of Koko Head Regional Park should be adequately described and the Department should have the opportunity to review all activities that may affect the public use of State shoreline land in this vicinity.

**Forestry and Wildlife**

Fire is a real threat for many of the threatened and endangered plants growing in the Koko Head crater area. The endangered *Marsilea villosa* fern grows in the crater. With increased visitor traffic, the impacts on the dry-land plant resources will need to be mitigated or avoided. On the west side of the botanical garden inside Koko crater exists a Hawaiian garden with a grove of naturally occurring willow trees and other threatened and endangered plants. Vehicular traffic into this area will increase the fire risks and impacts of this garden. A new Koko crater rim lookout will create added usage of the rim which will impact the rare Hawaiian plants located there.

The division recommends that areas planned for trails and tunnels or other uses where planned activities will increase visitor or vehicular traffic to the dry-land resources including known threatened and endangered species be surveyed for endangered species and appropriate measures be included in this document to mitigate their impacts.

**Land Division - Engineering Branch**

Our current projects are not affected by the proposed project. We confirm that the proposed project is located in Zone D. This is an area in which flood hazards are undetermined.

We have no other comments to offer at this time. Should you have questions, please call Lauren Tanaka at 597-0385, Planning Branch of the Land Division.

Aloha,

DEAN UCHIDA, Administrator



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION  
KALANIPANEA BUILDING, ROOM 555  
601 KANELOA BUILDING  
HONOLULU, HAWAII 96813

TIMOTHY E. JOHNS, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
DOUVRES  
JANET E. CAVETANO

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

REF:HP-1K

Mr. Jim Nakasone, Project Manager  
Department of Design & Construction  
650 South King Street- 9th Floor  
Honolulu, Hawaii, 96813-2955

LOG NO: 23564  
DOC NO: 9906co01  
Architecture

Dear Mr. Nakasone:

**SUBJECT: Koko Head Regional Park Nature Preserve  
Draft Environmental Impact Statement  
TMK 3-9-12:1, Por. 2, 4, 8, 10, 12, 14, and 16  
East Honolulu, Oahu**

We received on March 15, 1999, from Group 70 International, Inc. the draft Environmental Impact Statement for Koko Head Regional Park Nature Preserve.

We concur with recommendations of the Cultural Surveys Hawaii survey for archaeological sites in the defined, previously developed areas. As further plans are developed should the impact areas be changed, further survey may be required.

We believe that there is sufficient information on the former Military Radar Station site to determine that it is significant. We concur that more research needs to be done on the radar sites. Maps indicating the actual locations of the non-existent structures and the existing structures would be a useful addition, as would more details on the function of the various structures. We also concur with the recommendation that the radar sites should be preserved. We believe that more information needs to be provided on the physical impact of the proposed tramway and its accessory structures on the historic structures before determinations of 'effect' may be made.

Koko Crater, known traditionally as Koholepele (Vagina Labia Minor) is significant for its association with the volcano Goddess Pele's sister, Kapokohelele (Kapo of the traveling Vagina). Legend says that this is where Kapo landed on O'ahu leaving her imprint in traditional times. For these reasons visual impact should be considered when designing the viewing platform and cable car infrastructure.

Thank you for the opportunity to comment. Should you have any questions please contact me or my staff at 692-8015.

Aloha,

*Timothy E. Johns*

TIMOTHY E. JOHNS, Chairperson and  
State Historic Preservation Officer

JUN 24 1999

CO:JK



GROUP 70  
INTERNATIONAL

- FRANK S. ODU, AIA, AICP
- MEEMAN G.Y. HONG, AIA
- SHERYL B. SCAMUN, AIA, AND
- HARUHI HIDA, AIA
- ROY H. NABEI, AIA, CN
- JAMES I. NISHIMURA, AIA
- RUJPHI E. PRADHAR, AICP
- STEPHEN H. YUEN, AIA
- LINDA L. CHENG, AIA
- PAUL P. CLARNEY, AIA
- DOAN H. KALANOU, RA
- NORMA J. SUDT, RA
- GEORGE I. MA, AICP
- JEFFREY H. THOMSON, AICP
- KATHLEEN A. NAM
- BOB A. IMHOYE, AIA, CN
- FRANK B. MCGEE, RA
- CHRISTOPHER M. RASTOLD, AICP
- STUART M. JONES, AIA

July 30, 1999

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

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Johns:

Thank you for the following comment letters regarding your department's review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project:

- Letter of June 8, 1999, signed by Mr. Dean Uchida, Administrator of the Land Division, and containing comments from the Aquatic Resources, Forestry and Wildlife, and Land Divisions.
- Letter of June 24, 1999, signed by you as State Historic Preservation Officer, and containing comments from the Historic Preservation Division.

Our responses to these comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of these project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Letter to Mr. Timothy E. Johns, Chairperson  
Board of Land and Natural Resources  
July 30, 1999  
Page 2

Your department's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project by phone (527-5558), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letters are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of a new Koko Head Regional Park and Nature Preserve master plan.

#### Aquatic Resources Division

Thank you for indicating that significant adverse impacts to aquatic resources are not expected from the proposed improvements at Hanaua Bay.

A copy of Mr. Uchida's letter will be forwarded to the project architects and to the Hanaua Bay Nature Preserve manager for their information and consideration with regard to mitigation measures during construction of the improvements and maintenance of the overall park area.

The City and County currently does not have any future plans for improvements or modifications along the shoreline of Koko Head Regional Park and Nature Preserve. If any are forthcoming in the near future, they are likely to be generated by the planning process outlined above. As noted, we would welcome your department's participation in this process as a resource, and as a means to keep informed and have an excellent opportunity to review and comment in a timely fashion on any proposals that may affect public use. In the alternative, we urge you to get on the mailing list by contacting Cynthia Bond at one of the numbers provided above.

#### Forestry and Wildlife Division

No improvements are planned in the vicinity of threatened or endangered plants growing in the Koko Head crater area, or in the vicinity of the Koko Crater Botanical Garden. All new improvements will be confined to areas that have been substantially altered in the past and are currently in active park use. No impacts in the form of increased visitor or vehicular traffic in largely natural dry land areas are anticipated.

#### Land Division - Engineering Branch

Thank you for informing us that DLNR does not have and current projects that would be affected by this proposed project.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
925 Keolu Street, Fifth Floor • Honolulu, Hawaii 96813-1307 • Phone (808) 433-5671 • Fax (808) 433-5671 • http://www.group70.com • email: mail@group70.com

Letter to Mr. Timothy E. Johns, Chairperson  
Board of Land and Natural Resources  
July 30, 1999  
Page 3

#### Historic Preservation Division

Thank you for indicating your concurrence with the recommendations of the Cultural Surveys Hawaii survey of potential archaeological sites in areas of the Regional Park that might be disturbed by the proposed improvements. As noted in the attachment, all previously proposed improvements in the vicinity of the former Military Radar Station site have been deleted from the project. Consequently, this area will remain as is.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. Upon its completion, the appropriate number of copies of the FEIS will be transmitted to your office. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Fortmore*

Ralph Fortmore, AICP  
Principal

Attachment

cc: Historic Preservation Division  
State Department of Land and Natural Resources  
Kakuhewa Building, Room 535  
601 Kamohala Boulevard  
Kapolei, HI 96707

Mr. Dennis Nakamoto, AIA  
INK Architects, Inc.

Mr. Roy Nihel, AIA  
Group 70 International, Inc.

Mr. Alan Hong, Manager  
Hanaua Bay Nature Preserve

Mr. Jim Nakasone  
Department of Design and Construction  
City and County of Honolulu

11/20/2002 10:00 AM Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
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BENJAMIN J. CAYETANO  
GOVERNOR



RECEIVED STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
881 PUNCHBOWL STREET  
99 MAY 17 8 08 AM '99  
HONOLULU, HAWAII 96813-5097

KAZU HAYASHIDA  
DIRECTOR  
DEPT. OF TRANSPORTATION  
881 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097

URGENT REFER TO:  
HWY-PS  
2.3751

FACILITIES DESIGN & ENG. DIV.  
DEPT. OF TRANSPORTATION  
C & C OFFICE BUILDING

99 MAY 17 11 08 AM '99  
DEPT. OF TRANSPORTATION  
C & C OFFICE BUILDING

Mr. Randall Fujiki  
Page 2  
MAY 13 1999

HWY-PS 2.3751

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

Attention: Mr. Jim Nakasone, Project Manager

Dear Mr. Fujiki:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement (EIS)

Thank you for consulting us. We have the following comments about the Draft EIS:

1. The Draft EIS proposed a 24-foot wide driveway from Kalamianaole Highway to the proposed new parking lot, and further states that:  
Pedestrian access (sidewalks) to the Koko Crater nature learning center from Kalamianaole Highway will not be provided... Visitors will be transported between facilities within the Park on 40-foot long transit buses...  
We recommend that the EIS reconsider improvements to accommodate safe pedestrian and bicycle access from Kalamianaole Highway to the proposed new parking lot.
2. The Final EIS should include a figure to show the proposed realignment of Koko Head Park Road and Hanauma Bay Road and the design of their proposed signalized four-way intersection with Kalamianaole Highway. The Draft EIS text incorrectly states that Figure 3-14 shows the proposed intersection design.

3. The EIS needs to propose improvements and operational measures to mitigate traffic impacts if the proposed new parking lot overflows and traffic queues back to Kalamianaole Highway. The project Traffic Impact Assessment Report (TIAR) is based on extrapolated fall 1998 data when the existing parking lot did not overflow and parking lot users were not restricted from access to lower Hanauma Bay.
4. According to the City staff, the existing Hanauma Bay parking lot commonly fills by 8:30 a.m. during the summer, sporadically fills by mid-morning during the spring, and only fills on a few holidays during the fall and winter. Replacing the existing Hanauma Bay parking lot with a new lot at the former Job Corps site will not eliminate peak "demand" which causes the parking lot to overflow. Parking turnover will be slower in the new lot if users must compete with tour bus passengers for a limited number of admission tickets, and then must wait for shuttle bus transport to and from Hanauma Bay. Issuance of admission tickets which require waiting for several hours to enter Hanauma Bay may further reduce parking turnover.
5. Requests for modification of access to and plans for work within the Kalamianaole Highway right-of-way need to be submitted to the Highways Division for review and approval. Plans for realignment of Koko Head Park Road and Hanauma Bay Road to form a four-way signalized intersection with Kalamianaole Highway must incorporate appropriate geometrics for tour buses and adequate left-turn storage for peak summer use. We also will require that the City undertake appropriate measures to mitigate traffic impacts from overflow of the proposed new parking lot.

If you have any questions, please contact Ronald Tsuzuki, Head Planning Engineer, Highways Division, at 587-1830.

Very truly yours,

KAZU HAYASHIDA  
Director of Transportation



July 30, 1999

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

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Hayashida:

Thank you for your May 13, 1999 letter to Mr. Randall K. Fujiki, Director of the Department of Design and Construction, regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaua Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your department's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Francis S. Oul, AIA, AICP  
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Paul P. Cheney, AIA  
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John H. Overton, AICP  
Kallisto A. Nui  
Roy A. Inouye, AIA, CSI  
Frank P. McGee, RA  
Christine M. Ross, AIA, AICP  
Nurt M. Jinn, AIA

Letter to Mr. Kazu Hayashida  
Department of Transportation, State of Hawaii  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Pedestrian and Bicycle Access

No changes to the current provisions for pedestrian and bicycle access to Hanaua Bay Nature Preserve are planned at this time. If any are forthcoming in the near future, they are likely to be generated by the planning process outlined above. As noted, we would welcome your department's participation in this process as a resource, and as a means to keep informed and have an excellent opportunity to review and comment in a timely fashion on any proposals that may affect transportation facilities and their use. In the alternative, we urge you to get on the mailing list by contacting Cynthia Bond at one of the numbers provided above.

Park Entry from Kalaniana'ole Highway

The proposed realignment of the Koko Head Park Road and Hanaua Bay Park Road intersections with Kalaniana'ole Highway has been deleted from this project.

No improvements are currently planned to address the existing traffic queues on Kalaniana'ole Highway that result from the occasional closing of Hanaua Bay Nature Preserve parking lot when it is full. However, we anticipate that alternative measures to alleviate this problem will be considered as part of the above-described master planning process for the Koko Head Regional Park Nature Preserve. Again, the City would welcome your participation in this process.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. Upon its completion, the appropriate number of copies of the FEIS will be transmitted to your office. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/20/2005 10:00 AM - 11/20/2005 10:00 AM - [Name] - [Address] - [Phone] - [Fax] - [E-mail]

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# University of Hawaii at Mānoa

Environmental Center  
A Unit of Water Resources Research Center  
Crawford 317 • 2550 Campus Road • Honolulu, Hawaii 96822  
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June 4, 1999

RE:0691

Mary O'Leary  
Group 70 International, Inc.  
925 Bebel Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Ms. O'Leary:

Draft Environmental Impact Statement  
Koko Head Regional Park and Nature Reserve  
East Honolulu, Oahu

The Department of Design and Construction proposes improvements to Koko Head Park and Nature Preserve areas that will integrate various recreational areas in the region that have been functioning separately. The former Hawaii Job Corps site buildings and ball field will be demolished and replaced with a nature learning center and a central parking lot for Hanalei Bay. Parking lots and buildings at Hanalei Bay will be removed and replaced with a marine education center and facilities to support activities within the Bay. A shuttle service will transport park users between the new parking lot and the Bay as well as to Lanai Lookout, Halona Blowhole and Koko Crater. A scenic lookout will be constructed atop Koko Crater, with a tram to transport visitors to the top. Benefits to the plan include an improvement to traffic circulation at the main entrance to the Park (the current Hanalei Bay entrance), an increase in visitor awareness and education about Park features, an increase in preservation of the area's natural environment, a reduction of impacts to Hanalei Bay and a strengthening of management practices that protect the Bay's ecosystems and water quality. Mitigation measures are planned to focus on minimizing inconvenience to Hanalei Bay users, preserving or recording historic remnants of the old military radar station atop Koko Crater, and reducing visual impacts of the proposed tram system.

The Environmental Center has reviewed the document with the assistance of Karl Kim, Urban and Regional Planning; Roger Fujitaka, Water Resources Research Center; and Victoria Cullins of the Environmental Center.

### General Comments

1. This DEIS fails to adequately discuss the impacts of the changes the proposed plans will have on residents of the East Honolulu area. The plan has focused almost entirely on means to accommodate the tour industry with almost no attention to the community needs or uses. Residents who usually park in the park and carry their coolers and beach mats to the beach will now have to park across the street and take a shuttle to the park. This will have the effect of reducing the number of residents who use the Bay. Currently, this number is approximately 15% per year. The DEIS totally ignores this issue and fails to acknowledge that this is a problem.

2. The proximity of the shooting range next to the new park is noted but moving it is not considered. We see this as a real safety issue. There is a significant potential for people to be injured by a stray bullet or some child could wander into the shooting range by accident. The two uses... Park and Shooting Range... are incompatible. Relocation of the shooting range must be addressed.

3. A potentially serious traffic hazard will be generated if Park visitors begin entering the Park from the existing Park entrance off Anapau Street in Hawaii Kai. This would create a significant increase in use of this residential street by visitors to the Park and thus pose a significant safety problem

### Sec 1.0 SUMMARY

**1.4 SIGNIFIANT BENEFICIAL AND ADVERSE IMPACTS** In general, it is inappropriate to list impacts as either beneficial or adverse. This classification depends on the opinion of the drafter of the document and frequently what is beneficial to one party may well be adverse to another. That is why the EIS law is written to stress identifying "impacts of actions" without reference to "beneficial" or "adverse". For example, in the case of the plans for the Hanalei Bay Park and Nature Preserve, enhancing access to the park may be beneficial to the tourism industry but deleterious to the local residents and to the resources. Many of the points listed under paragraph 1.4.1 Beneficial Impacts could just as reasonably be presented as "adverse impacts". For example, public access will be restricted (pedestrian traffic to the bay will be restricted); maintenance and management costs will be significantly increased (150 jobs added); Traffic safety at the Kalaniana'ole Highway-Hanalei Bay Road-Koko Head Park Road intersection will be decreased because the new configuration will require a left turn across cwa bound traffic and is likely to increase traffic congestion on Kalaniana'ole Highway as well as create a safety hazard between left turning and cwa bound vehicles. Promulgation of the Park development will likely increase the numbers of tourists visiting the area thus creating more of an impact on both the bay as well as roadways leading to and from Hawaii Kai. As access to Koko Crater is enhanced, yet another impact can be expected to the Koko Crater botanical garden with increased use.

**1.6 ALTERNATIVES** The Environmental Center concurs with the views of Karl Spencer regarding the lack of accessibility to the park by local neighborhoods. There are no facilities for the coast road to provide biking or walking between Ka Iwi, Koko Head Botanical Gardens, the proposed Nature Center and Hanalei Bay. There is only limited walking provided within the park itself, with much of the accommodations in the park

facilities at both Sea Life Park and the Waikiki Aquarium. This type of artificial reef environment seems particularly inappropriate when you have Hanalei Bay just below.

**3.2.4.2. Lower Park Area Facilities** It is doubtful if the proposed new improvements at the lower level will be "burden of the shoreline setback area" as stated in the DEIS. Also, eliminating all pedestrian access places an unreasonable burden on local, resident users of the Bay. The entire plan for this development seems to have ignored the need for local access through foot and bicycle paths.

**3.3.2. Central Parking Area** Parking for bicycles, mopeds and motorcycles should be provided. People should be encouraged to minimize their use of commercial or mechanized vehicles. Why are sidewalks being omitted from the plans from Kalaheo Hwy. to the Learning Center?

**3.3.3. Park Shuttle Transportation System** What provisions will be made for beach equipment, picnic baskets, or baby carriers on the Shuttle? If these items are not permitted this would place yet another restriction on local use of the Bay.

**3.4. PARK USAGE AND ACTIVITIES**

**3.4.1. Park Usage** The DEIS provides some estimated projections for Park users. Why weren't the actual user numbers used in these estimates since they exist?

**3.4.2. Park Attractions and Activities** The next to the last line in this section should read: "A carrying capacity study for Hanalei Bay is currently underway."

**3.4.2.4 Hanalei Bay Nature Preserve-Lower Level Activities and Usage Levels** There is an error in the third paragraph of this section relevant to attendance on Sundays and the "highest average month of 1997".

**3.7. PROJECT SCHEDULE**

What will happen to the existing educational program and park management staff if the present nature/educational center is torn down a year ahead of completion of the new center? Why should the existing facilities be removed before the new ones are in place?

**Fig. 3.14 Hanalei Bay Conceptual Site Plan** Is the existing comfort station #3 within the setback area? This figure does not depict the intersection of Kalaheo Highway and Koko Head Park Road as described in paragraph three of page 3-21.

**SECTION 4.0 ENVIRONMENTAL SETTING**

**4.3 CLIMATE**

There appears to be a typographical error in the fourth paragraph of this section with regard to Kona storms.

**4.4.1. Topography and Soils** Reference is made in "hurf" We assume this is a typographical error for "huff"

designed around mechanized "people movement." The plan also proposes to prohibit people from walking down to Hanalei Bay, and removing the present upper level parking. While this may control the numbers of bay visitors, options that allow free movement in a non-mechanized form should be included in the alternative section as certain user groups may be excluded. One such alternative should include a walk/bike trail system to connect the park system to local neighborhoods.

**1.7 UNRESOLVED ISSUES** The center does not agree that "any issues with respect to whether or not additional facilities would be appropriate on Koko Head do not need to be resolved at this time." As stated in Environmental Impact Statement (EIS) Rules, Title 11, Chapter 200-7 (HAR) a group of proposed actions must be treated as a single action when "The component actions are phases or increments of a larger total undertaking." Therefore it would not be appropriate to add recreational uses in the future that have not been identified in the present EIS.

**1.8 COMPATIBILITY WITH LAND USE POLICIES AND PLANS** This section does not list the State, and City and County land use policies, plans and regulations with which it is purported to be "more than just compatible." This appears to be an omission and the particular policies and plans should be included.

**2.0 PURPOSE AND NEED FOR THE PROPOSED ACTIONS** In an attempt to limit the overall number of park users, certain restrictions will be applied to Hanalei Bay. One of these is that park visitors will be required to be a part of a guided tour or complete one session of awareness training. In this case, will park visitors include Hawaii residents or active military? Who, if anyone, would be exempt from this provision?

**3.0 PROJECT DESCRIPTION**

**3.1 OVERVIEW** The DEIS describes the various components of 1,275.4 acres that make up Koko Head Regional Park. However, it is unclear why the present document does not address all components of the Park. It appears that this is a piece-meal planning and handling approach of the DEIS, contrary to the EIS statutes and regulations. The Final EIS should include an explanation of the reasons why only certain elements of the park are being considered at this time and how this partial plan will be incorporated into future plans for the remainder of the Park. Furthermore, the Final EIS should acknowledge the need for a Supplemental EIS at such time as the remaining Park plans are defined.

We note that the DEIS refers to the Former Hawaii Job Corps Center Site and states that demolition of the existing buildings and ball field is planned. Why is the ball field being destroyed? There are insufficient ball fields in the Hawaii Kai area now...why remove an existing one?

There appears to be no consideration for the impacts of the Hanalei Bay access and Koko Head "funicular" to the Hawaii Kai residents down below or local users of Hanalei Bay islandwide. The DEIS does not adequately address the issues involved in developing a large, commercialized, tourist attraction within an existing, well established residential community.

The proposal to build various aquarium facilities, surge tank, tidepools, touch tanks, an edge-of-the-reef exhibit and a beyond the reef exhibit will compete directly with existing

**4.5.3.1 NEARSHORE OCEAN WATERS** There have been a few surveys of the marine biota in Hanalei Bay. Drs. Sherwood Maynard or Richard Brock at the University of Hawaii should be able to provide you with the information.

**4.6.1.1. UPPER PARK AREA** The last paragraph of this section has an incorrect statement regarding operation of the interpretive display. The interpretive display is operated by the University of Hawaii Sea Grant Program as a part of the Hanalei Bay Education Program.

**6.2.1.1. HAWAII STATE PLAN**  
**Relationship of the Proposed Actions** The proposed plans, contrary to the language in this paragraph, will not increase public accessibility and prudent use of the areas in the Park for recreational and educational purposes. The plans will, in fact, limit public accessibility and decrease use of the Park and that may well decrease access to the educational program as compared with the existing situation. The EIS should acknowledge these limitations.

**7.1.1 Topography, Soils and Drains**  
**Mitigative Measures** Mention is made of the City and County Grading, Grubbing and Stockpiling Ordinance No. 3968, the DPP's Soil Erosion Standards and Guidelines, and the U.S. Soil Conservation Service's "Erosion and Sediment Control Guide for Hawaii." It would be helpful if a short explanation of the substance of each of these documents were provided in the Final EIS. Few people know the details of what is required by these documents.

**7.1.2 Marine Life Habitats**  
**Mitigative Measures** To reduce the chance of water quality degradation it would be prudent to schedule demolition and land clearing in the very dry period of May to October. This should greatly reduce the potential for silt laden runoff to the beach.

**7.7 Noise**  
**Mitigative Measures** What hours of operation are being considered for construction equipment? Restrictions on the hours of operation may be needed depending on the disturbances to Park users and nearby residential properties.

**7.1.10 Roads and Traffic**  
**Mitigative Measures** The paragraph on Mitigative Measures for traffic cites "Appropriate traffic control measures and scheduling of construction activities will be applied..." What are these measures?

**7.2.10 Recreational Resources**  
**Mitigative Measures** A new ball field should be constructed to replace the Coach Goes little league ballfield. There is sufficient underutilized land in the Park to easily accommodate a new ball field and the East Honolulu district could certainly use another ball field. We note also that a swimming pool was originally to be included in the Koko Head District Park. There is no public swimming pool in the entire East Honolulu District.

**7.3.5 Adverse Environmental Effects That Cannot Be Avoided** Economic impacts to existing concessionaires, snorkel rental firms, Sea Life Park and the Waikiki Aquarium should be evaluated and included in the listing of impacts of this plan.

**8.1. NO-ACTION ALTERNATIVE** The no-action alternative ignores the fact that Hanalei Bay is already collecting \$2.5 million dollars in admission more than enough to maintain the Park, even improve it. The present management regime is keeping the number of visitors down compared to pre 1990 levels of visits. The current carrying capacity study will help set the appropriate number of visitors/day.

**8.3.1 Alternative Locations for the Nature Learning Center and Central Parking Area** The present Nature Preserve and Natural Environment are not particularly vulnerable. Most of the natural environment is gone. A Marine Center and snack bar with retail outlet could easily be constructed on the existing site without damaging the upper park and would have no impact on the lower park. Moving the parking across the street is a "preference" of the Department of Design and Construction...NOT a design necessity.

**8.4 MORE INTENSIVE RECREATIONAL FACILITIES DEVELOPMENT** Current management practices, already in place, are regulating use of the facilities. Hence, management practices can regulate the intensity of use, regardless of the physical/structural developments that may be constructed.

**Appendix I. Investigation of the Marine Environment in the Vicinity of the Koko Head Regional Park and Nature Preserve, East Honolulu, Island of Oahu**  
Sedimentation and salinity characteristics of Hanalei Bay water quality were described in this section of the DEIS. However, bacterial concentrations in the Bay were not addressed. Discussion of bacterial contamination would seem particularly important considering recent recognition of the occasional failure of some public beaches to meet recreational water quality standards. The University of Hawaii at Manoa's Water Resources Research Center (WRRC) has conducted bacteriological studies of coastal waters with some of the results being contained within the latest Mamala Bay study. WRRC data show that although the water quality at Hanalei Bay may generally meet the standard for enterococci, the standard is exceeded on a regular basis. Additionally, the State Department of Health (DOH) rates this beach as compromised with regard to enterococci. The sand at Hanalei Bay also contains high concentrations of enterococci. As common in Hawaii, it appears that the source of enterococci is soil, in this case within the parking lot and other upper level sources. With rainfall, the bacterium travels on the coastal downhill gradient to contaminate the Bay's sandy beach and subsequently the water. Another source of sand contamination may well be from the abundance of pigeons frequenting the area, depositing feces on the sand. Therefore, any construction within the parking lot or elsewhere can be expected to allow soil and other non-point source contamination to enter the Bay's nearshore waters, increasing levels of enterococci. In other studies, WRRC has also detected high concentrations of staphylococci bacteria in Hanalei Bay. The origin of these bacteria appears to be from human sources. If current park plans result in increasing swimmers, higher levels of staphylococci in water may naturally be expected. In response to concerns about high rates of skin infections after swimming at Hanalei Bay, an Ad Hoc committee was formed by the State Department of Health to investigate marine water quality, especially the occurrence of *Staphylococcus aureus*. Eugene Akazawa and David Sasaki of the DOH are available for consultation regarding the above matters and should be contacted for information to be included in the DEIS water quality discussion.



Traffic Impact Assessment Report for Koko Head Regional Park and Nature Preserve

The traffic assessment is deficient as it deals solely with vehicle volumes, with no discussion of shuttle bus and tour bus operation impacts. The document should include a discussion of such factors as noise, noxious discharges, numbers and frequencies of vehicles and other impacts from the proposed park shuttle system and visiting buses. Peak hour traffic counts seem to be inappropriately used to determine traffic impacts. This approach shifts the focus to neighborhood traffic rather than uses with potential to impact the park. As tourists may not be concerned with, or travel during peak hours, current cumulative daily totals for weekdays and weekends should be substituted for baseline conditions and then future cumulative conditions should be assessed. Identify each generator (i.e., Hanama Bay, the Nature Center, the scenic shuttle ride and summit funicular) and the amount of traffic each will generate. Additionally, pre and post project parking at Hanama Bay, the botanical garden and regional park should be identified. Intensified development of the area is inherent in the development of generators and thus related impacts must be identified.

Thank you for the opportunity to review this Draft Environmental Impact Statement.

Sincerely,

*Jacquelin N. Miller*  
Jacquelin N. Miller  
Associate Environmental Coordinator

cc: OEQC  
Roger Fujioka  
Karl Kim  
Victoria Cullins



July 30, 1999

Ms. Jacquelin N. Miller  
Associate Environmental Coordinator  
Environmental Center  
University of Hawai'i  
Crawford Hall 317, 2550 Campus Rd.  
Honolulu, HI 96822

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Miller:

Thank you for your June 4, 1999 letter to Ms. Mary O'Leary of Group 70 regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

The Environmental Center's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@cc.honolulu.hawaii.gov) for more information and to be included on a "contact list" of organizations and individuals who want to be kept

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Letter to Ms. Jacquelin N. Miller  
Environmental Center, University of Hawaii  
July 30, 1999  
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Informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

#### General Comments

All of these comments are no longer applicable to this project, given the significant changes in its scope. As described above, residents of the East Honolulu area will have the opportunity to play a major role in the preparation of an new master plan for Koko Head Regional Park and Nature Preserve.

#### Sec. 1.4 - Significant Beneficial and Adverse Impacts

We disagree with your assertion that, "in general, it is inappropriate to list impacts as either beneficial or adverse." Section 11-200-17 "Content requirements: draft environmental impact statement" of the Environmental Impact Statement Rules in several places indicates that an essential part of a description of impacts is an indication as to whether they are beneficial or, in particular, adverse. Specifically, Section 1.4 of the DEIS, which triggered your comment, is part of the DEIS "summary sheet". Rule 11-200-17(b)(2) states that a "summary sheet" must contain, among other things, a concise discussion of "significant beneficial and adverse impacts (including cumulative impacts and secondary impacts". Making this distinction also appears to us to be essential to any subsequent discussion of mitigative measures, since it would be nonsensical to discuss mitigative measures for beneficial impacts.

We agree that some impacts can be both beneficial and adverse, depending on the perspective, or as you put it, "frequently what is beneficial to one party may well be adverse to another". Where this is the case, it is our intention that both be described in the EIS. We will review the discussion of impacts throughout the DEIS, as well as in those sections referenced in your letter, and revise as appropriate in the FEIS to ensure that both perspectives are adequately covered.

#### Sec. 1.6 - Alternatives

Your comments with regard to access from surrounding neighborhoods and provisions for biking and walking are well taken, and will be addressed as part of the master planning processes described above. There are no plans within the current project proposal to make any physical changes to the existing means of access to Hanaua Bay, Koko Head District Park or other areas of the Regional Park and Nature Preserve.

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It should be noted that the "coast road" (Kalaniana'ole Highway) is a State highway. Any modifications to the highway to better accommodate pedestrians and/or bikers fall within the jurisdiction of the State Department of Transportation.

#### Sec. 1.7 - Unresolved Issues

Notwithstanding your disagreement, we continue to believe that a review of potential environmental impacts of the park improvements that are proposed for this project is sufficient to meet the requirements of the Environmental Impact Statement Rules and that there are no "issues with respect to whether or not additional facilities would be appropriate on Koko Head" that also need to be resolved at this time. We agree with your contention that "a group of proposed actions must be treated as a single action when the component actions are phases or increments of a larger total undertaking." However, this is not the case in this instance.

First, we believe that the proposed improvements, as defined by the revised project scope, can be reasonably considered to be "stand alone", or not be impacted by or have impacts on, other possible Regional Park improvements. To put it another way, they are needed to improve the facilities and support needed improvements in management practices at Hanaua Bay Nature Preserve, and will beneficially serve park users and the general public for well into the future, irrespective of whatever plans there may be for the rest of park land encompassed by the Koko Head Regional Park and Nature Preserve.

Second, there are at this time no formal "proposed actions" for the rest of the Regional Park that would constitute "phases or increments of a larger total undertaking". These remain to be determined as part of the upcoming planning processes described above.

#### Sec. 1.8 - Compatibility with Land Use Policies and Plans

This section will be expanded in the FEIS to include a listing or brief summary of land use policies and plans with which the proposed actions are appropriate. Thank you for pointing out this omission.

#### Sec. 2.0 - Purpose and Need for the Proposed Actions

The requirement that at least some groups of park visitors be part of a guided tour has been dropped. However, it is proposed that all visitors to Hanaua Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, be required to complete one session of resource awareness training. A primary function of the proposed new "marine education center" will be to provide the space for this training program. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training.

#### Sec. 3.1 - Project Description Overview

As noted in the attachment, the scope of this project has been scaled back to include only park facility improvements at Hanaua Bay Nature Preserve. They partially implement proposed improvements called for the "Hanaua Bay Nature Park Master Plan" that was completed in May 1992. The Overview and other sub-sections of the Project Description section will be rewritten in the FEIS to reflect this reduced scope.

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As noted in the attachment, the existing Goetts Memorial Ballfield on the former Hawaii Job Corps site will be retained. In addition, the proposed funicular, changes in Hanalei Bay access and live reef exhibit have all been dropped from the project.

Sec. 3.2.4.2 - Lower Park Area Facilities

The statement in the DES that the beach shuttle turnaround will be located outside of the shoreline setback area was phrased in such an unambiguous and definitive manner because it is based on a specific design for the turnaround and a certified shoreline survey. On what basis do you assert that this is doubtful? If you do have some form of factual evidence to support this claim, we urge you to share it with us.

Figure 3.14 - Hanalei Bay Lower Level Facilities Conceptual Site Plan

No improvements to or in the vicinity of Comfort Station No. 3 are planned as part of this project. This facility was built approximately 35 years ago, and was remodeled in 1993. We have not been able to locate anyone who knows for certain whether or not this facility is within the shoreline setback area. However, based on plans available to the architect for the lower bay area improvements, it would appear that it is within the setback area.

Sec. 3.3.2 - Central Parking Area

This improvement is no longer part of the project. A sidewalk for entry from Kalaniana'ole Highway, and a parking area for bicycles, mopeds and motorcycles, are currently available at Hanalei Bay Nature Preserve.

Sec. 3.3.3 - Park Shuttle Transportation System

As noted in the attachment, the park shuttle transportation system is no longer part of the project.

Sec. 3.4.1 - Park Usage

It is not anticipated that, given the scaled-down scope of the proposed improvements, there will be any material impact on existing park usage levels. Data on recent usage levels will be included in the FEIS.

Sec. 3.7 - Project Schedule

After further study and consideration of comments from community representatives, the siting of the proposed new marine education center and snack bar has been revised. The new proposed sites will now allow the existing educational program and park management staff to continue to operate out of the existing facilities while new facilities are being constructed. Plans and a description of the proposed new site locations will be included in the FEIS.

Sec. 4.5.3.1 - Nearshore Ocean Waters

Thank you for informing us that Drs. Sherwood Maynard or Richard Brock should be able to provide us with information on surveys of marine biota in Hanalei Bay. The discussion in this section will be modified accordingly.

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As you no doubt know, Dr. Brock is currently conducting a carrying capacity study of Hanalei Bay. Its findings and recommendations will be used to modify current bay use regulations and management practices, where found to be appropriate. The proposed improvements in this project are intended to provide the facilities that will be needed to support and facilitate implementation of any such changes, as well as to support current park operations and efforts to minimize park user impacts on the bay environment.

Sec. 6.2.1.1 - Hawaii State Plan

The currently planned improvements will have only a very minor impact on public accessibility - namely, they will provide the space necessary to conduct the awareness training sessions. These training sessions and the other educational facilities and exhibits in the new marine education center, the relocation of the food concession from the lower beach area to the upper park area, and the improved facilities for park management and operations will all support more prudent use of natural resource areas in the Hanalei Bay Nature Preserve. The paragraph in this section that discusses "Relationship of the Proposed Actions" will be revised in the FEIS to more accurately reflect this intent.

Sec. 7.1.1 - Topography, Soils and Drainage Mitigative Measures

A short explanation of the substance of the referenced documents will be provided in the FEIS.

Sec. 7.1.2 - Marine Life Habitats Mitigative Measures

Your points on the timing of demolition and land clearing are well taken. While we are reasonably certain that the City Department of Design and Construction is well aware of the importance of properly timing these activities, we have nevertheless transmitted a copy of your comments to them.

Sec. 7.1.7 - Noise Mitigative Measures

The possibility of establishing restrictions on the hours of operation of construction equipment has not yet been considered, given the early stage in the project planning process and the fact that the new improvements have not yet been designed, much less have contractors selected for their construction. Given the above-described circumstances, as well as the fact that all approvals required to ensure that this project can move forward have not yet been obtained, it is considered premature to respond to this issue with specific measures at this time. Appropriate noise mitigation requirements will be included in the project specifications that will be provided to the selected contractors.

Sec. 7.1.10 - Roads and Traffic Mitigative Measures

As noted immediately above, it is premature to respond to this issue with specific mitigative measures at this time. Appropriate traffic mitigation requirements will be included in the project specifications that will be provided to the selected contractors.

Sec. 7.2.10 - Recreational Resources Mitigative Measures

As noted, the existing Goetts Memorial Ballfield is being retained. The need for and appropriateness of providing a swimming pool in Koiko Head District Park will be

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Letter to Ms. Jacquelin N. Miller  
Environmental Center, University of Hawai'i  
July 30, 1999  
Page 7

constructed, to be too absolute. This may be essentially true with respect to physical/structural developments in the upper park area, but we do not believe this to be the case for the lower park/bay area.

More amenities and facilities in the lower bay area will make it increasingly difficult to limit, just by means of management practices, the number of people using this area. The park manager's recommended approach, which is to not provide any facilities in the lower bay area that do not have to be there, appears to other City officials and us to be a good basic guideline for decision-making on any improvements in this area.

Sec. 3.3.1 (Text Reference to Fig. 3-14), Sec. 3.4.2, Sec. 3.4.2.4, Sec. 4.3, and Sec. 4.6.1.1

Thank you for pointing out the typographical and other errors in these sections. The appropriate corrections will be made in the FEIS.

#### Appendix I - Investigation of the Marine Environment

The scope and nature of the proposed improvements in this project will not impact current use levels at Hanauma Bay, and will not alter the ways in which people use the bay in a manner that would impact bacterial concentrations. In addition, our consultant has indicated that many sources of indicator bacteria (enterococcus) occur naturally, and that the individuals you indicate are available for consultation have themselves found this to be the case in studies they have conducted. Your own comments indicate that many sources of bacterial concentrations, such as rainfall and pigeons, have nothing to do with construction of the proposed improvements.

In any event, construction activities will be of relatively short duration, and will be much more confined than originally planned since the existing parking lots will no longer be torn up and re-landscaped. Appropriate measures will also be taken to meet all requirements related to erosion control and minimizing potentially harmful runoff.

In summary, we do not consider detailed bacterial contamination studies to be relevant to or necessary for an appropriate level of discussion of either the potential short-term or long-term effects of the proposed improvements on water quality.

#### Appendix I - Traffic Impact Assessment Report

As noted in the attachment, the proposed shuttle bus operation is no longer a part of this project. No changes to existing regulations governing tour bus use of Hanauma Bay and other Regional Park facilities are planned, nor are any changes in the size, capacity or operation of the Hanauma Bay Nature Preserve automobile parking facilities planned. Traffic patterns and volumes of park users within the Nature Preserve and Regional Park should remain essentially as they are now.

Consequently, we consider it sufficient for this traffic study to focus on impacts of the proposed improvements on the ability of the roadways running through the Park and in the surrounding area to adequately accommodate projected traffic volumes. (Please note that a supplemental report has been prepared by the traffic consultant to reflect the changes in project scope. A copy will be included in the FEIS.) We do understand your concerns about the potential impacts of traffic on the Regional Park itself, and agree they

Letter to Ms. Jacquelin N. Miller  
Environmental Center, University of Hawai'i  
July 30, 1999  
Page 6

considered as part of the upcoming master planning processes that are described at the beginning of this letter.

#### Sec. 7.2.5 - Adverse Environmental Effects That Cannot Be Avoided

As noted, the project scope has been revised and no longer includes any improvements or changes in management practices that would alter the impacts of current Hanauma Bay facilities and management practices on Sea Life Park or Waikiki Aquarium.

The proposed project includes the replacement of facilities used by existing food and snorkel concessionaires, and thus will impact their existing operations. It is anticipated that the changes will truly be "improvements", and thus will be beneficial to both the operators and users.

#### Sec. 8.1 - No Action Alternative

Full utilization of the collected revenues has been deferred because the plans for changes to the physical facilities, and to the educational programs and management operations that will use the new facilities, are in the process of being formulated. In the absence of definitive plans, it is highly possible that these funds, if spent now, would be used in a manner that would turn out to be wasteful or incompatible with these plans. It should be noted that these revenues are being used to fund the carrying capacity study, as well as to pay for existing staff and for some improvements and equipment that are needed irrespective of what form the future plans will take.

We agree with your statement that the carrying capacity study will help set the appropriate number of visitors per day. No improvements are being planned at this time that would be impacted by, and thus should await, the results of this study. As noted above in our response to your comments on Sec. 4.5.3.1, the proposed improvements are intended to provide the facilities that will be needed to support and facilitate implementation of any changes in visitor use of the bay that are recommended by the carrying capacity study, as well as to support current park operations and efforts to minimize park user impacts on the bay environment.

#### Sec. 8.3.1 - Alternative Locations for the Nature Learning Center and Central Parking Area

As noted, moving the Hanauma Bay parking to a "central parking area" on the former Hawai'i Job Corps site is no longer part of this project.

We essentially agree with your statement that the proposed new marine education center and snack bar "could easily be constructed on the existing site without damaging the upper park and would have no impact on the lower park". This is a primary reason for the proposal to locate these facilities on this site. However, we do believe it is accurate to also conclude that removal of the existing food concession in the lower bay area will have a beneficial impact, rather than no impact, on the lower park.

#### Sec. 8.4 - More Intensive Recreational Development

We consider your statements concerning the role of management practices in regulating the intensity of use, regardless of the physical/structural developments that may be

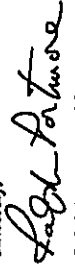
Letter to Ms. Jacquelin N. Miller  
Environmental Center, University of Hawaii  
July 30, 1999  
Page 8

should be addressed in connection with environmental studies of any major new park improvements that are recommended by the upcoming master planning process.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. Four copies of the FEIS will be sent to your office upon its completion. We appreciate your input on this project.

**GROUP 70 INTERNATIONAL, INC.**

Sincerely,  
  
Ralph Fortmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

**REVIEW**  
APR 19 1999

**MEMORANDUM**

**DATE:** April 15, 1999

**GROUP 70**

**TO:** City and County of Honolulu  
Dept. of Design and Construction  
Mayor Jeremy Harris  
City and County of Honolulu

**FROM:** Group 70 International, Inc.  
Bruce Carlson, Director  
Waikiki Aquarium  
2777 Kalakaua Avenue  
Honolulu, HI, 96815

**SUBJECT: COMMENTS REGARDING KOKO HEAD REGIONAL PARK**

I'm writing in response to the Draft Environmental Impact Statement notice posted in the March 23, 1999 bulletin of the OEQC regarding proposed improvements for the Koko Head Regional Park and Nature Preserve.

First, regarding SCUBA divers accessing Hanalei Bay, I would ask that you give more consideration as to how divers will reach the Bay with their equipment. Most divers (including myself) check out the Bay first from the parking lot before deciding to take our equipment down the hill. It appears to me that the proposed new plan would require us to take all our equipment on a tram from the Job Corps site without having an opportunity to first check out the Bay. Given the amount of equipment that many of us carry (including expensive camera gear), the proposed system seems unworkable. I don't know how to resolve this problem given the proposed new plans, but I do suggest that this is a serious problem for divers and needs additional consideration. Also, many of us prefer to dive in the early morning or evening. Some provisions need to be made for divers at these times if the tram is not available.

Secondly, as I have stated in previous letters and in discussions while serving on the Mayor's advisory committee for this project, the aquarium exhibit plan for the visitor center is not a particularly good idea. While I understand the reasoning to provide visitors who do not go down to the Bay an opportunity to see living fishes, I can assure you that you cannot afford the expense to maintain such a facility. I have suggested several times that a less expensive alternative that would serve the same purpose would be to install an underwater video camera in the bay and send live images back up to the Visitor Center. Not only could visitors view the images, but visitor center staff could

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operate the camera remotely (pan, tilt, zoom) while giving visitors brief lectures about marine life in the bay. And, once the signal is captured you can send it anywhere, via live feeds to local news stations, or via satellite around the world, or plug it into the internet. A video camera is not maintenance-free and will be expensive to install, but nowhere near as costly as an aquarium.

Thank you for the opportunity to provide these comments and I look forward to your response.



July 30, 1999

Mr. Bruce Carlson, Director  
Waikiki Aquarium  
2777 Kalakaua Avenue  
Honolulu, HI 96815

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Carlson:

Thank you for your April 15, 1999 letter regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Iterative planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (827-5559), fax (827-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

FRANK S. OLS, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scammon, AIA, ASID  
Hiroshi Hida, AIA  
Roy H. Nibel, AIA, CN  
James I. Nishimura, AIA  
Ralph E. Portman, AICP  
Stephen H. Yvert, AIA  
Linda L. Chung, AIA

Paul P. Cherveney, AIA  
Dean H. Kaminetz, RA  
Norma J. Scott, RA  
Gweneth L. Awa, AICP  
Jeffrey H. Overton, AICP  
Kathryn A. Yum  
Ray A. Inouye, AIA, CN  
Frank H. MacCue, RA  
Christine M. Barwick, AICP  
Stuart M. Jew, AIA

Letter to Mr. Bruce Carlson  
Waikiki Aquarium  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Scuba Divers Accessing Hanalei Bay

As a result of the changes in the project scope, there are no changes in the current means of access to Hanalei Bay by divers that are now being proposed.

Live Reef Interpretive (Aquarium) Exhibit

Plans for this exhibit have been deleted from the current project.

Possible Future Operational or Facility Changes

If either of the above proposals are to be re-considered in the near future, they are likely to be generated by the planning process outlined above. As noted, we would welcome your participation in this process. In the alternative, we urge you to get on the mailing list by contacting Cynthia Bond at one of the numbers provided above.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. Upon its completion, a copy of the FEIS will be transmitted to your office. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

GROUP 70 INTERNATIONAL, INC. 1100 BROADWAY, SUITE 1200, NEW YORK, NY 10018

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DEPARTMENT OF ENVIRONMENTAL SERVICES  
CITY AND COUNTY OF HONOLULU  
650 SOUTH KING STREET, 2ND FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 527-6923 • FAX: (808) 527-6875



EDDY WALKER  
Mayor

RECEIVED  
APR 01 1999

MAR 31 1999

GROUP 70

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

BAURT FURUKAWA  
Deputy Director

ENV 99-40

**MEMORANDUM**

TO: RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: JIM NAKASONE, PROJECT MANAGER

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

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)  
KOKO HEAD REGIONAL PARK AND NATURE PRESERVE  
IMK: 3-9-12: 1, POR. 2, 4, 8, 10, 12, 14 AND 16

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

1. During construction, proper best management practices (BMPs) should be employed to reduce and control discharge of pollutants.
2. Direct surface runoff from parking lots to grassed/landscaped areas or water quality inlets.

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

cc: Group 70 International, Inc. (Mary J. O'Leary)



**GROUP 70**  
INTERNATIONAL

Frank S. Dale, AIA, AICP  
Norman G.Y. Hoang, AIA  
Sheel B. Narmun, AIA, ASID  
Hiroshi Iida, AIA  
Ray H. Nix, AIA, CSI  
James I. Nishimura, AIA  
Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA  
Elizabeth Cleary, AIA  
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Vivian J. Scott, AIA  
Stephen F. Kelly, CPA  
Clyde L. Miller, AICP  
James H. Duncan, AICP  
Kathryn A. Nam  
R. J. A. Inoué, AIA, CSI  
Mary J. O'Leary, AICP  
Frank H. MacCle, AIA  
Clad M. Awanakut, MGA  
Christine M. Rucoda, AICP  
Scott M. Jim, AIA

April 23, 1999

Mr. Kenneth E. Sprague  
Director  
Department of Environmental Services  
City and County of Honolulu  
650 S. King Street, 3rd Floor  
Honolulu, HI 96813

Dear Mr. Sprague:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your March 31, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We have prepared the following responses to your comments:

1. During construction, proper best management practices (BMPs) will be employed to reduce and control discharge of pollutants.
2. Surface runoff from parking lots will be directed to grassed or landscaped areas or water quality inlets.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

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DEPARTMENT OF FACILITY MAINTENANCE  
**CITY AND COUNTY OF HONOLULU**  
650 SOUTH KING STREET, 11TH FLOOR • HONOLULU, HAWAII 96813  
Phone: (808) 533-4341 • Fax: (808) 627-6667



JEREMY HARRIS  
MAYOR

**REVIEWED**  
MAR 31 1999

GROUP 70

March 24, 1999

ROSS S. SASAMURA  
ACTING DIRECTOR AND CHIEF  
ENGINEER

DEBORO M. BAQUILAR  
DEPUTY DIRECTOR

BY REPLY REFER TO:  
PHO. 99-022

Ms. Mary O'Leary  
Group 70 International  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Koko Head Regional Park and Nature Preserve - Draft EIS

Thank you for giving us the opportunity to review the Draft Environmental Impact Statement, however we do not have any comments.

If you have any questions, please call Laverne Higa at 527-6246.

Very truly yours,

*R. S. Sasamura*  
Ross S. Sasamura  
Acting Director and Chief Engineer

LH  
cc: Jim Nakasone (DDC)



FIRE DEPARTMENT  
**CITY AND COUNTY OF HONOLULU**  
 3375 KOAFAHA STREET, SUITE 402  
 HONOLULU, HAWAII 96819-1009



RECEIVED

'99 MAR 31 AM 1:19

FACILITIES DESIGN & ENG  
 DEPT. OF DESIGN & CONSTRUCTION  
 C & C OF HONOLULU

ATILIO K. LEONARD  
 FIRE CHIEF  
 JOHN CLARK  
 ACTING FIRE CHIEF

RECEIVED  
 DEPT OF DESIGN & CONSTR  
 C & C OF HONOLULU  
 99 MAR 31 AM 9:20

JEREMY HARRIS  
 SAISON

TO: RANDALL K. FUIKI, DIRECTOR  
 DEPARTMENT OF DESIGN AND CONSTRUCTION

VIA: JIM NAKASONE, PROJECT MANAGER

FROM: JOHN CLARK, ACTING FIRE CHIEF

SUBJECT: KOKO HEAD REGIONAL PARK AND NATURAL PRESERVE  
 DRAFT ENVIRONMENTAL IMPACT STATEMENT  
 EAST HONOLULU, ISLAND OF OAHU, HAWAII  
 TMK: 3-9-12: 1, POR. 2, 4, 8, 10, 12, 14 AND 16  
 HFD INTERNAL NO. OL 99-059

We received your correspondence dated March 15, 1999, regarding the Draft Environmental Impact Statement (EIS) for the subject project. We appreciate the opportunity to review the document and foresee no adverse impact on the services we provide if the actions identified in the Draft EIS are approved.

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

*John Clark*  
 JOHN CLARK  
 Acting Fire Chief

JC/CW:hh

April 23, 1999

Mr. Ross S. Sasamura  
 Acting Director and Chief Engineer  
 Department of Facility Maintenance  
 City and County of Honolulu  
 650 South King Street, 11<sup>th</sup> Floor  
 Honolulu, HI 96813

Dear Mr. Sasamura:

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Thank you for your March 24, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that you do not have any comments to offer at this time regarding the project.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS review upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC

Sincerely,

*Ralph Portmore*  
 Ralph Portmore, AICP  
 Principal

cc: Mr. Jim Nakasone  
 Department of Design and Construction



**GROUP 70**  
 INTERNATIONAL

- FRANK S. OLS, AIA, AICP
- STEWART G.Y. HONG, AIA
- SHERYL H. SCAMMAN, AIA, ASID
- HAROLD HILL, AIA
- BOB H. SILVER, AIA, CSI
- JAMES I. NICHOLS, AIA
- RAJESH F. PANDIT, AICP
- STEPHEN H. YUEN, AIA
- JANIS L. CHENG, AIA
- PAUL P. CHENKAY, AIA
- DEAN H. KAMAKURA, AIA
- W. PAUL T. SOTO, AIA
- STEPHEN F. CALIA, CPA
- GEORGE I. VILLALBA, AICP
- JENNIFER H. O'CONNOR, AICP
- KATHY A. NAM
- BOB A. JEWETT, AIA, CSI
- MARY J. O'LEARY, AICP
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Mon J. O'Leary, AICP  
Frank B. McCue, AIA  
Clad M. Assouline, AICG  
Christine M. Roubala, AICP  
Suat M. Joo, AIA

April 23, 1999

Mr. John Clark  
Acting Fire Chief  
City and County of Honolulu  
Fire Department  
3375 Koapaka Street, Suite H425  
Honolulu, HI 96819-1869

Dear Mr. Clark:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your March 26, 1999 letter regarding your review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement. We acknowledge your statement that you do not foresee any adverse impact on the services provided by the Fire Department if the actions described in the Draft EIS are approved.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward your office a copy of the Final EIS upon its completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

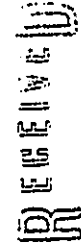
*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

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

630 SOUTH KING STREET • HONOLULU, HAWAII 96813  
TELEPHONE: (808) 521-4111 • FAX: (808) 527-4743



APR - 9 1999

GROUP 70



July 7, 1999

JAN NAOE SULLIVAN  
DIRECTOR

LORETTA C. CHIEE  
DEPUTY DIRECTOR

1999/CLOG-1927 (ST)

'99 EA Comments - Zone 3

**MEMORANDUM**

**TO:** RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF DESIGN AND CONSTRUCTION

**ATTN:** JIM NAKASONE

**FROM:** JAN NAOE SULLIVAN, DIRECTOR  
DEPARTMENT OF PLANNING AND PERMITTING

**SUBJECT:** DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS)  
KOKO HEAD REGIONAL PARK AND NATURE PRESERVE  
EAST HONOLULU, OAHU  
TAX MAP KEYS: 1-9-12: 1, 4, 8, 10, 12, 14 & 16

We have reviewed the Draft EIS for the above-referenced project and note that insofar as it was announced at the June 2, 1999 public informational meeting, that this project had been revised to include only the improvements located makai of Kalamanoie Highway, this document must be revised to clearly describe the current proposal.

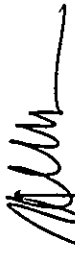
The final EIS must clarify the following:

- What are the goals and objectives of the revised proposal and clarify which goals and objectives of the original project remain applicable.
- What physical improvements are proposed for construction and what, if any, of the original improvements are planned for subsequent development.
- What are the operational and programmatic changes which will accompany the revised proposal and how do these relate to existing park operations.
- What are the revised capital and operational cost estimates for the implementation of the revised proposal as well as the time-frame for the project (i.e., project phasing).

RANDALL K. FUJIKI, DIRECTOR  
Page 2  
July 7, 1999

- Whether there will be any office or tutorial space located in the proposed facility, now that there no longer are Koko Crater improvements proposed.
- How staffing of the Marine Education Center will be provided (i.e., City employees, concessionaires, etc.).
- Whether bicycles, motorcycles and mopeds will be regulated in the reduced proposal.
- Figure 6-3 should be revised to read "East Honolulu Development Plan and Land Use Map." This map also incorrectly represents Koko Head Elementary School. The school should be depicted as a Public Facility (PF) and the adjacent playground as a Park (P).
- Section 1.3 should be revised to indicate that the proposed use of State Conservation District land also triggers the need for the preparation of this EIS.

Thank you for the opportunity to comment on this matter. Should you have any questions, please contact Steve Tagava of our staff at Extension 4817.

  
JAN NAOE SULLIVAN  
Director of Planning  
and Permitting

JNS:am

cc: Ralph Portmore, Group 70 International, Inc.  
Office of Environmental Quality Control

POSSIBLE NO. 5392



July 30, 1999

Ms. Jan Naoe Sullivan, Director  
Department of Planning and Permitting  
City and County of Honolulu  
650 South King Street, 7th Floor  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Sullivan:

Thank you for your July 7, 1999 letter to Mr. Randall K. Fujiki, Director of the Department of Design and Construction, regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

Changes in Project Scope

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanatama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

Koko Head Regional Park and Nature Preserve Planning Process

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 9<sup>th</sup> and 12<sup>th</sup>

The participation of a representative of your Department in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAAM005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A

Letter to Ms. Jan Nace Sullivan, Director  
Department of Planning and Permitting  
July 30, 1999  
Page 2

mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### Responses to Comments

As indicated in your letter, the FEIS will be revised to clearly describe the current proposal, as well as to discuss fully its potential environmental effects. Our responses to your specific comments are provided immediately below. Those responses that directly address your comments will also be incorporated into the FEIS as appropriate.

1. The FEIS will clarify the goals and objectives for the revised proposal, including which goals and objectives of the original proposal remain applicable.
2. The physical improvements that are now proposed for construction are described in the attachment. There are no definitive plans for the subsequent development of any of the other originally proposed improvements. Any plans for subsequent development will reflect improvements that are recommended as a result of the master planning processes outlined above.
3. Operations at Hanaua Bay Nature Preserve are proposed to basically remain as they are now, with two noteworthy exceptions:
  - All visitors to Hanaua Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, would be required to complete one session of resource awareness training. A primary function of the proposed new "marine education center" will be to provide the space for this training program. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training.
  - The existing food concession would be moved from the lower bay area to a new facility in the upper park area.
4. The FEIS will provide revised capital and operational cost estimates, and a revised construction timetable, for implementation of the revised project proposal. Where applicable, project phasing will also be indicated.
5. Office and "tutorial" space will be included in the proposed new facilities. Virtually all of the Hanaua Bay Nature Preserve's operational staff, and those maintenance staff people who only work there, will continue to be housed at the Nature Preserve. In addition to space to conduct the awareness training, it is proposed that space be provided for classroom-like sessions with school and other types of groups, for displays/exhibits, and for a museum-like or educational gift shop.
6. No changes in current staffing arrangements are proposed at this time. General operations and maintenance will be provided by City employees, and concessionaires will continue to operate the food, snorkel rental and beach tram activities. It is currently anticipated that staffing at the marine education center for the awareness training and educational programs, etc. will continue to be provided by a combination of contracted services, such as those being provided now by the UH Sea

Letter to Ms. Jan Nace Sullivan, Director  
Department of Planning and Permitting  
July 30, 1999  
Page 3

Grant Program, and volunteer docents, such as those being provided now by the Friends of Hanaua Bay. However, further study of the alternatives will be undertaken before a final operational plan is established.

7. Parking for bicycles, motorcycles and mopeds is currently and will continue to be provided at Hanaua Bay Nature Preserve. No changes in the existing arrangements are anticipated.


8. Section 1.3 and Figure 6-3 will be revised in the FEIS to incorporate the corrections you have indicated. Thank you for bringing them to our attention.

#### Conclusion

Your letter and this response letter will be included in the FEIS. Upon its completion, two copies of the FEIS will be transmitted to your office. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

POLICE DEPARTMENT  
CITY AND COUNTY OF HONOLULU  
801 SOUTH BERETANIA STREET  
HONOLULU, HAWAII 96813 - AREA CODE (808) 529-3111



JEREMY HARRIS  
MAYOR

LEE D. DOHOHUE  
CHIEF

RECEIVED  
MAY 10 1999

MAY 10 1999

OUR REFERENCE CS-DL

May 5, 1999

GROUP 70

TO: RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF DESIGN AND CONSTRUCTION

ATTENTION: JIM NAKASONE, PROJECT MANAGER

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

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT  
KOKO HEAD REGIONAL PARK AND NATURE PRESERVE  
EAST HONOLULU, ISLAND OF OAHU, HAWAII  
TKK: 3-9-121.1, FOR: 3, 4, 8, 10, 12, 14, AND 16

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

Traffic-related problems during and after construction will have an impact on the services provided by the Honolulu Police Department.

Since no suitable alternative site can be found, we are pleased to note that the proposal to relocate the shooting complex has been rejected.

There are no further comments at this time. However, we may have more concerns and comments as plans progress. If there are any questions, please call Assistant Chief Eugene Uemura at 529-3255 or Major Henry Robinson of District 7 at 529-3362.

Thank you for the opportunity to comment.

LEE D. DOHOHUE  
Chief of Police

By  
EUGENE UEMURA  
Assistant Chief  
Support Services Bureau

cc: Ms. Mary O'Leary, AICP  
Group 70 International, Inc.



GROUP 70  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
Norman G.Y. Hong, AIA  
Sheryl B. Scaman, AIA, ASID  
Hitoshi Takeda, AIA  
Roy H. Nishitani, AIA, CSI  
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Ralph E. Portmore, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA  
Paul P. Chaney, AIA  
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Roy A. Inouye, AIA, CSI  
Mary J. O'Leary, AICP  
Frank B. McCue, AIA  
Chad M. Avoniani, AICP  
Christine M. Rucobis, AICP  
Stuart M. Jone, AIA

May 10, 1999

Mr. Eugene Uemura, Assistant Chief  
Support Services Bureau  
Police Department  
City and County of Honolulu  
801 South Beretania Street  
Honolulu, HI 96813

Dear Assistant Chief Uemura:

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your May 5, 1999 letter to Mr. Randall Fujiki, Director of the Department of Design and Construction, regarding the Police Department's review of the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement.

We acknowledge your statement that traffic-related problems during and after construction will have an impact on the services provided by your department. A major consideration in the design of the planned improvements, and in the scheduling of construction activities, will be to minimize these potential impacts.

Your comment that you may have more concerns and comments as plans progress is also acknowledged.

Your letter and this response letter will be included in the Final Environmental Impact Statement (EIS). We will forward to your office a copy of the Final EIS upon its completion. We appreciate your input to the assessment of potential environmental impacts from this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph E. Portmore*  
Ralph E. Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction

F:\Planning\9805-11 Koko Head Regional Park\DESIGN\Responses\Letter\DESIGN CO COMMENT\LeeDy\_Uemura1999\_HIPD.doc

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DEPARTMENT OF TRANSPORTATION SERVICES  
**CITY AND COUNTY OF HONOLULU**  
PACIFIC PARK PLAZA • 311 KAPOLANI BOULEVARD SUITE 1200 • HONOLULU, HAWAII 96813  
PHONE: (808) 523-4318 • FAX: (808) 523-4730



**RECEIVED**  
MAY 11 1999

CHERYL D. SOON  
DIRECTOR  
JOSEPH M. MAGALDI, JR.  
DEPUTY DIRECTOR

JEREMY HARRIS  
MAYOR

GROUP 70

May 7, 1999

TPD99-00289

**MEMORANDUM**

**TO:** RANDALL K. FUJIKI, DIRECTOR  
DEPARTMENT OF DESIGN AND CONSTRUCTION

**ATTN:** JIM NAKASONE, PROJECT MANAGER

**FROM:** CHERYL D. SOON, DIRECTOR

**SUBJECT:** KOKO HEAD REGIONAL PARK AND NATURE PRESERVE

In response to the March 15, 1999 letter from Group 70 International, Inc., the draft environmental impact statement (DEIS) for the subject project was reviewed. The following comments are the result of this review:

1. The first paragraph of Section 3.3.1 on Page 3-14 states that Koko Head Park Road will be widened to 24 feet from the entrance intersection at Kalaniana'ole Highway to the new shuttle transportation system loop road. It is our understanding that this widening would be to 22 feet.
2. The third paragraph of Section 3.3.1 on Page 3-21 describes the recommended lane improvements for the intersection of Kalaniana'ole Highway with Koko Head Park Road and Hanauma Bay Road. Figure 3-14 does not depict this intersection. It is also our understanding that the recommendation for the westbound approach (Kalaniana'ole Highway) would be a dedicated left-turn storage lane from Kalaniana'ole Highway onto Hanauma Bay Road and a through/right lane from Kalaniana'ole Highway onto Koko Head Park Road.
3. The second paragraph of Section 3.3.3 on Page 3-22 states that the proposed park shuttle transportation system will be operated by this department. If the proposed routes are to be part of the City bus system as defined in ROH Chapter 13:

Randall K. Fujiki  
May 7, 1999  
Page 2

- a. The fare structure must be set forth in that chapter.
- b. Special transit service, defined in this chapter as "public transit service which supplements the City bus system to serve persons who are paratransit eligible", may have to be provided.
- c. The baggage provision in this chapter may need to be amended to allow beach equipment to be carried on the bus. Presently, only baggage that can be stored under a passenger's seat or on a passenger's lap are admitted on board City buses.
4. The second paragraph on Page 3-23 states in part that the operating fleet will be low-floor buses that have a standard capacity of 65 passengers. This statement should not be so restrictive as to prevent the use of high-floor buses when necessary.
5. Table 3-2 on Page 3-23 states that the headway standard for the main shuttle route would be 9 minutes. It is our understanding from previous discussions that the headway standard would be 12 minutes.
6. Section 3.5 Construction Activities on Pages 3-27 and 3-28 should include a discussion of the construction activities associated with the intersection of Kalaniana'ole Highway with Koko Head Park Road and Hanauma Bay Road.
7. The third sentence in the third paragraph of Section 4.7.1 on Page 4-39 should state that most traffic to Koko Crater Botanical Garden and Equestrian Center reach "Kealahou", not "Keahole" Street via Kalaniana'ole Highway.

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

*Cheryl D. Soon*  
CHERYL D. SOON

cc: Mary O'Leary  
Group 70 International, Inc.



GROUP 70 INTERNATIONAL

- Francis S. Oala, AIA, AICP
- Norman G. Y. Hwang, AIA
- Sheryl B. Scamm, AIA, ASID
- Hiroshi Hida, AIA
- Roy H. Nohel, AIA, CN
- James I. Robinson, AIA
- Ralph E. Pommerehne, AICP
- Stephen H. Yuen, AIA
- Linela L. Chang, AIA
- Paul P. Conway, AIA
- Dean H. Keanon, RA
- George J. Neri, RA
- George J. Neri, AICP
- Jillings H. Overton, AICP
- Kathryn A. Nunn
- Ray A. Orsavage, AIA, CN
- Frank B. McCabe, RA
- Christine M. Rowland, AICP
- Nancy M. Jow, AIA

July 30, 1999

Ms. Cheryl D. Soon, Director  
Department of Transportation Services  
City and County of Honolulu  
711 Kapiolani Blvd., Suite 1200  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Soon:

Thank you for your May 7, 1999 letter to Mr. Randall K. Fujiki, Director of the Department of Design and Construction, regarding your review of the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanuana Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your department's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Ms. Cheryl D. Soon  
Department of Transportation Services  
July 30, 1999  
Page 2

RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Response to Comments No. 1 Through 6

All of these comments deal with proposed improvements that were described in the DEIS, but are no longer a part of this project. Consequently, specific responses are no longer applicable.

However, it is anticipated that several potential roadway and/or park shuttle service improvements will be considered again in the near future, as part of the Koko Head Regional Park and Nature Preserve Planning process outlined above. As noted, your department's participation in this process as a resource would be welcomed. Such involvement would provide a valuable resource to the participants and be an excellent opportunity to review and comment in a timely fashion on any proposals that may affect roadway and/or public transportation facilities. In the alternative, we urge you to get on the mailing list by contacting Cynthia Bond at one of the numbers provided above.

Reference to Kealahou Street

This will be corrected in the FEIS. Thank you for pointing it out.

CONCLUSION

Your letter and this response letter will be included in the FEIS. Upon its completion, the appropriate number of copies of the FEIS will be transmitted to your office. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

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



April 20, 1999

JEFFREY HARRIS, Mayor  
EDDIE FLORES, JR., Chairman  
FORREST C. MURPHY, Vice Chairman  
KAZU HAYASHIDA  
JAN M. LY, AICP  
BARBARA ANN STANTON  
CHARLES A. STED

CLIFFORD S. JAMILE  
Manager and Chief Engineer

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

Dear Ms. O'Leary:

Subject: Your Transmittal of March 15, 1999 of the Draft Environmental  
Impact Statement for the Koko Head Regional Park and Nature Preserve

Thank you for the opportunity to review and comment on the Draft Environmental Impact  
Statement (DEIS) for the Koko Head Regional Park and Nature Preserve.

Our previous comments on November 17, 1998 on the Environmental Impact Statement  
Preparation Notice are still applicable and included in Section 12 of the DEIS.

If there are any questions, please contact Barry Usagawa at 527-5235.

Very truly yours,

  
CLIFFORD S. JAMILE  
Manager and Chief Engineer

cc: Department of Parks and Recreation, Attn: Jim Nakasone



April 26, 1999

Mr. Clifford S. Jamile  
Manager and Chief Engineer  
Board of Water Supply  
City and County of Honolulu  
630 South Beretania Street  
Honolulu, HI 96813

Dear Mr. Jamile:

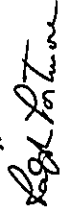
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Thank you for your April 20, 1999 letter regarding your review of the Koko Head  
Regional Park and Nature Preserve Draft Environmental Impact Statement. We  
acknowledge your statement that the comments in your previous letter of November 17,  
1998 on the Environmental Impact Statement Preparation Notice are still applicable. The  
necessary ministerial permits and review processes will be obtained and completed with  
the Board of Water Supply at the appropriate time in the project's design.

Your letter and this response letter will be included in the Final Environmental Impact  
Statement (EIS). We will forward your office a copy of the Final EIS review upon its  
completion. We appreciate your input for this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Ralph Portmore, AICP  
Principal

cc: Mr. Jim Nakasone  
Department of Design and Construction





**HAWAII KAI NEIGHBORHOOD BOARD NO. 1**

60 NEIGHBORHOOD COMMISSION • CITY HALL, ROOM 408 • HONOLULU, HAWAII 96813

April 27, 1999

Francis Oda  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Mr. Oda:

The Hawaii Kai Neighborhood Board No. 1 has reviewed the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement (EIS) and requests the City and County of Honolulu to withdraw, or defer, the EIS until the Koko Head Regional Park Master Plan has been revised to include the wishes of the residents and patrons of the parks and recreational facilities in the Hawaii Kai area.

The alternatives included in the Draft EIS do not adequately address the residents' and patrons' wishes. These alternatives appear to be specifically tailored to visitors.

The Hawaii Kai Neighborhood Board recommends that the Koko Head Regional Park Master Plan be revised to include the results of community discussion and input to clarify the goals for parks in the Hawaii Kai area. The April 26, 1999 meeting of the Hawaii Kai Neighborhood Board Parks and Recreation Committee produced many alternatives which were not included in the Master Plan or the Draft EIS. We also note that there are several planning studies ongoing in the Hawaii Kai area that are in various stages of completion which could have an impact on the Master Plan and Draft EIS.

Therefore, the Hawaii Kai Neighborhood Board hereby requests that this Draft EIS be withdrawn, or deferred, until the Koko Head Regional Park Master Plan has been revised as recommended above.

Sincerely,

*Charlie Rodgers, S.S.*

Charlie Rodgers, Chair  
Hawaii Kai Neighborhood Board

cc: Mayor Jeremy Harris  
Council Chair Muff Hannemann  
Councilmember John Henry Felix

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APR 30 1999  
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**GROUP 70**  
INTERNATIONAL

- Francis S. Oda, AIA, AICP
- Namun G.Y. Hung, AIA
- Sheryl D. Seaman, AIA, AICP
- Heather Hill, AIA
- Ray H. Kibet, AIA, CN
- James I. Nelsen, AIA
- Ralph E. Peterson, AICP
- Stephen H. Yarr, AIA
- Uma L. Chung, AIA
- Paul P. Cherny, AIA
- Dawn H. Karamba, RA
- Nancy J. Natt, RA
- George J. Ahl, AICP
- Kelley H. O'Connell, AICP
- Kathryn A. Nani
- Bo A. Parry, AIA, CSI
- Frank H. McCue, RA
- Christine M. Rosado, AICP
- Shari M. Jew, AIA

July 30, 1999

Mr. Charlie Rodgers, Chair  
Hawaii Kai Neighborhood Board No. 1  
c/o Neighborhood Commission  
Honolulu Hale, Room 400  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Rodgers:

Thank you for your April 27, 1999 letter to Mr. Francis Oda of Group 70 regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

Changes in Project Scope

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained.

In addition, City representatives met weekly through June and July with a "Hanauma Bay Improvements Task Force" consisting of over 20 concerned residents and users of the bay. Most of these were designated representatives of other community and public interest groups. The purpose of the Task Force meetings was to determine, first, whether or not the City should proceed before completion of the carrying capacity study with any improvements at Hanauma Bay Nature Preserve, and if so, what those improvements should be.

This Task Force has endorsed the completion of a significant number of improvements. The revised project scope, as described in the Final EIS, substantially reflects the consensus of this group. The only major exception is the snack bar, where the Task Force had "strong differences of view" as to whether or not and what type food concession should be provided in the upper park area.

The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

Koko Head Regional Park and Nature Preserve Planning Process

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is currently working on establishing an

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Inspection • Asset Management  
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Oahu's Neighborhood Board System - Established 1973

Letter to Mr. Charlie Rodgers  
Hawaii Kai Neighborhood Board No. 1  
July 30, 1999  
Page 2

effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

The Neighborhood Board's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.


#### Conclusion

In summary, we believe the proposed improvements now adequately address "the wishes of the residents and patrons of the parks and recreational facilities in the Hawaii Kai area", and that it would no longer be necessary or appropriate to withdraw or defer the project as presently conceived.

We greatly appreciate the Hawaii Kai Neighborhood Board's consideration and input on this project. Your letter and this response letter will be included in the FEIS. Upon its completion, four (4) copies of the FEIS will be transmitted to you for the Neighborhood Board's use. An equal number of copies will be provided to the Hawaii Kai Library, and other organizations in the community that have participated in the DEIS review will also receive copies.

GROUP 70 INTERNATIONAL, INC

Sincerely,

  
Ralph Fortmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

\\hawaii\group70\group70\000011\Koko Head Regional Park\DEIS\Responses\Community Meetings\John Rodgers.doc

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
925 Hahione Street, Fifth Floor • Honolulu, Hawaii 96813-4397 • Phone: (808) 523-0966 • FAX: (808) 523-5673 • http://www.group70.com • e-mail: info@group70.com



## Hawaii-American Water Company

6700 Kalahele Avenue Highway, Suite 205 • P.O. Box 25010 • Honolulu, HI 96825  
(808) 394-1280 • FAX (808) 395-5023

July 12, 1999

Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813

Re: Koko Head Regional Park & Nature Preserve  
Draft Environmental Impact Statement (DEIS)

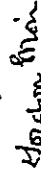
Dear Sir:

The following are Hawaii-American Water Company's comments to the DEIS:

- 1) The wastewater treatment plant has sufficient processing capacity to accommodate the projected wastewater discharges.
- 2) The Company is owned by American Water Works Company, Inc.
- 3) The existing wastewater connection conditions for the Hanama Bay Nature Preserve are outlined in the Sewer Connection and Service Agreement dated August 2, 1995 between the Department of Parks and Recreation and East Honolulu Community Services, Inc. (now known as Hawaii-American Water Company). Increases in the quantity of wastewater discharged may require the construction of additional on-site facilities or modifications of the existing connections.
- 4) Our review and approval must be obtained for any modifications to be made to the existing wastewater connections for the Koko Head Regional Park & Nature Preserve.

Please call me at 394-1284 should you have any questions regarding our comments.

Sincerely,

  
Gordon Mori  
Business Manager

GROUP 70  
DEPARTMENT OF  
PARKS AND RECREATION  
HONOLULU, HAWAII

JUL 14 1999

GROUP 70





July 30, 1999

Mr. Gordon Mori, Business Manager  
Hawaii-American Water Company  
P.O. Box 25010  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Mori:

Thank you for your July 12, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

Changes in Project Scope

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

Koko Head Regional Park and Nature Preserve Planning Process

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5556), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Kihel Street, Fish House • Honolulu, Hawaii 96813-4070 • Phone: (808) 527-5566 • Fax: (808) 527-5563 • http://www.group70inc.com • e-mail: mail@group70inc.com

Letter to Mr. Gordon Mori, Business Manager  
Hawaii-American Water Company  
July 30, 1999  
Page 2

Responses to Comments

Thank you for confirming that the existing wastewater treatment plant has sufficient processing capacity to accommodate the projected wastewater discharges from this proposed project.

No increases in the quantity of wastewater currently being discharged are anticipated in connection with this proposed project. In any event, if additional on-site facilities or modifications of existing connections are needed in the future, they will be provided by the City and County.

We acknowledge, and the City and County is aware, that your approval must be obtained for any modifications to be made to the existing wastewater connections for the Koko Head Regional Park and Nature Preserve.

Conclusion

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be transmitted to your office upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

\\hawaii\group70\Projects\990711\Koko Head Regional Park\DEIS\Responses\Letter to Mori July 30, 1999

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
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# CITIZENS for OCEAN ACCESS

PO Box 12271 Honolulu, Hawaii 96828  
e mail: coa@chameleon.net

RECEIVED

MAY 07 1999

GROUP 70

May 5, 1999

Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813

Dear Group 70:

This letter constitutes our comments on the Draft Environmental Impact Statement plan to develop the Koko Head Regional Park & Nature Preserve.

Residents of O'ahu have long enjoyed access to and the use of Hanauma Bay and other points along the Ka'iwi coast for many forms of recreation. Citizens for Ocean Access ("COA") believe the plan as described in the Draft Environmental Impact Statement of March 1999 unfairly and unnecessarily restricts the access of O'ahu residents to the area. We believe the plan and can, and should be, substantially modified with resident's recreational needs in mind. We believe this can be done in such a way that the preservation and conservation of the area, particularly Hanauma Bay, can be achieved.

While the primary recreational concern of COA is scuba diving, we support those others who have long used this area for diverse recreational activities and for whom this plan will also limit or prohibit access to their chosen activities. Historically residents with recreational interests have led efforts to preserve and protect Hanauma Bay and this coastline area. Local divers have been active participants in clean ups at Hanauma Bay — removing tires, abandoned fishing nets and other trash and debris. Divers and other recreational users of this shoreline area have demonstrated their commitment by reporting illegal activities, reef damage and other unusual conditions to authorities.

Local divers and residents with other recreational interests have been the core of volunteers at Hanauma Bay providing information and education to visitors. Their efforts have resulted in reduced damage to the reef and this fragile environment. The plan fails to recognize or value the efforts of these dedicated volunteers.

We wish to be clear that we support efforts to protect and preserve the Hanauma Bay/Koko Head region and our environment as a whole. We believe the planners have not considered many factors and where it is stated (DEIS §1.4.2), "The ease and convenience of access to Hanauma Bay Nature Preserve will be reduced due to the reallocation of the parking and institution of more comprehensive and restrictive management practices," we believe the planners have underestimated the high degree of disruption to residents who have historically protected and supported Hanauma Bay.

In this letter, we will examine, first from our perspective as divers, then from our perspective as citizens who enjoy Hanauma Bay's many recreational possibilities, aspects of the plan that are restrict residents access. Finally, we will make suggestions that would mitigate these problems.

Group 70 International, Inc.  
May 5, 1999  
Page 2

## 1. Problems resulting from the plan for SCUBA divers:

- Safe diving practices require a pre-dive assessment of the dive site. Currently, this is accomplished by simply walking to the overlook after parking. If adverse conditions render diving impossible, divers return to their vehicle and, if within the prescribed time period, obtain a refund of the parking fee. The plan as delineated in the DEIS, however, will result in divers spending excessive time and money since divers must either,
    - Park at the Koko Head Parking area and take a tram to the bay to assess conditions. If conditions are good, return by tram to get their gear, and return again to the bay or,
    - Park at the Koko Head Parking area, don diving gear and take the tram to the bay. If diving is not possible, return again by tram to the Koko Head Parking area.
  - Divers need a method for securely handling heavy, expensive, theft prone equipment. Currently, divers maintain direct control of their equipment from time of arrival at the bay to time of departure. The DEIS contains no provision for transportation of divers with their equipment from the Koko Head parking area to Hanauma Bay. Suggestions that may be forwarded to deal with this are fraught with problems.
  - As divers who now take the brief tram ride from the top of the bay to the beach know, wearing diving gear on the tram precludes ease of seating, especially when the tram is full, as life berths are not wide enough. This concern is compounded by the approximately 1.3 mile tram ride to and from the parking area.
  - Transporting diving gear, which may include expensive camera equipment has not been give consideration in the DEIS. Suggestions for transporting diving and photography equipment are fraught with problems.
    - if dive bags are transported on the trams, there must be a locker area at Hanauma Bay for divers to change and store items that cannot be taken into the water. The DEIS contains no such accommodation.
    - if dive gear is to be assembled and transported on the trams, the trams must be designed to support assembled gear. Divers do not allow their life support equipment to be laid in a pile or transported so that it may fall over and be damaged.
    - one suggestion has been made that park personnel convey diving gear to and from Hanauma Bay. Divers do not allow strangers to handle their life support equipment and / or expensive cameras.
- Under the new plan, divers may be precluded from diving at Hanauma Bay
- The DEIS indicates in Section 3.2.2 that The Bus will operate the trams from Koko Head to Hanauma Bay. (DEIS § 3-2.2) The current policy of The Bus precludes

carrying heavy items on board its vehicles. (The Bus Policy #11.09) This means divers' equipment may be precluded.

- Divers and others often choose to recreate early in the morning or late in the afternoon. There is no indication in the plan that trams will run at these hours raising concerns that these activities will be eliminated.
- The cost of diving may become prohibitive. Divers will no longer have the option of walking down to the beach and will have to pay for this tram ride, as well as the tram to and from the bay and the parking fee. These additional costs will make diving prohibitively expensive.
- Hanauma Bay is often the only safely accessible dive site on the island. The plan is sufficiently restrictive that on such days, divers may not be able to pursue their recreational activity.
- The plan calls for divers to participate in guided tours of Hanauma Bay. Marine biologists, photographers and writers are among the many environmentally conscious local divers who have made thousands of low impact dives in the Bay. These divers are knowledgeable about the environment, and have a demonstrated track record of protecting it. These divers do not need to be restricted to a guided tour.
- Section 3.4.2.4 of the DEIS provides for "general access to the beach for residents who have completed one session of resource awareness training." The meaning of "general access to the beach" is unclear however. We understand it to mean unrestricted and unguided access to the toilet bowl and witch's brew, as well as inner and outer reef areas. We wish this to be clearly stated in the plan.
- 2. Problems resulting from the plan for local residents.
  - While identifying a central point of entry to the park at Koko Head, the plan also allows taxi cabs to directly enter Hanauma Bay (DEIS §5.9). Visitors wishing to view or use upper bay facilities can circumvent parking, tram rides and admission fees by taking a taxi directly to the bay. Residents taking friends to view or use the upper bay facilities, however, will have to proceed through the entry, admission and tram ride procedures.
  - The plan does not provide for safeguards that visitors taking taxi's to the bay will not simply remain at the bay, circumventing the admission and entry fees.
  - The plan suggests "inconveniences caused by new procedures" will be offset by maintaining "reasonable fees." (DEIS §1.5) No fees, however, have been suggested. Increasing the current fee structure for residents who regularly use Hanauma Bay (particularly *vis a vis* mandatory use of trams) may result in many residents, especially those with low or fixed incomes, losing access to the bay.
  - Any fee, regardless of amount, may make use of the park cost prohibitive for users who now enter the bay on foot or by other methods not requiring parking.

- Recreational users who now enter the park on foot or by methods not requiring parking will, under the new plan, be required to proceed through the complex and costly admission procedure.

A number of other concerns have been raised that relate to cost factors, traffic patterns, loss of other recreational areas and effects on the Hawaii Kai business community. COA does not have expertise in these areas that allow us to formally comment on them. We do, however, stand in support of other resident and recreational groups who will be negatively impacted by the plan.

#### Negative Effects of the Plan on Hanauma Bay

- Conservation issues are raised by the proposed aquarium at the top of Hanauma Bay. If the aquarium is to be representative of the bay, it will have to be stocked with specimens from the bay. It is, however, illegal to remove live animals from Hanauma Bay. In addition, replacing organisms that die in the aquarium will result in a continued depletion of the bays natural resources.
- Restricting access to residents who have helped care for the environment eliminates an important source assistance to authorities in the protection and preservation of Hanauma Bay.
- Replacing the parking area with a natural environment will defeat the purpose of preservation unless hiking / biking trails are built. The DEIS does not contain such plans. Without trails, visitors can go where they please, damaging areas where they walk.

#### Alternatives that will restore resident's access to Hanauma Bay:

- Maintain and beautify the current parking area with natural surroundings.
- Improve the current facilities at the top of Hanauma Bay where admission and orientation activities would be conducted.
- Allow all visitors the choice of walking down to and up from the beach.
- Formulate and enforce clear standards for visitor behavior in the park and include this as part of the resource awareness training. Visitors who do not comply should be asked to leave.
- Maintain approximately 150 parking spaces (a final design number should be developed in consultation with groups representing all local users of the park's recreational facilities) in the upper Bay area where tour buses now park and will continue to do so under the plan.
- Annual passes would be available to residents after taking the initial "resource awareness training." Those holding annual passes would have first come, first served access to parking spaces retained at the Bay.

Finally, we wish to emphasize our feeling that the needs of residents have not been considered in this plan. We feel as if our efforts to preserve the environment have gone unnoticed and unrewarded. We feel as if we are being treated as tourists in our own home. We feel as if we have not been consulted for our input into the plan and we feel offended at the suggestion the we will be charged a fee for having been inconvenienced.

We offer you our expertise as divers and users of Hanauma Bay and other areas along the southeast coastline. We look forward to working with you and your staff to find solutions to these problems.

Sincerely,

CITIZENS for OCEAN ACCESS

By: *Bob Kern*  
Bob Kern  
943-9241



**GROUP 70**  
INTERNATIONAL

Francis S. Odu, AIA, AICP  
Norman G.Y. Hoag, AIA  
Nancy B. Scammon, AIA, ASID  
Hiroshi Iida, AIA  
Ray H. Nishel, AIA, CN  
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Kathryn A. Nini  
Roy A. Inouye, AIA, CN  
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Christine M. Russett, AICP  
Stuart M. Jones, AIA

July 30, 1999

Mr. Bob Kern  
Citizens for Ocean Access  
P.O. Box 12271  
Honolulu, HI 96828  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Kern:

Thank you for your May 5, 1999 letter to Group 70 International regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

We greatly appreciate your active participation in the recently completed series of Hanauma Bay Task Force meetings. It added significantly to the positive results that were achieved. Thanks to your and others' help, we believe we now have a project proposal that will be of great benefit to Hanauma Bay Nature Preserve and is worthy of widespread community support.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master

Letter to Mr. Bob Kern  
Citizens for Ocean Access  
July 30, 1999  
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indicated, a blanket prohibition on this form of access would likely preclude access to the Nature Preserve for residents who need to use taxis to get there. Essentially, there are no easy solutions to this problem that became apparent as a result of these discussions.

The proposals to be discussed in the Final EIS do not include or reflect any changes to the existing manner in which taxi access is being regulated. However, it is our understanding that the City will continue to monitor this situation closely and, if it becomes an increasingly serious problem, will actively look into ways to address it without inconveniencing "legitimate" taxi users.

Alternatives That Will Restore Resident Access to Hanaua Bay

Most of your recommended alternatives are incorporated into the current proposal. Our specific responses are as follows:

- The current parking area will be retained and "beautified" with additional landscaping that reflects the natural surroundings.
- New facilities are proposed at the top of Hanaua Bay where admission and orientation activities would be conducted. They are also proposed to house park operations and a snack bar for park users.
- All visitors will continue to have the choice of walking down to and up from the beach.
- Presently, the intention is to focus on requiring all lower bay users to go through a resource awareness training. Alan Hong, the Hanaua Bay Nature Preserve Manager, pointed out several potential drawbacks to attempting to enforce clear standards of visitor behavior, and asking those who do not comply to leave, at the Hanaua Bay Improvements Task Force meetings. The Task Force members appeared to generally accept his recommendation that the results of instituting the resource awareness training should first be evaluated before giving further consideration to implementing this kind of policy.
- It is proposed that annual passes be made available to everyone (i.e., both residents and non-residents) who completes the resource awareness training. However, it is not anticipated that, at least in the near future, holders of such passes would be given any priority for access to parking spaces. It would be extremely difficult to administer such a policy, given the current manner in which access is controlled when the parking lot is full.

Such a practice would need to be considered in connection with some form of physical improvements that would make it possible to implement it. Since the existing method of controlling access when the parking lot is full is not a very acceptable long-term solution, it is anticipated that ways to solve this problem will be considered as part of the upcoming master planning process for the Koko Head Regional Park and Nature Preserve, as described earlier in this letter. Your recommendation could be reconsidered at that time.

Letter to Mr. Bob Kern  
Citizens for Ocean Access  
July 30, 1999  
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plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this upcoming planning process as well is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0065@co.honolulu.hawaii.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Restrictions on Oahu Resident Access to the Area

All original proposals for new improvements and new operational and management practices that would have imposed new restrictions on resident access to the area have been dropped. Access provisions and restrictions for all visitors, including divers, will remain substantially as they are now. In particular, no changes in the existing fee structure are being proposed and part of this project.

The only change now being proposed that would impact accessibility is a requirement that all visitors to Hanaua Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training. It is our understanding, based on your participation as a member of the Hanaua Bay Task Force, that your organization supports this change.

Taxi Access

We agree that the current policy of allowing taxis to directly enter Hanaua Bay Nature Preserve is being used by some visitors - primarily tour operators - to circumvent the current regulations and management practices that are intended to control access to the bay. However, as discussions at the Hanaua Bay Improvements Task Force meetings

Letter to Mr. Bob Kern  
Citizens for Ocean Access  
July 30, 1999  
Page 4

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be provided to your organization upon its completion. We appreciate your input on this project.

**GROUP 70 INTERNATIONAL, INC.**

Sincerely,

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

RECEIVED  
OFFICE OF THE DIRECTOR  
DESIGN AND CONSTRUCTION  
C & C OF HONOLULU

99 JUL -9 AM 7:54

EAST HONOLULU COMMUNITY COALITION

P.O. Box 26356  
Honolulu, Hawaii 96825

July 6, 1999

Mr. Gordon Wood  
Department of Planning and Permitting  
650 S. King St., 9th floor  
Honolulu, HI 96813

Dear Mr. Wood:

We are writing on behalf of the East Honolulu Community Coalition (hereinafter referred to as "EHCC"), a grass roots association of East Honolulu residents strongly opposed to the development called for in the Draft Environmental Impact Statement for the Koko Head Regional Park & Nature Preserve (March 1999) (Department of Design and Construction, City and County of Honolulu) (hereinafter referred to as "DEIS").

EHCC hereby files its formal objection to the entire DEIS, on the basis that the DEIS does not fulfill the statutory definition of an Environmental Impact Statement as defined in Hawaii Revised Statutes Section 343-2. EHCC hereby asserts that the DEIS is not founded upon scientific study and neither adequately nor accurately assesses the impact on the environment nor the economic and social welfare of the community and State, as required by the statute. A carrying capacity study of Hanauma Bay was begun by the University of Hawaii on June 2, 1999. The Mayor and the City Departments involved in the DEIS are aware of this study. This study will be conducted over a one year period, with final assessments coming after that period of time. It is EHCC's position that, in order to evaluate the impacts of the proposed action, it is imperative that this study be completed and incorporated into the final environmental impact statement, and that no final environmental impact statement be issued until the completion of a rigorous, scientific study of the impact of human activity on Hanauma Bay.

EHCC believes that by letter dated June 7, 1999 from Randall K. Fujiki, Director of the Department of Design and Construction, to Ms. Genevieve Salmonson, Director of the Office of Environmental Quality Control of the State of Hawaii, the scope of the project proposed by the DEIS has been drastically reduced to improvements in the upper park area of Hanauma Bay, the demolition of the old Job Corps buildings, and limited improvements to the Hanauma Bay parking lot. The above-referenced June 7 letter is attached hereto and incorporated herein by reference. EHCC's belief that the project has been drastically reduced to the above-mentioned improvements is further predicated on a meeting between Mayor Jeremy Harris and EHCC members held June 1, 1999 in the Mayor's Conference Room,

11/08/99 10:00 AM - 11/08/99 10:00 AM



wherein the Mayor announced such a reduction in scope.

Preferring to err on the side of caution, however, EHCC includes herein comments reflecting the high level of community opposition to the now withdrawn so-called "mauka" portion of the DEIS project proposal. The "mauka" portion included the tunicular and summit lookout, the nature center at the base of Koko Crater at the old Job Corps site, a new parking area at the site of current Goetz Memorial Ballfield, demolition of the existing parking area at Hanauma Bay and re-landscaping of this area, park shuttle transportation system to Hanauma Bay and around the makai side of Koko Crater into the Koko Crater Botanical Garden, reconstruction/realignment of existing Kalaheo Highway Intersections with Koko Head Park Road and Hanauma Bay Road, and development of the existing Job Corps site entry road.

EHCC has held many hours of meetings and discussions with individuals and groups such as Citizens for Ocean Access, Hawaii Kai Youth Baseball, and Friends of Hanauma Bay, as well as fishermen, swimmers, hikers, bicyclists, divers, fishermen, park users and residents. From these meetings and discussions, EHCC has compiled many and various comments and objections to the DEIS, and presents them herein, organized according to the section numbers and headings contained in the DEIS.

## Comments

### 1.4.2 Adverse Impacts.

The following adverse impacts have not been adequately addressed:

- Increased traffic generated through East Oahu;
- Impact on surrounding residential communities;
- Impact on fiscal position of the City & County of Honolulu;
- Access reduction, especially for Hawaiians and residents;
- The impact of the project on the role of the presently existing, and extremely effective, Hanauma Bay Educational Program and its many volunteers;
- Use of entrance road in the early mornings before normal park operating hours (as is the present practice) and also late afternoon users; and
- Pedestrian access to Hanauma Bay - it appears this will be halted.

### 1.5 Proposed Mitigative Measures

Controls on Access to Hanauma Bay. These proposed mitigative measures are not addressed with sufficient detail. "Reasonable levels of user fees at Hanauma Bay need to be set forth. There is concern that only tourists will be able to afford user fees. Although it appears that residents will be exempt from the general park entrance fee, they will still have to purchase tickets for parking, shuttles, the nature learning

center, the summit tunicular, Upper Hanauma Bay, and Lower Hanauma Bay (tours would involve an additional fee). It is unclear from the wording if Lanai Lookout, Habona Blowhole or Koko Crater Botanical Garden would require separate tickets. It is worrisome that no cost estimates are given; prices are yet to be determined. Why should residents be so burdened by fees and shuttles when commercial tour buses will still be allowed direct access to Hanauma Bay?

Removal or Disturbance of Old Military Radar Station Remnants. This mitigative measure appears sensible, if the Modified DEIS is considered. Access to the summit lookout should, however, be taken place exclusively by hiking trail.

Impacts on View of Koko Crater. In view of the Modified DEIS, and in view of the necessity to maintain the shooting range as referenced in the DEIS, it is EHCC's opinion that the old cable car tracks and utility poles should be removed, and vegetation in conformance with that naturally present in the area should be planted.

### 1.6 Alternatives

The alternative of postponing action pending further study is the alternative that has the support of EHCC, and should be the alternative that is adopted, pending completion of the carrying capacity study.

An alternative of compliance with the guidelines in the East Honolulu Development Plan, adopted in May 1998, is not discussed. The following is an excerpt from those guidelines:

#### \*Passive or Nature Parks

- Preserve and enhance Koko Head Regional park's coastal-oriented recreational resources by implementing when funding is available, the following:
  - Convert the portion of Kalaheo Highway between Lunalilo Home Road and Sandy Beach to a 25-mile per hour scenic roadway.<sup>1</sup>
  - Maintain and facilitate access to the area's important fishing resources.
  - Develop new trails in and around Koko Crater.
- Minimize adverse lighting impacts to aquatic life and avifauna, as well as adverse aesthetic impacts.
- Maintain Koko Crater Botanical Garden with drought tolerant plant species.
- Develop Ka Iwi scenic shoreline in a manner which preserves the area's natural scenic quality and provides educational and passive recreation opportunities.
- Protect fragile natural resources, such as the wildlife at Hanauma Bay nature park from overuse through some form of management control.

<sup>1</sup> This goal of the East Honolulu Development Plan is NOT endorsed by EHCC, as EHCC is concerned that this would place an unnecessary burden on residents who commute to Honolulu by means of Kalaheo Highway, and is placed here solely for the purpose of accurate reflection of the goals contained in the East Honolulu Development Plan.

Active Recreation Areas

- Expand the Koko Head Regional park boundary to include Golf Course 5 and 6 properties, thereby increasing East Honolulu's active recreation areas.<sup>2</sup>
- Locate areas designed for sporting events that attract high numbers of people along major collector streets or accesses that are separated as much as possible from residential areas and wildlife habitats.
- Minimize the visibility of perimeter fencing along major collector streets, large recreation buildings or structures, lining, parking lots and other utilitarian elements through plantings or other appropriate visual screens adjacent to residential areas and major roadways, particularly to soften the view of the park from above the roadside vista point along Kalanianaʻōle Highway.
- Locate bus stops and loading areas at principal entries and adjacent to convenient pedestrian accesses to marina activity areas within the park.
- Provide amenities and service facilities to accommodate "tailgate" picnics in parking areas for sporting events, including shading canopy trees within the parking lot as well as nearby picnic tables and outdoor grills.<sup>3</sup>

2.0 PURPOSE AND NEED FOR THE PROPOSED ACTIONS

Goal A: To preserve and enhance the natural character of Koko Head Regional Park.

The description of this goal in the DEIS goes to the heart of the reasons the community opposes the plan contained in the DEIS. The planned improvements do not preserve the natural character. Rather they represent a huge investment in infrastructure which, in the opinion of almost everyone EHCC has spoken with, represent an unacceptable level of development. The implicit assumption that existing facilities should be retained and improved, rather than removed, with the land being restored to its natural character, places a higher priority on tourism than on Goal A.

Goal B: To provide low-impact recreational opportunities in the Koko Head Regional Park that minimize impacts on landforms, flora and fauna.

With no scientific evidence that it is necessary to limit the number of park user volumes, the DEIS proposes to only permit access to Hanauma Bay if one is part of a guided tour or if one has completed one session of resource awareness training. We know of no one who objects to a requirement of one session of resource awareness training, yet we are concerned that such training be available, accessible, and affordable. No provision is made for low impact recreational opportunities such as hiking and bicycling. The proposal to waive the resource awareness training if the visitors are part of a guided tour again places a higher priority on tourism than preservation.

<sup>2</sup> This goal of the East Honolulu Development Plan is NOT endorsed by EHCC, and is placed here solely for the purpose of accurate reflection of the goals contained in the East Honolulu Development Plan.

Goal C: To unify existing and future recreational activities in the park and provide greater linkage among them.

Since all of the infrastructure and shuttles relating to Goal C are proposed to be deleted, we would encourage the Department of Design and Construction to go forward with hiking trails and pedestrian and bicycle path upgrades and improvements, as well as with the planned swimming pool at Koko Head District Park.

Goal D: To emphasize and enhance the educational value of the park and its resources.

We are concerned that the scale of the marine education center at Hanauma Bay represents an expense that, given the aquariums at Waikiki and Sea Life Park, is not necessary and may not be cost effective. Rather the educational value of the park could be enhanced by less infrastructure and more education by trained park rangers.

3.1 Overview

Description of planned park improvements

- Former Hawai'i Job Corps Center site: The proposed demolition of the ballfield dedicated to 5 to 7 year old children is strongly opposed by the community, and we were extremely pleased with the Mayor's statement that the project no longer includes the demolition of the Goetz field. The ball field is only two years old, and was constructed by the community in memory of one of its treasured members. Additionally, the ball field serves to introduce children to sports, and is adjacent to the other ballfields, so that parents with children at different age levels can attend all of their children's games. The community has expressed a desire to have a dormitory site at the former Job Corps site so that visiting sports, debate, scouting, and other youth activity groups from outer island and the mainland have an economical place to stay, and so that positive activities can be encouraged in our youth.

- Of the other three proposed park improvements: Koko Crater, Hanauma Bay Nature Preserve, and the Shuttle Transportation system, we are pleased with the Mayor's decision to only retain the improvements to the Bay. The proposed construction at Koko Crater and the shuttle transportation system would have increased traffic, pollution and additional traffic congestion and its attendant problems. There are many other rational ways of achieving changes to protect Hanauma Bay Nature Preserve, some of those are:
  - establishing a reservation system for non-residents;
  - using the existing Park 'n Ride parking lot to shuttle visitors;
  - establishing a public/private partnership with Sea Life Park to improve the existing

- facilities there and directing passive viewing tourism to Sea Life Park; Ensuring that any positions open at Hanauma Bay are filled with individuals who have some college-level training in marine conservation or biology.
- The East Oahu community will not benefit from an influx of tourism. Kalaianako Highway is already overburdened.
- The Shuttle Transportation system, as described by the DEIS, requires a "special design funicular system because conventional funicular technology does not appear applicable or affordable." Consulted engineers and transportation experts agree that this funicular system will be extremely expensive to maintain, and therefore not likely to generate positive cash flow.

### 3.2.4.1. Upper Park Area Improvements.

- Why a snack bar? If the objective of the plan is to minimize impact on Hanauma Bay, how does a 100 to 150 seat restaurant minimize impact?
- New infrastructure for the upper level alone would include: a shuttle turn-around area, a marine education center consisting of two buildings and a central observation area, an indoor and outdoor reef interpretive exhibit, a 1,700 sq. ft. snack bar building with 5,000 sq. ft. eating area, additional public restrooms, a 1,200 sq. ft. museum shop, and extensive landscaping. Future plans include separate exhibits such as a surge tank, tidepools, touch tanks, an edge-of-the-reef exhibit, and a beyond-the-reef exhibit. How can this possibly be considered low impact? This extensive development is on the order of a theme park and would only serve to destroy the natural character of Hanauma Bay.

- Placing the utilities underground is a fine idea.

- Improvement of the beach access road to accommodate emergency vehicles is also a good idea. Buildings covering a total of 3,600 sq. ft. at a height of 24 ft. are not consistent with the natural character of the area. Since the lower level of Hanauma Bay is in a tsunami inundation zone, buildings in this area should therefore be kept to a minimum.

### 3.2.4.2. Lower Park Area Facilities.

- What is the rationale for not allowing pedestrian traffic on the beach access road? Pedestrian traffic is low impact, non-polluting. Many local people enjoy the healthy aerobic workout obtained from walking from the top of Hanauma Bay to the beach.

- Local divers and residents with other recreational interests have been the core of volunteers at Hanauma Bay providing information and education to visitors. Their efforts have resulted in reduced damage to the reef and this fragile environment. The plan fails to recognize or value the efforts of these dedicated volunteers. We believe the Modified DEIS underestimates the high degree of disruption to residents who have historically protected and supported Hanauma Bay.
- Transporting diving gear, which may include expensive camera equipment, has not been given consideration in the DEIS.
- Hanauma Bay is often the only safety accessible dive site on the island. EHCC is concerned that the plan, as presently contained in the DEIS, is sufficiently restrictive that on such days, divers may not be able to pursue their recreational activity. The plan calls for divers to participate in guided tours of Hanauma Bay. Marine biologists, photographers and writers are among the many environmentally conscious local divers who have made thousands of low impact dives in the Bay. These divers are knowledgeable about the environment, and have a demonstrated track record of protecting it. These divers do not need to be restricted to a guided tour.

- Alternatives that will restore resident's access to Hanauma Bay:

- Maintain and beautify the current parking area with natural surroundings. Of urgent concern is the current asphalt parking lot. Replacing that lot with concrete would have an immediate beneficial effect on the Bay.
- Improve the current facilities at the top of Hanauma Bay where admission and orientation activities would be conducted.
- Allow all visitors the choice of walking down to and up from the beach.

- It is EHCC's position that the profit generated from the current operations at Hanauma Bay must be used to improve the Bay, and that additional capital improvement project funds (CIP) should not be used, pending completion of the carrying capacity study. EHCC has been given the following figures from the Fiscal Officer of the City and County of Honolulu.

|                                     | Income      | Expenses*   | Profit      |
|-------------------------------------|-------------|-------------|-------------|
| 1999 Fiscal Year (July until May)   | \$2,335,000 | \$1,123,000 | \$1,112,000 |
| 1998 Fiscal Year (July until June)  | \$2,725,000 | \$1,371,000 | \$1,354,000 |
| 1997 Fiscal Year (Partial - 3 mos.) | \$ 846,000  |             |             |

- Expenses include salaries, maintenance and equipment.

- A valuable environmental resource such as Hanauma Bay should have had a baseline marine habitat survey. The DEIS acknowledges that no surveys have been performed for marine biota and that information is adapted from a 1981 report. How is it possible to determine impact from human usage if there is nothing to measure against? Baseline surveys for the coral reef and marine biota should be done immediately, and be considered as part of the affected environment.

#### 4.7.1. Roads and Traffic

- Traffic needs to be directed away from Koko Head District Park. The park is heavily used during the week for youth activities. On Saturdays, usage triples and there has been a great deal of concern as to the commingling of tour buses, limousine and outsider vehicles. Currently on weekends there is not enough parking available. It is common to see double parking and cars parked in no parking zones. A policeman has been seen; issuance of multiple citations for improper parking is not infrequent.

#### 5.2.2.1 Kalaianaoale Highway.

- According to the DEIS, "the new traffic light at the Park entrance, and the shuttles that will use Kalaianaoale Highway ... may cause some minor delays as compared to existing conditions." All the data used to substantiate this conclusion was based on the assumption that these enhanced tourist attractions would not increase the visitor attendance. No computer simulations were used to determine the anticipated delays produced by the interaction of traffic light and traffic flow with the proposed changes.

#### 5.2.2.2. Former Hawaii Job Corps Center Area.

- According to community input at the meeting held on April 26, 1999, the planned nature learning center and parking area are not "essentially consistent" with the 1992 Koko Head Park Master Plan. There is community interest in creating a facility to be used by Hawaii residents for a variety of educational endeavors, such as a dormitory for visiting sports teams, scouting and/or leadership camps, and staging areas for self-directed hikes. There is no community interest in the planned nature center and parking area. The DEIS fails to adequately present this significant effect as required by the Hawaii Revised Statutes.

#### 5.6 Hanauma Bay Rules and Regulations

- The DEIS states that the Hanauma Bay Rules and Regulations adopted by the City in 1990 and amended in 1998 have successfully utilized controls over access and parking as a means of reducing park usage. Why then do we need to introduce more costly controls and unreasonably restrictive rules when we have a plan that is already effective? If section 6 of the Hanauma Bay

#### 3.4.2.4 Hanauma Bay Nature Preserve - Lower Level Activities and Usage Levels

- The impact of regulation of access to the lower level of Hanauma Bay must be explored with the aim of obtaining information as to the impact of such limitation on tourism as a whole. It is necessary to determine if such limitation will cause a further decline in Oahu visitors, and if a decline is the result, the extent of such a decline and its effect on Oahu's economy must be determined.
- No plan is set out for office and other visitor facilities (e.g. information exhibits) during construction.
- The current volunteer program could be supplemented with knowledgeable staff with multiple language skills, videos, and interpretive displays.
- No change should be made to the current system of waiting or shutting down and up from the Bay. A handrail to the stairs up from the Bay is needed.
- A new comfort station is necessary.

#### 4.4.1. Topography

The term "turf cone" is used frequently in this section (and elsewhere). Should the term be "tuff cone"?

#### 4.5.2.2. Hanauma Bay (water quality)

- The DEIS states "the overall water quality of the Bay does not appear to change substantially as a result of human usage". This study is inadequate to make a determination that water quality is not affected by human usage. The study needs to be performed over a longer period of time (one year with monthly or bi-monthly sampling versus two samplings for one day) and other pertinent information such as current flow, wind speed, tidal fluctuations should also be recorded in order to determine whether there is a change in water quality. The greater question is, what is the impact to the marine ecosystem based on changes to water quality?

#### 4.5.3.1. Near shore Ocean Waters.

A long term water quality monitoring program should take place as part of mitigation.

#### 4.5.3.2. Physical/Biological Structure of Hanauma Bay.

- This section starts with the observation that a major concern regarding human usage of Hanauma Bay is the effect of high densities of swimmers on biotic composition and ends with the observation that the [reef] community is primarily a result of natural processes, and not a result of human impact. Thus, the DEIS itself would appear to indicate that human usage is not affecting Hanauma Bay.

Rules and Regulations as amended July, 1998 are no longer applicable, does this mean that native Hawaiians will no longer have the right to enter the Nature Preserve to exercise their traditional and customary rights without paying fees? These customary rights are governed by state law and court rulings. Will the Director no longer be authorized to waive fees for educational or promotional programs?

The assertion that maintenance can be accomplished at the same time as visitor activities seems inconsistent with the estimates that total usage of the Bay facilities (upper and lower) will remain at or possible exceed current levels. Current closure all day Tuesdays is critical for use of oil-based paints needed at the Bay.

6.3.4.2. Relevant SMA Review Guidelines

The following quoted statement does not appear to be accurate:

"The recent connection of Hanauma Bay Nature Preserve's wastewater system to the Hawaii Kai Treatment plant has eliminated previous adverse impacts on bay waters. Similarly, wastewater facilities at the new nature learning center will be connected to the regional system. None of the other improvements will impact wastewater management requirements or practices at the Park. Existing solid waste management practices are generally adequate to avoid any adverse impacts on the Park's resources."

East Honolulu Community Services, Inc. is the company (private) that operates the Hawaii Kai Sewage Treatment Plant. This company was referred to as the American Wastewater Corporation in the DEIS. EKCC has been advised that no submittals as to any information contain in the DEIS have been made to the operator of the sewage treatment plant, that the operator would not accept any raw sewage that contained salt water, that the treatment plant is able to process 6.2 million gallons of sewage per day under normal conditions (no power failures or unusually heavy rainstorms) and that presently a high average of 3.8 million gallons is being treated daily.

There is an assumption that the collection and pumping facilities are adequate for the project but there is no mention if the Hawaii Kai Regional Wastewater System would be able to handle the added load while still maintaining adequate capacity in emergencies such as a power failure.

7.1.9. Employment

Other than presenting employment figures for construction of the proposed improvements, the DEIS fails to discuss the effect the proposed action will have on employment. Not addressed are impacts resulting from the 100-150 seat restaurant and resulting from the restrictions on access to the Bay. There are many small restaurants in the Hawaii Kai area and many tour operators whose livelihood will be adversely affected by the Modified DEIS. Thus, the DEIS fails to comply with Section 11-200-17 of the Hawaii Administrative Rules.

7.2.11 Population and Employment.

See preceding paragraph.

7.2.13 Roads and Traffic

- Kalanianaʻole Highway is the primary route of travel for users of park areas, commuter traffic from East Oahu and the windward side of Oahu, and a major scenic route for tourists. The DEIS fails to mention that it is also a major route for large trucks unable to use the Pali or Wilson Tunnels and an alternative route in cases of emergency when other roads to town are blocked or closed off.
- The DEIS does mention that serious conflicts will result from suggested uses of Kalanianaʻole Highway. Your proposed solutions include a shuttle transportation system, a new road from the nature learning center to Hanauma Bay consisting of a 2-lane 2-way roadway, and a signalized 4-leg intersection with several additional lanes.
- In the Traffic Impact Assessment Report of Feb. 19, 1999, it is clearly stated that no conclusions of traffic safety are stated or implied in the Report. Since this is a major concern, especially in regards to the intersection of Hanauma Bay Road and Kalanianaʻole, why was this not addressed?

The DEIS makes observations of traffic flow and comments on the future impacts of the Park on various intersections. These observations are based on traffic count data listed in Appendix A. Review of this data shows that there are only three pieces of data listed for each intersection, one each of three different two-hour time periods. This is essentially one piece of data for each intersection for each time period. It is thus unclear if this sampling addresses the specific objective of the DEIS.

The evaluation of future traffic conditions lacks an explanation of the methods used to obtain the conclusion stated in the DEIS. The vehicular trips generated as given in Table 2 do not conform to any numbers given elsewhere in the DEIS. The DEIS estimates the addition of 120 shuttles a day. How can this volume of 40-foot buses have only a minimal impact on traffic or intersections? 120 shuttles carrying

The DEIS states that 100-150 new jobs will be created in staffing alone. These would be filled by City and County employees. These are NEW jobs, at a time when the City needs to cut costs to stay within a budget. In addition to this, park management plans and operating budgets would need to be obtained on an annual basis. None of these costs are addressed. They would require a commitment of public funds (i.e., taxpayer monies) on an ongoing basis. These costs would be staggering. Again, none of these costs is estimated nor are they included in the cost estimates. Also glossed over is the increased demand on police and fire protection services.

The cost estimates in Table 3-4 of the DEIS are woefully inadequate. Less money will be spent in the community on local businesses. This will place further burdens on small business in Hawaii and further impair our already weak economy.

The residential community of Hawaii Kai virtually surrounds the Koko Head Regional Park and Nature Preserve. This project would devastate this community. As proposed in the DEIS, this project would be better described as a theme park or a tourist attraction complete with an amusement ride. The beauty of the area lies in its natural, pristine state. It is currently one of the most popular visitor destinations and scenic recreation areas on Oahu. To irretrievably alter this area with widened roads, traffic lights, many new buildings, access restrictions, an aquarium and a funicular would be a travesty.

#### 7.2.14.2 Wastewater Disposal.

See comments to 6.3.4.2 above.

#### 8.3.3 Relocation of the Koko Head Shooting Complex.

Shooting Range - The Koko Head Shooting Complex, established in 1937, is the only public shooting range on Oahu. It is also used by the Honolulu Police Department and state and federal law enforcement agencies for training purposes. This is a necessary facility and its relocation is not a reasonable option. A replacement by an indoor facility is also not an option, as it is necessary for law enforcement to train at an outdoor shooting range. It is essentially the position of EHCC that any plan which does not accommodate all current users or which threatens to displace current users is not an acceptable plan.

### Conclusion

The DEIS fails to adequately describe the effect of the proposed development on the environment. Access to vital community recreational facilities will be diminished, and swimmers', snorkelers' and scuba divers' access to Hanauma Bay will be limited, although there is no scientific evidence included in the DEIS that swimmers have any effect on either water quality or the reef community. Facilities are planned which do not take into account the interest of the community.

The proposals contained in the DEIS appear to develop the area for tourism. If recreation and education were the main goals, alternatives could include more picnic areas, parks, along with informational kiosks. The general public does not need to have a nature learning center. Strategically placed kiosks throughout the picnic and park areas could provide educational awareness. There are no plans for hiking trails or bicycle access, both of which activities result in low impact on the environment.

In sum, the DEIS does not comply with the definition of Environmental Impact Statement contained in Section 343-2 of the Hawaii Revised Statutes:

An informational document prepared in compliance with the rules adopted under section 343-6 and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic and social welfare of the community and State, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects.

The community opposes this plan, and especially the implicit decision to give more weight to tourism than to community welfare.

EHCC wishes to thank the mayor for withdrawing all portions of the DEIS which are marula of Kalaianacade Highway. We appreciate the recent efforts of the mayor and his staff to obtain meaningful input from the community, and look forward to a final environmental impact statement which is founded on scientific study, which accurately assesses the impact on the environment and economic and social welfare of the community and State, and which incorporates the community's wishes in a legally sufficient fashion.

Sincerely,

*Susan R. Kern*  
Susan R. Kern, Esq.

*Lane Woodall*  
Lane Woodall, Facilitator

*John Potharnus Creadick*  
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cc: Mayor Jeremy Harris  
City Council Members  
Governor Benjamin Cayetano  
Senator Sam Slom  
Representative David Slegmaier  
Mr. Charlie Rodgers, Hawaii Kai Neighborhood Board  
Mr. Kazu Hayashida, Director of Transportation  
Mr. Randall Fujiki, Director, Department of Design and Construction  
Mr. William Balfour, Jr, Director, Department of Parks and Recreation  
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July 30, 1999

East Honolulu Community Coalition  
P.O. Box 26356  
Honolulu, HI 96825  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Coalition Members:

Thank you for your July 6, 1999 letter to Mr. Gordon Wood of the Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaleia Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force, which includes members of the Coalition, is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5538), fax (527-5563) or e-mail (CAA0005@co.honolulu.hawaii.gov) for more information and to ensure that the Coalition is included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Our responses to your specific comments follow.

#### Delay in Filing of FEIS until Completion of the Carrying Capacity Study

While we respect your reasons for requesting such a delay, we do not share them. It would appear to us that this position is based more on a reaction to the nature and extent of the original project proposals, and the manner in which they were brought to the public's attention, than on what has occurred since Mayor Harris withdrew from this project all of the proposals that were strongly opposed by the community.

We are sure you are aware of the efforts of the "Hanauma Bay Improvements Task Force" to come up with proposals for needed improvements to this Nature Preserve that could and should proceed before completion of the Hanauma Bay carrying capacity study. This task force is made up of a broad cross-section of Hanauma Bay users, caretakers and concerned residents, several of whom are representatives of the East Honolulu Community Coalition.

At its first of a total of seven intensive planning sessions during June and July, the group reviewed the basic issue of whether or not it should proceed to come up with recommendations for improvements that could be made now. There was a consensus to proceed -- a consensus that from all appearances included the East Honolulu Community Coalition members. The task force then developed an extensive list of potential improvements, and reached a "strong consensus in favor" of proceeding now with most of them. (A copy of the Task Force Report will be included as an appendix in the FEIS.)

The East Honolulu Community Coalition members were clearly a part of this consensus. It would not have been a "strong consensus" without their agreement.

Most of the proposed improvements that now make up this project were endorsed with a "strong consensus in favor" by the Task Force. Given this result, and the active participation of several East Honolulu Community Coalition members in producing the list of recommended improvements, we are frankly puzzled by your blanket opposition to the initiation of any improvements until the carrying capacity study is completed. We urge you to further consult with the East Honolulu Community Coalition and other members of the Task Force, and then reconsider your position.

The specific purposes of the new facilities that are now being proposed for the Hanauma Bay Nature Preserve are to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. (A full description of the revised project, as well as

an assessment of its potential impacts, will be included in the FEIS). All "added" (as opposed to replacement) facilities are relatively small in size and are limited to things required for public education/awareness training, public safety (e.g., the new turnarounds on the beach access road and the lifeguard equipment storage space) or public convenience (e.g., expanded restrooms and new small public lockers for storage of valuables).

Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these objectives, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be contrary to, impede or constrain efforts to implement further protective measures, whatever they might be, except possibly in the case of a recommendation to close the bay to public use. A recommendation to do this or impose similar extreme measures is not anticipated.

Therefore, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. A "wait-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve existing Hanauma Bay Nature Preserve master plan goals and objectives without compromising future options.

#### Section 1.4.2. Adverse Impacts

All of the listed potential adverse impacts, as well as any others, will be fully discussed in the FEIS. Essentially, with the revisions to the project scope that are described in the attachment, the original proposals that could have generated all but one of the adverse impacts listed in your letter have been deleted from the project. Operations at and access to Hanauma Bay Nature Preserve will remain essentially as they are now. No improvements or changes in existing operational practices are proposed for any other areas in Koko Head Regional Park and Nature Preserve.

With respect to impacts on the City's fiscal position, the total estimated capital costs for the currently proposed project is less than \$10 million, or roughly one-half the \$19.3 million total estimated cost for the original. (A more specific and detailed estimate will be provided in the FEIS.)

Two sources of funds, or a combination of them, will be available to pay for such a bond issue:

- the payments could be included in the City's annual CIP budget, and/or
- they could be made from the Hanauma Bay Nature Preserve special fund, into which the parking and entry fee revenues are deposited.

It has not been determined as of the date of this letter as to what method of payment will be proposed by the City Administration. (The final decision will be made by the City Council.) More definitive information will be provided in the FEIS. In any event, the



annual costs of paying off such a bond issue would amount to approximately 0.1% of the City's annual budget and thus would not be at a level that would compromise or otherwise significantly impact the City's fiscal position.

Section 1.5 Proposed Mitigative Measures

Controls on Access to Hanauma Bay. All original proposals that impacted the ways different groups of users access and use Hanauma Bay and other areas in Koko Head Regional Park and Nature Preserve have been deleted from this project. The revised project maintains the existing access rights and management practices. Fees at Hanauma Bay Nature Preserve will continue to be \$1.00 for parking and \$3.00 for non-resident adult entry to the lower bay area.

Removal and Disturbance of Old Military Radar Station Remnants. The revised project no longer involves any improvements that would impact this area.

Impacts on View of Koko Crater. The revised project no longer includes any facilities that would impact these views.

Section 1.6 Alternatives

Postponing Action Pending Further Study. We appreciate your reference to the parks and open space guidelines in the East Honolulu Development Plan, and agree that any proposals for improvements to Koko Head Regional Park and Nature Preserve should address these guidelines. Their consideration will be integrated into the master planning processes outlined at the beginning of this letter. They will also be addressed in the FEIS.

With respect to your suggestion to postpone any action pending further study, we do not consider this to be necessary or appropriate for this revised project's proposals for improvements to Hanauma Bay Nature Preserve. We believe that proceeding now with these improvements makes sense and is supported by the many Hawa'i Kai residents who have expressed interest and been involved in developing the current project scope.

The revisions to this proposed action are the direct result of the announcement by Mayor Harris on June 1<sup>st</sup> that, in response to community concerns, this project would be revised to include only improvements to Hanauma Bay Nature Preserve. He also announced that any proposals for improvements to areas of Koko Head Regional Park outside of Hanauma Bay Nature Preserve would be the subject of a community-based master planning process for the Regional Park.

Both parts of this announcement appeared to have the strong and near-unanimous support of the community representatives who were in attendance. As noted earlier, a community-based Task Force, established by Mayor Harris to follow up on his announcement, has also expressed strong support for most of the Hanauma Bay improvement proposals included in this revised project. Please also refer to our response above under the heading "Delay in Filing of FEIS until Completion of the Carrying Capacity Study" for additional points and a more detailed discussion of the bases for the City's desire to proceed with this project.

Section 2.0 Purpose and Need for the Proposed Actions

The responses above address the basic points made in these comments.

We appreciate your concerns that the proposed resource awareness training be "available, accessible, and affordable". It will be. A major part of the proposed new marine education center will be devoted to accommodating this training so that it will be readily available and accessible. It is proposed that there be no charge to attend the training, and that the costs of conducting it be paid for out of the parking and entry fee revenues now being collected. The proposal is to require all Nature Preserve visitors who want to go to the lower bay area to attend the training.

Proposals for hiking trails and pedestrian and bicycle path upgrades and improvements, as well as for implementing the planned swimming pool at Koko Head District Park, will receive full consideration as part of the master plan preparation efforts outlined at the beginning of this letter.

As indicated in the attachment, the proposal to include a live reef or "aquarium" type exhibit in the new marine education center is no longer a part of this project.

Section 3.1 Overview of Project Description

The possibility of providing a dormitory facility for visiting sports and other youth activity groups will be considered as part of the master plan preparation efforts outlined at the beginning of this letter.

The revised project proposals do not involve any substantive changes in the current accessibility and management practices at Hanauma Bay Nature Preserve. It is intended that any such changes be considered in the context of the upcoming master planning effort for the entire Koko Head Regional Park and Nature Preserve.

This project no longer includes any proposals that could have resulted in "an influx of tourism" or substantially impacted Kalaniana'ole Highway. The proposed Koko Crater summit funicular has also been deleted from the project.

Section 3.2.4.1 Upper Park Area Improvements

The revised proposal for a snack bar does not involve the provision of 100 to 150 seats. It is intended to replace the existing snack bar in the lower bay area and will be designed to serve essentially the same number of people.

In most cases the size and scope of the referenced "infrastructure" items have been reduced. Shuttle turnarounds will be the minimum size allowable for the maneuvering of the tram and emergency vehicles. As noted, the original proposal for a reef interpretive exhibit has been deleted from this project.

With respect to the suggested "alternatives that will restore resident access" (included in the comments on Section 3.2.4.2):

- Appropriate landscaping will be added in the existing upper park area parking lots.
- Replacing the existing pavement with concrete is not included in the current project

Section 4.1 Topography

Thank you for pointing out the error in the spelling of "tuif" cone. It will be corrected in the FEIS.

Section 4.5.2.2 Hanaua Bay Coastal Water Quality

The statement in the DEIS concerning the absence of an apparent impact of human usage on water quality reflects findings in other studies that were reviewed by this project's marine biology consultant, as well as the findings from his own water sampling. Issues related to the past degradation of Hanaua Bay's marine ecosystem, and possible future efforts to prevent any further degradation or even reverse the past damage, go well beyond questions of water quality impacts.

In any event, it is our understanding that Dr. Brock's carrying capacity study includes a comprehensive analysis of how water quality changes in Hanaua Bay, the potential sources of these changes, and their impacts on the bay's marine ecosystem. The improvements that are proposed as part of this project will support and facilitate the implementation of any changes in bay use or management practices that may be recommended by Dr. Brock's study.

Section 4.5.3.1 Near-Shore Ocean Waters

Your recommendation that a long-term water quality monitoring program appears to be an excellent idea. However, it should be pointed out that this will not per se mitigate any potential impacts resulting from the construction of new improvements or changes in the Nature Preserve's management practices. Decisions to implement actions that may be indicated by the monitoring program's findings will need to be made once this program has existed for sufficient time to generate such findings. It is not anticipated that the proposed improvements included in this project will have any substantive or lasting adverse impacts on the bay. On the contrary, they are intended to support efforts to better manage people's use of the bay so that individual impacts will be reduced.

Section 4.5.3.2 Physical/Biological Structure of Hanaua Bay

The DEIS was intended to indicate that there are apparently some ways and some areas in the bay where human usage has not contributed to the past degradation of the bay. It was not intended to indicate this as a primary finding. This will be clarified in the FEIS.

It is understood that the DEIS should assess the potential impacts of the "proposed actions" on the bay. Since these actions will clearly not increase human usage or the intensity of human impact on the bay, but will rather have the opposite effect, the expenditure of limited funds for the completion of a new baseline marine habitat survey was not considered necessary to an adequate assessment of potential adverse effects.

Section 4.7.1 Roads and Traffic

The revised project no longer includes any proposals that will impact traffic or parking in and around the Koko Head District Park.

proposal. It was the consensus of the Hanaua Bay Improvements Task Force that consideration of this should be deferred until an analysis of the impacts of upper park area stormwater runoff on the bay is completed. It is our understanding that this will be done as part of Dr. Richard Brock's carrying capacity study.

- A major part of the revised project scope is the improvement of current facilities at the top of Hanaua Bay where admission and orientation activities would be conducted.
- All visitors will continue to be given the choice of walking down to and up from the beach.

Section 3.2.4.2 Lower Park Area Facilities

We appreciate your support for the undergrounding of utilities and improvement of the beach access road (as stated in the comments under Section 3.2.4.1), and for the construction of a new comfort station (as stated in the comments under Section 3.4.2.4).

Under the revised project proposal, pedestrian access to the lower park area will continue to be available. Any proposals that could have disrupted existing "local diver and resident" access and use of the bay have also been deleted from the project. (This applies as well to non-residents.)

Comments Related to Use of Profits Generated by Current Hanaua Bay Operations

The decision on how to fund new improvements to Hanaua Bay will be made by the City Council. As noted earlier, it has not been determined as of the date of this letter as to what method of payment will be proposed by the City Administration. More definitive information will be provided in the FEIS.

Section 3.4.2.4 Hanaua Bay Nature Preserve - Lower Level Activities & Usage Levels

As noted, all original proposals that would have impacted access to the lower level of Hanaua Bay have been deleted from this project. No changes to the existing means of access are included in the revised project. The limited width of the stairs, plus the inability to provide sufficient structural support in side wall mountings, make it impractical to install a handrail.

We consider your suggestion that "the current volunteer program with knowledgeable staff with multiple language skills, videos, and interpretive displays" to be a good idea. It is mandated that the costs of implementing efforts of this kind will be paid with revenues out of the Hanaua Bay special fund, and thus it would be inappropriate to fund them with the City's Capital Improvements Program. The details of such educational and information programs still need to be worked out and are beyond the scope of this project.

Section 3.5 Construction Activities

Temporary facilities will be provided for office and other visitor facilities during construction. This will be indicated in the FEIS. A specific plan for their provision will be developed, in consultation with the Nature Preserve manager, staff and volunteers, once the project is approved. (This responds to a comment under Section 3.4.2.4.)

Section 5.2.2.1 Koko Head Park Master Plan Options for Kalamanaole Highway

Reconstruction of the park entry's intersection with Kalamanaole Highway, to include the installation of a traffic light, is no longer necessary as has been deleted from this project.

Section 5.2.2.2 Master Plan Options for the Former Hawaii Job Corps Center Area

All proposals for new park facilities on the former Hawaii Job Corps site have been deleted from this project. The only change now being proposed is the demolition of the existing dilapidated buildings on this site. New proposals for improvements here will be thoroughly considered as part of the upcoming District Park and Regional Park master plan preparation programs that are scheduled to begin this September.

Section 5.6 Hanalei Bay Rules and Regulations

The proposed improvements that are part of this project and basic reasons for their completion, have been thoroughly discussed in prior responses. This project does not propose to introduce "more costly controls and unreasonably restrictive rules". The only proposal involving a change to the existing Rules is the requirement that visitors participate in a resource awareness training. This is strongly supported by a broad cross-section of Hawaii Kai residents and bay users. Section 6 of the Rules will still be applicable - the existing statement to the contrary will be corrected in the FEIS.

Section 6.3.4.2 SMA Review Guidelines and Section 7.2.14.2 Wastewater Disposal

A copy of the DEIS was submitted to Hawaii-American Water Company (the current company name for what used to be called East Honolulu Community Services), and they have commented that "the wastewater treatment plant has sufficient processing capacity to accommodate the projected wastewater discharges". A copy of their comment letter and our response will be included in the FEIS.

Section 7.1.9 Employment and Section 7.2.11 Population and Employment

The revised proposal for a snack bar does not involve the provision of 100 to 150 seats. It is intended to replace the existing snack bar in the lower bay area and will be designed to serve essentially the same number of people. No employment or other impacts on tour operators or restaurants in the Hawaii Kai area are expected.

Section 7.2.13 Roads and Traffic

Reference to Kalamanaole Highway's use as a major route for large trucks unable to use the Pali or Wilson Tunnels, and as an alternative route in cases of emergency when other road to town are blocked or closed off, will be added to Section 4.7.1 in the FEIS.

It is not anticipated that planned improvements under this revised project proposal will result in any substantive changes to the amount or pattern of traffic currently being generated by existing uses and activities in Hanalei Bay Nature Preserve and Koko Head Regional Park. No new "conflicts" or problems with traffic congestion are expected. Consequently, there is no longer a need or reason for implementing any of the proposed roadway improvements and shuttle systems that were part of the original project scope. These conclusions are based on a supplemental traffic impact analysis

report that has been prepared to assess the impacts of the revised project proposal. A copy of this report will be included in the FEIS.

The scope of the Traffic Impact Assessment Report (TIAR) is limited to impacts of the proposed actions on traffic volumes and patterns. It is not intended to be a detailed analysis of potential traffic safety issues that are usually related to the specifics of roadway design and traffic controls. This is why the report has a "disclaimer" that no conclusions with respect to traffic safety are included.

The scope and methodologies used in the TIAR follow standard professional practices for such studies, including those related to the collection of appropriate traffic count data. They also meet the requirements for an environmental assessment/impact statement.

All proposals to establish new shuttle routes and use buses on them, and to establish new facilities or attractions that would impact traffic flow in nearby Hawaii Kai neighborhoods, have been deleted from this project. With the scaling-back of the project scope, construction of a new signalized intersection at a new main park entry is no longer needed and has also been deleted.

Section 8.3.3 Relocation of the Koko Head Shooting Complex

The revised project scope no longer includes any proposed improvements that would impact or be impacted by the Koko Head Shooting Complex. As stated in section 8.3.3 of the DEIS, its relocation is not considered at this time to be an acceptable alternative. This conclusion will also be stated in the FEIS.

Conclusion to Comment Letter

The following are responses to your summary or conclusionary comments:

We disagree that the DEIS fails to adequately describe the effects of the original proposed project on the environment. In any event, the FEIS is being substantially rewritten as a result of the major changes in the project scope, and will provide an adequate description and assessment of potential environmental effects.

We believe the revised project proposal now fully takes into account the interests of the community.

All proposals that could have been construed as "appearing" to develop the area for tourism have been deleted from this project.

Under the revised project proposal, it is expected that there will be minimal impact in terms of new jobs created. The few new jobs that are likely to be created will probably be related to conducting the resource awareness training. It is anticipated that provision of these services will be contracted out to an entity like the UH Sea Grant Program, which currently maintains and staffs an educational exhibit at Hanalei Bay Nature Preserve. The costs will be covered by existing revenues from parking and park entry fees, and are not expected to be "staggering". (This subject will be more fully discussed in the FEIS.)

The reduced scope of this project is not expected to generate increased demands for police and fire protection services. With better educated visitors using the bay, ambulance and HFD responses to the Nature Preserve may actually be reduced.





- 3-31 Table 3-4: Which component includes the cost of widening of Koko Head Park Road to 24 feet (see the last para of p. 3-14)? Is this cost included in component 3 or 4, or funded from other sources under component "A"?
- 4-13 4.4.1 Para 3 (and elsewhere): The term "turf cone" is used frequently in this section. Should this be "tuff" cone (see use of "tuffcone" on p. 4-15, para. 4.4.3, subpara 2)?
- 5-12 5.6 Para 1 (last sentence): The proposed rescinding of the current "Section 6 Rules" (see p. 5-13, Table 5-1) includes (6b) Hawaiian traditional and customary rights which are governed by State law and court rulings. How does the City & County propose to effect these legal changes? Will this change impact all Hawaiian beaches and shoreline?
- 5-12 5.6 Para 3: The assertion that maintenance can be accomplished at the same time as visitor activities seems inconsistent with the estimates that total usage of the Bay facilities (upper and lower) will remain at or even possibly exceed current levels. Current closure all day Tuesdays is critical for use of oil-based paints needed at the Bay. Also, a main reason for the all-day closure was to decrease the use of the Bay so that it could replenish itself.
- 6-21 3.1.3.7 Statement that beach is closed on Wednesday mornings is incorrect, the Bay is now closed all day Tuesdays for maintenance and allow the Bay to rest.
- 6-32 6.3.4.2 Second to last Para on this page: The statement that "no construction...will reduce or further restrict public access" seems inconsistent with the actual purpose of the current project to reduce access to the Bay and early morning use of the Bay for swimming.
- 7-16 7.2.10 Shooting range (Para 3): This paragraph again stresses the safety hazard to users of the new park facilities unless/funtill significant mitigation measures are accomplished at the shooting range. Although p. 7-17 para 2 indicates that funds for the construction of new baffling is included in the City & County's 1999-2000 capital budget, the analysis included in the draft EIS (Appendix L) itself acknowledges numerous problems and unknowns regarding the proposed mitigating measures. It says that even with new baffling measures the proposed funicular to the summit would be only "slightly outside" the danger zone, that this distance itself would have to be verified by a surveyor, and that the recommended baffling systems would still require "comprehensive" testing to ensure that they were effective. In other words, not even the expert consultant is prepared to state that the safety hazard posed by the shooting range can be satisfactorily mitigated via the currently proposed measures. In fact, later in the EIS (p. 8-5, para 8.3.3) it is directly acknowledged that "Moving the Shooting Complex out of" the park would be a much better option, except that unspecified "circumstances" make this impracticable. This is clearly a very serious problem, and one that requires more concerted attention before any decision is made to proceed with this expensive investment in a potentially hazardous facility that would also involve huge liability exposure for the City and County.
- 7-16 7.2.10 "Mitigative Measures": The measures proposed to deal with the Coach Goetas Little League ballfield will not be accepted by the present users - who invested much personal time and funds in improving this field. They do not agree that rescheduling uses at the District Park ballfield will meet the need, or that there are a sufficient number of other ballfields in the community for their purposes. Had this been the case, they would not have put the extensive investment - with substantial City & County support into the Goetas field. To avoid a firestorm of protest, the only truly effective mitigative measure would be the construction of a new ballfield at the District Park or elsewhere in the community before the present one is made into parking.



**GROUP 70**  
INTERNATIONAL

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July 30, 1999

Dr. Roy J. Gritter, Secretary  
Friends of Hanauama Bay  
P.O. Box 25841  
Honolulu, HI 96825-0841

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Gritter and Members and the Friends of Hanauama Bay:

Thank you for your May 1, 1999 letter to Mr. Eugene Takahashi of the Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

We greatly appreciate Dick Baker's active participation and serving as co-chair for the recently completed series of Hanauama Bay Task Force meetings. His efforts added immeasurably to the positive results that were achieved. Thanks to his and others' help, we believe we now have a project proposal that will be of great benefit to Hanauama Bay Nature Preserve and is worthy of widespread community support.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns related to the overall planning of the larger park area, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Letter to Dr. Roy J. Gritter, Secretary  
Friends of Hanalei Bay  
July 30, 1999  
Page 2

Your organization's continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAAD006@honolulu.gov) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

#### Park Attendance Levels [Page 1-4]

As a result of the scaling back of the project scope, only improvements at Hanalei Bay Nature Preserve are now proposed. These are not expected to change the existing mix of uses in the Nature Preserve, and will have only very minor impacts on current operations. It is not anticipated that current overall attendance levels will be affected.

#### Access Reduction and Hawaiian Access Rights [Sec. 1.4.2(a) & Sec. 5.6]

The revised proposal does not involve any changes in existing regulations controlling access to Hanalei Bay Nature Preserve. The existing "Section 6 Rules", and in particular existing Hawaiian access rights, will be maintained.

#### Resident User Fees [Sec. 1.5(a)]

The revised proposal maintains the existing fee structure. Residents will not be charged for beach use.

#### Timing of Construction and Other Safety Issues Related to the Koko Head Shooting Complex [Sec. 1.6(b) & Sec. 7.2.10]

All improvements included in the original proposal that would have impacted the Koko Head Shooting Complex have been deleted from this project. Consequently, there is no longer a timing issue.

The potential long-term need for safety improvements at the Shooting Complex, especially in connection with any plans for new park facilities that could be impacted by it, is recognized. It is anticipated that this issue will receive a thorough review as part of the upcoming effort to prepare a master plan for the entire Koko Head Regional Park and Nature Preserve.

Letter to Dr. Roy J. Gritter, Secretary  
Friends of Hanalei Bay  
July 30, 1999  
Page 3

#### Operation of Guided Tours [Goal D, Page 2-2]

Plans to establish new limits on access to the lower beach area at Hanalei Bay Nature Preserve, and to require non-resident visitors (and possibly some resident visitors) to participate in guided tours, have been scrapped. The current project proposal does not include any plans to establish new guided tours. Existing restrictions on commercial tours will remain in effect.

#### Proposed Job Corps Site Improvements: Proposed Removal of Goetz Memorial Ballfield [Sec. 3.2.1, Sec. 3.3.2, & Sec. 7.2.10]

All plans for new park facilities on the former Hawai'i Job Corps Center site have been dropped. The Goetz Memorial Ballfield will now be retained. It is also now proposed that all existing buildings on this site, except for two buildings used for Parks Department maintenance operations, will be demolished.

#### Proposed Improvements at the Koko Crater Summit [Sec. 3.2.3]

Plans for a Koko Crater funicular and summit lookout are no longer a part of this project. Any reconsideration of them would occur within the context of the upcoming master planning process for Koko Head Regional Park and Nature Preserve.

#### Gift Shop Stock/Storage Area [Sec. 3.2.4.1]

We understand that stock/storage space will be needed for a gift shop. Provision for such space will be made in the facility design. It is not reflected in the description and drawings included in the EIS simply because the project design process has not yet progressed to the point where such details are defined.

#### Beach Shuttle [Sec. 3.2.4.2]

There are no plans included in this revised project proposal that would change the current manner in which the beach shuttle is operated. The original proposal to require everyone going to the beach to use the shuttle has been dropped.

#### Use of Entrance Road [Sec. 3.3.1]

All proposals for changes to the park entry roads have been dropped. The original and/or other alternative proposals to improve the Hanalei Bay and/or other park entries may be considered again in connection with the upcoming process directed at preparing a new master plan for Koko Head Regional Park and Nature Preserve.

#### Length of Visitor Stay [Sec. 3.3.2]

As noted, all of the proposed new facilities and the proposed new central parking area at the former Hawai'i Job Corps site have been dropped from the project. It is not anticipated that any of the proposed improvements included in the revised project scope will alter current visitor-length-of-stay patterns at Hanalei Bay Nature Preserve.

#### Pedestrian and Bus Access [Sec. 3.3.2]

Existing provisions for pedestrian and public bus access to Hanalei Bay Nature Preserve will remain as they are now.

Letter to Dr. Roy J. Gritter, Secretary  
Friends of Hanauuma Bay  
July 30, 1999  
Page 4

Proposed Shuttle Bus - Type of Vehicle and Peak Capacity [Sec. 3.3.3 & Sec. 3.3.1]

All proposals for new shuttle service have been deleted from the project. No changes are planned to the current operation of the beach shuttle at Hanauuma Bay Nature Preserve.

Plans for Group Tours-Sightseers [Sec. 3.4.1 & Sec. 3.4.2]

Group-tour sightseer stops at Hanauuma Bay Nature Preserve will continue to be limited to a maximum of 15 minutes. Given the short duration of these stops, it is not anticipated that these tourists will have time to visit the new marine education center. Those who may want to do so despite the short time would have to pay the entrance fee.

Miscellaneous Access Issues [Sec. 3.4.2.4 & Sec. 6.3.4.2]

Under the revised proposal, visitors will continue to gain access to the lower beach area at Hanauuma Bay Nature Preserve in the same manner as they do now - i.e., they will have the option of walking or taking the beach shuttle. The original proposal to require everyone to use the shuttle has been dropped. It is anticipated that the existing shuttle operation will continue to be able to accommodate the demand for its service.

Early morning and late afternoon users will continue to have access to the bay at the same times as they do now. No changes in the hours when the Nature Preserve is open to the public are proposed.

All proposals to establish any form of differential access rights to Hanauuma Bay or other areas of the Regional Park have been dropped.

The revised proposal does not involve placing any specific limits on the number of residents per day. Essentially, the existing limitations related to the number of parking spaces, frequency of public bus service, etc. will continue to limit resident access in the same manner as they do now.

It is proposed that all visitors to Hanauuma Bay Nature Preserve who intend to go to the lower beach area, whether they be non-residents or residents, be required to complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training. This requirement would apply whether or not they intend to snorkel. Under this proposal, residents who have completed the training would have to wait for their guests (whether resident or non-resident) to complete the awareness training before they could proceed together to the lower beach area.

Plans for Office and Visitor Facilities, Operations, and for Lower Bay Access. During the Construction Period [Sec. 3.7 & Sec. 3.8]

Temporary space will be provided for existing office operations, exhibit space, and food and snack concessions during construction. Access to the lower beach area will need to be prohibited during the re-paving of the beach access road and construction of the new turnaround, due to the inability of fire and emergency vehicles to get to the area.

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Letter to Dr. Roy J. Gritter, Secretary  
Friends of Hanauuma Bay  
July 30, 1999  
Page 5

Sources of Funding for the Proposed Improvements [Sec. 3.8 & Table 3-4]

Given the reduced project scope, all proposed improvements could be funded under the existing bond authorization.

Widening of Koko Head Park Road is no longer proposed as part of this project.

Need for, and Timing of, Park Closure to Perform Maintenance [Sec. 5.6 & Sec. 6.3.2.2]

The revised proposal reflects a continuation of the existing practice of closing the Nature Preserve all day on Tuesdays.

Errors in Sec. 4.4.1 and Sec. 6.3.2.2

Thank you for pointing these out. The appropriate corrections will be made in the FEIS.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be provided to your organization upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Fortmore*

Ralph Fortmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone

Department of Design and Construction

11/05/2002 10:00 AM Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
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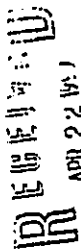
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# Friends of Honolulu Botanical Gardens

180 N. Vineyard Boulevard, Honolulu, HI 96817 • Phone (808) 537-1708 • Facsimile (808) 537-6274



APR 22 1999

GROUP 70

April 20, 1999

Mary J O'Leary, AICP  
Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307

**SUBJECT: KOKO HEAD REGIONAL PARK AND NATURE PRESERVE  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)**

Dear Ms. O'Leary:

Thank you for providing a copy of the subject document for our review. As noted in our comments on the Notice of Preparation, we were anxious to explore the potential uses of the Koko Crater Botanical Garden within the context of the regional park and nature preserve.

As described in the Notice of Preparation and noted in the purpose and need for the proposed action, the botanical garden/community recreation area was envisioned as an integral recreational element of the park, which in its name - "represents a conscious recognition and, through its planned improvements, a unification of and linkage among the various recreational and natural resources within the existing Park." However, the DEIS eliminated the botanical garden, along with other important elements of the Park, from the scope of the document. Noting this, our comments are as follows:

1. Why were key features, such as Koko Crater Botanical Garden, of the Master Plan: Overall Long Range Plan eliminated from the scope of the master plan and this document?
2. Has the Master Plan, as represented in the Notice of Preparation, been modified? If so, what changes have been made. Identify/clarify the land areas and related improvements that are included in the scope of this document.
3. Figure 4-4 indicates Koko Crater Botanical Garden as a "linear" Study Area 7. Is this an accurate representation of the scope of the archaeological inventory study?

Mary J. O'Leary  
SUBJECT: KOKO HEAD REGIONAL PARK AND NATURE PRESERVE DRAFT  
ENVIRONMENTAL IMPACT STATEMENT (DEIS)  
April 20, 1999  
Page 2

Should the scope of the park master plan be restored to address the long-term vision of integrating all the resources of this Park, the Friends of Honolulu Botanical Gardens would look forward to providing more meaningful input into the planning of the Koko Crater Botanical Garden in relation to the overall park.

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

Sincerely,

FRIENDS OF HONOLULU BOTANICAL GARDENS

Danae Anne Yee, President



July 30, 1999

Ms. Dana Anne Yee, President  
Friends of Honolulu Botanical Gardens  
180 North Vineyard Boulevard  
Honolulu, HI 96817

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Yee:

Thank you for your April 20, 1999 letter to Ms. Mary O'Leary of Group 70 International regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5559), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Ms. Dana Anne Yee, President  
Friends of Honolulu Botanical Gardens  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Inclusion of Koko Crater Botanical Garden in Project Scope**

Koko Crater Botanical Garden was not included in the original project scope due to funding constraints. As noted above, the project scope has been further reduced, and any consideration of improvements outside of Hanauma Bay Nature Preserve has been deferred until after completion of the upcoming master planning process described above.

It is anticipated that improvements to Koko Crater Botanical Garden will be considered as part of this planning process. Several interested community residents toured the Botanical Garden this past July 17<sup>th</sup> in preparation for their participation in the planning of the overall Regional Park and Nature Preserve. Again, this participation of representatives of your organization in the October 5<sup>th</sup> and 12<sup>th</sup> planning charrettes would be welcomed. Please contact Cynthia Bond at one of the numbers indicated above to sign up.

**Archaeological Inventory Survey**

The reference in Figure 4-4 to the a "linear" study area within the Botanical Garden as being one of the areas included in the Cultural Surveys Hawaii archaeological inventory survey is essentially correct. The loop trail itself, and 10 meters to each side of the trail, was surveyed.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/20/2000 10:00 AM

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
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FROM : HAWAII BICYCLING LEAGUE

PHONE NO. : 808 735-3756

JUN. 25 1999 05:51PM P1

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MAY 07 1999



3412 Waialae Ave., #1, Honolulu, Hawaii 96816 • Voice/Fax: (808) 735-3756 • Email: bicycle@hbl.com

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FINANCIAL MANAGER  
Chris Clark

5 May 1999

Hawaii Bicycling League Comments on the Group 70 Draft Environmental Impact Statement for the Development of the Koko Head Regional Park and Nature Preserve.

The Hawaii Bicycling League (HBL) promotes bicycling and other non-motorized forms of human mobility for their recreational, transportation, and health benefits. We therefore have a profound interest in how the Koko Head Regional Park is developed insofar as the development plans affect cycling and walking within the park complex and between the park and nearby communities in East and Windward Oahu. This is a plan for a large, expensive regional park. The way the park system develops will ultimately impact park usage for large numbers of residents and visitors.

The Koko Head Regional Park stretches from Koko Head to the Koko Crater Botanical Gardens. The park connects in a natural way to Sandy Beach, the Ka Iwi coastal area being acquired by the State of Hawaii, and Makapuu Lookout and Point. Therefore, decisions made regarding access and connectivity will impact the entire Ka Iwi coastline and affect the accessibility of the coast to both resident and visitor.

HBL strongly supports the need to preserve Haunama Bay and protect it from overuse. As cyclists, we have a deep and abiding concern for protecting the natural environment. But we think that the Draft Plan presented by Group 70 has serious shortcomings that will limit the park's usefulness for cyclists and walkers. We also must express reservations for some management aspects of the plan as these might impact potential tourists who bicycle to the park system.

1. Non-residents are banned from using lower Haunama bay (beach) except under "guided tour" conditions. This seems overly restrictive and imposes a double-standard on visitors. We think it is unfair to do so and will negatively impact bicyclists and walkers engaged in relatively low-impact forms of eco-tourism that the State of Hawaii is currently promoting. Indeed, visitors who will bicycle or walk to Haunama Bay are likely to be sensitive to environmental issues and can be made aware of the need to preserve the bay using the same sort of educational experience planned for residents. We think access should be restricted in a way that is non-discriminatory.

2. Virtually everything (pg. 3-21) that goes into Haunama Bay has to be shunted over from the Koko Head Nature Center (to be built on the present Job Corps site). This negatively impacts those who wish to cycle to the Bay rather than using a motor vehicle. Is this necessary? While this approach eases management problems by tightly controlling access, we think a less draconian approach should be implemented. For example, cyclists could sign in at the Job Corps location, obtain permission to ride their bikes to Haunama Bay, and then bicycle to the bay.

3. There will be no sidewalk leading down to the nature center from Kalaniana'ole Highway. People are to ride the bus, drive, or, presumably, ride bicycles. This does not take into consideration that some people might walk to the nature center from nearby communities such as, for example, Portlock and the Hawaii Kai communities immediately to the west of Koko Head (i.e., in the long, rectangular area bounded by Kalaniana'ole Highway, Lunalilo Home Road, Hawaii Kai Drive, and the natural boundaries of the Koko Head District Park. These communities are only a few minutes away from the park on foot, and indeed, trail systems could augment sidewalks to connect communities to the park. Encouraging fossil fuel consumption while protecting the environment is illogical.

4. No pedestrian access is provided to the beach in Haunama Bay from the upper levels. To restrict access, everything goes by trolley or bus. But one must pay a fee to ride the bus. This restricts those who may be on limited incomes from simply walking to the bay and saving scarce financial resources. Why couldn't a management plan be devised to let people walk to the bay?

5. There is some discussion of providing bike racks and "paths" near the Nature center (5-10) but no mention, anywhere, of biking or walking being used as an integrated means of getting around the park system or to the park system from elsewhere. No where is there even a diagram of a bike path. The plan, therefore, ignores non-motorized transportation. This is distressing as the various elements of the regional park system (including stunningly beautiful roads and potentially, trails that connect the Botanical Gardens and Ka Iwi coastline).

The fact is that the park lies within a thriving set of East Honolulu/Koolau-poko communities of over 160,000 people who live within reasonable cycling distance of the park. Even further cycling distances can be considered if one includes the City and County's bike/bus transit system.

Indeed, the lack of consideration for cycling can be seen on page 3-21 and 3-22. While the Draft EIS carefully spells out to the exact number the various car and shuttle stalls and handicapped access stalls, nowhere is there even an estimate of how many bicycles will be accommodated, where they will be accommodated, or whether cyclists can expect washrooms, secure parking, or other amenities that would encourage non-motorized transportation to the park system.

HBL believes that no management plan for the Koko Head Regional Park system is complete unless it fully examines the range of potential transportation choices that are available to people: cycling, walking, taking buses, or driving cars. The plan should

examine the nearby roadway and walkway systems and make recommendations so that these transportation resources are bike and pedestrian friendly, both within the park and connecting the park to elsewhere.

6. The consultants mentioned the idea of converting the Kalaianaoale Highway coast road to a 1-way system at low speed, but to do this they mentioned revisiting the idea of building a new highway through Hawaii Kai. This proposed road would run along a "drainage easement" that HBL President Khal Spencer mentioned as a potential community trail. Speeding is a problem in Hawaii Kai as it is elsewhere. Building a road specifically designed as a by-pass will encourage speeding. It could create more high-speed traffic along Lunalilo Home Road and Hawaii Kai Drive, where the new road would merge with existing roadways, as well as creating high-speed traffic on the by-pass itself. More high-speed roads would further dismember our communities by walls of highways and speeding cars. This scenario would endanger nearby residents who already cross wide, fast streets at their peril. It would in addition, separate these communities from easy walking access to the park itself. We find this idea distasteful.

The discussion of traffic (5-4) does not take into account the use of the nearby roads by cyclists and pedestrians. We think any plan to change traffic patterns or rebuild roadways should explicitly provide safe connectivity for cyclists and pedestrians both within the park and between the park and elsewhere.

7. Various Master Plan goals (5.2.1, pg. 5-2) for the area include promoting "low impact" use of the region. However, the plan's entire emphasis on a motorized shuttle and the building of new roads not only promotes high impact, but ignores the impact of engineering more roads and by-passes into the residential area, and encouraging more unnecessary motor vehicle encroachment into East Oahu.

The plan's failure to address the connectivity between the park system and the residents of southeast Oahu and its lack of consideration to cycling and walking as valid means of transportation ignore critical aspects of the Hawaii State Plan (6-1 to 6-3). This plan requires beneficial and multiple use, increased accessibility, ensuring opportunities for everyone's use, and promoting a greater awareness of the environment. Ka Iwi park goals (6-10) of preservation, enhancement and recreation are, ironically, addressed by building parking lots for cars at Makapuu and Hawaii Kai Golf Course. No thought is given to redesigning the roads so they encourage cycling or walking instead of driving.

The plan ignores City and County General Plan objectives (6-11 and 6-12 A, B4, D, D6, and D7 as discussed above, by encouraging fossil fuel reliance and promoting a disconnect between neighborhood access and the park system.

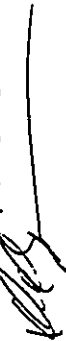
Further, we fail to see how the plan encourages regional Master Plan goals that provide for passive and active open spaces and accessibility of recreational open space (6-21) because the plan encourages motor vehicular use to the exclusion of low-impact human powered transport that better connects people to the land.

8. Under Sec. 7, "probable impacts", pg. 7-18, states that the planned improvements will have little impact on traffic because the number of people using the park will remain constant at current levels. But page 7-21 directly contradicts that statement. Surely, "having two major publicly-accessible nature preserves so near to each other" will

encourage more visits and therefore more traffic, and the plan admits this. We are therefore confounded as to why no attention is given to encouraging non-motor visits to the park, especially from nearby areas of East and Windward Oahu. This should be done by incorporating cycling and walking facilities into the park, designing cycling and walking friendly engineering principles into the nearby roadways and walkways, and providing trail system leading from neighborhoods into the park where feasible. Promoting bicycling and walking use would go a long way towards encouraging a more environmentally sensitive population, and fulfill the various visions in the master plans.

In summary, HBL fully supports efforts to control access and restore the health of Haunama Bay. But because of the limiting effects this plan has on cycling and walking, HBL does not see where this park plan, on balance, provides a positive outcome. Indeed, driving to the coast, sitting at a nature center, being trucked around in a bus between stops does not remind HBL of connecting to the land or ocean. This project must be reexamined. While it is necessary to protect the bay, an overall concept that encourages people to connect from their homes or hotels to the land in a more comprehensive manner, encouraging a greater environmental awareness through walking, hiking, and bicycling, must be devised.

Khal Spencer  
President, Hawaii Bicycling League



Letter to Mr. Khal Spencer  
Hawaii Bicycling League  
July 30, 1999  
Page 2

Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

1. Banning of non-residents from using lower Hanauma Bay except under "guided tour" conditions.

This proposal is no longer a part of the revised, scaled down project. Existing regulations and operational practices governing access will remain essentially as they are now. The only change currently being proposed that would impact accessibility is a requirement that all visitors to Hanauma Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training.

2. Relocation of Hanauma Bay parking to a new central parking area on the former Hawaii Job Corps site.

This proposal has been dropped and the existing parking lots at Hanauma Bay Nature Preserve will remain. The existing bicycle parking area will also remain.

3. Walkways and trail systems connecting the surrounding communities to the Regional Park and Nature Preserve.

The existing walkway from Kalaniana'ole Highway into Hanauma Bay Nature Preserve will remain. No changes to existing provisions for pedestrian access into and between the different parts of Koko Head Regional Park and Nature Preserve are planned at this time. However, we anticipate that proposals for improving bicycle and pedestrian access will be considered as part of the upcoming master planning process, as described above.

4. Pedestrian access to the beach in Hanauma Bay.

The proposal to require everyone going to the lower beach area to use the beach tram has been dropped. Visitors, including those walking their bikes, will continue to be able to walk between the beach and the upper park area in the same manner as they do now. It

July 30, 1999

Mr. Khal Spencer, President  
Hawaii Bicycling League  
3442 Wai'ale'ale Avenue, #1  
Honolulu, HI 96816

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Spencer:

Thank you for your May 5, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. This would be a highly effective way of ensuring that an appropriate level of consideration is given to the Hawaii Bicycling League's "interest in how Koko Head Regional Park is developed insofar as the development plans affect cycling and walking within the park complex and between the park and nearby communities in East and Windward Oahu" in the course of preparing new master plans for the District and Regional Parks.




Francis S. Ode, AIA, AICP  
Norman G.Y. Hoang, AIA  
Sheri B. Seaman, AIA, ASID  
Harold Hida, AIA  
Roy H. Nishi, AIA, CSI  
James I. Schimmo, AIA  
Ralph E. Pomeroy, AICP  
Stephen H. Yuen, AIA  
Linda L. Chung, AIA

Paul P. O'Connell, AIA  
Dean H. Karamura, RA  
Norma J. Scott, RA  
George J. Allen, AICP  
Julius H. Overton, AICP  
Kathleen V. Nam  
Roy A. Hensley, AIA, CSI  
Frank W. McGee, RA  
Christine M. Rowland, AICP  
Shari M. Jones, AIA

Letter to Mr. Khal Spencer  
Hawaii Bicycling League  
July 30, 1999  
Page 4

**CONCLUSION**  
Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to your organization upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,  
  
Ralph Fortmore, AICP  
Principal

Attachment  
cc: Mr. Jim Nakasone  
Department of Design and Construction

Letter to Mr. Khal Spencer  
Hawaii Bicycling League  
July 30, 1999  
Page 3

is anticipated that further study will be made of alternatives for establishing a separate pedestrian path to the beach, or for improving the safety of continued joint use of a beach access road. However, given the reaction to the original proposal, elimination of optional pedestrian access is no longer being considered.

5. Use of biking or walking as an integrated means of getting around the park.
- As noted in the response to #3 above, it is anticipated that an examination of the full range of potential transportation choices, including especially proposals for improving bicycle and pedestrian access, will be considered as part of the upcoming master planning process for Koko Head Regional Park and Nature Preserve.
6. Building new highways and/or changing existing traffic patterns.
- No new road construction or changes in existing traffic patterns is proposed in connection with this revised project proposal. Any such changes, if considered at all in the future, should be reviewed within the context of the upcoming master planning process for Koko Head Regional Park and Nature Preserve.
7. Promoting "low impact" uses, providing for connectivity between the park system and residents of southeast Oahu, and consideration of cycling and walking as valid means of transportation.

As noted, the scaled-down scope of the revised proposal addresses only needed improvements to Hanauma Bay Nature Preserve. However, it is realized that these and other issues related to use of the Koko Head Regional Park and Nature Preserve and its connection to the surrounding community should be addressed in a comprehensive fashion, before any additional major park improvements are undertaken. This is why processes for preparing new master plans for the Koko Head District Park and Koko Head Regional Park and Nature Preserve are planned to begin in September and October, respectively. We urge your organization to send representatives who will actively participate in these programs.

8. Impacts of the proposed improvements on traffic.
- Given the scaled-down nature to the revised proposal, and the intention to continue to operate Hanauma Bay Nature Preserve in essentially the same manner as it is currently being operated, this project no longer includes any proposals that are expected to impact existing traffic volumes or patterns. Traffic impacts will be considered as part of the Koko Head Regional Park and Nature Preserve planning process.

**9. Summary**  
HBL's support of efforts to control access and restore the health of Hanauma Bay is greatly appreciated. This project has been revised to focus almost exclusively on providing improvements that are needed to support achieving these purposes. We urge you and other members of your organization to actively support the approval of the necessary permits for this project during the upcoming review processes, so that it may be completed.

HAWAII CITIZENS' RIGHTS PAC  
P.O. Box 667, Kalaheo, HI 96734

City and County of Honolulu  
Dept. of Design and Construction  
650 South King St., 9th Floor  
Honolulu, HI 96813

June 4, 1999

RECEIVED

Attn: Mr. Jim Nakasone, Project Manager '99 JUN -7 P2:18

**SPECIAL NOTE:** The following is a revision of our letter on the same subject as our letter of June 1, 1999 which is being expanded as a result of additional questions from our members. The additional questions are found in section IV below.

FACILITIES DESIGN & ENG

RE: Koko Head Regional Park and Nature Preserve, East Honolulu, Island of Oahu  
Draft Environmental Impact Statement

Dear Mr. Nakasone,

Hawaii Citizens' Rights Political Action Committee (HCR) represents over 7,000 firearm owners in the state of Hawaii, the vast majority of which reside in Honolulu and are users of the Koko Head Shooting Complex. HCR takes no position with regard to most of the proposed changes to the greater Koko head Regional Park area, but we do have major concerns related to those changes that will impact the Shooting Complex. Essentially these concerns relate to two main areas: the safety of the range and its uninterrupted operation. What follows is a more detailed expression of these concerns as well as a number of questions:

I. The Range Analysis in Appendix L (page 9) expresses uncertainty as to whether the team line and viewing platform would actually be within the safety fan created by the proposed baffling. The point is then made that this would have to be determined by a surveyor/civil engineer. In view of this uncertainty, how can an informed decision on this matter possibly be made? Isn't it preferable to have the measurements and the calculations completed before evaluating the plan so that the plan's viability may be known? What would happen if the plan is approved and the survey then reveals that the proposed baffling will not accomplish the desired result?

II. What are the details of construction of the baffling system as they relate to the design and type of materials being considered? Has this design been tested and used successfully elsewhere? Are the design and materials suitable for this location and how will they withstand exposure to Hawaii's intense sun, salt air, rain, and wind? What evidence or testing has been done that supports the conclusion that the proposed design and materials are the optimal ones?

III. Will the operation of the Shooting Complex be interrupted during construction or during periodic maintenance and if so to what extent? This question is of paramount importance to the users of the range as there is no where else to shoot on Oahu and thousands of shooters remember the range closure for the better part of a year in 1992 to remedy a safety problem. Along the same line, what would happen if the baffling is built but fails to adequately shield the team from stray bullets? Would the range be closed?

IV. ADDITIONAL QUESTIONS:

1. The DEIS as submitted is not complete. It is impossible to comment appropriately on an incomplete document without the measurements, maps, and calculations required to determine the areas of potential hazard. The DEIS needs to add the missing information (perhaps as a supplementary DEIS) and resubmit for public comment, with an additional comment period. For example, what is the maximum hazard distance/radius of the most powerful cartridge fired at the range? Please include a projectile hazard survey map illustrating the areas of hazard.
2. Where has the proposed design been tested and used successfully? What specific materials are to be used? How do we know that the proposed materials and design are sufficient to fully protect the public and to assure that design shortcomings or future degradation do not threaten the closure of the only public shooting range on Oahu?
3. What is the hazard potential of projectile ricochet?
4. When will a draft construction schedule be available?
5. Please provide details of all anticipated and possible impacts on Oahu's shooting population.
6. What actions are to be taken if there is a failure of the system to fully protect to downrange areas?

Sincerely,



Brian Baron, Chair  
2207 Mohala Way, Honolulu, HI 96822 (please address correspondence to this address)  
Tel: 946-7663



July 30, 1999

Mr. Brian Baron, Chair  
Hawai'i Citizens' Rights PAC  
2207 Mohala Way  
Honolulu, HI 96822

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Baron:

Thank you for your June 4, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaleia Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head Regional Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head District Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (827-5538), fax (827-5563) or e-mail (CAA00056@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Mr. Brian Baron  
Hawai'i Citizens' Rights PAC  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Proposed Action's Impacts on the Koko Head Shooting Complex**

All project proposals that could have raised safety concerns, and/or required improvements to or otherwise impacted the use of the Koko Head Shooting Complex, have been dropped. This in particular includes the proposal to build a funicular railway to the top of Koko Crater and provide a summit lookout. All remaining proposed improvements are to be located at Hanaleia Bay Nature Preserve.

Consequently, while safety and/or other improvements at the Shooting Complex may still be appropriate, there is no immediate need to pursue their completion in order to ensure the safety of users of a new funicular and summit lookout. Any future consideration of safety improvements, or possibly of relocating the Shooting Complex to a suitable alternative site, will be done within the context of the upcoming effort to prepare a new master plan for the Koko Head Regional Park and Nature Preserve. Plans for the initiation of this process are described above.

**Detailed Questions on Proposed Safety Improvements**

Since the summit funicular and summit lookout are no longer proposed, any proposals for safety improvements and the Shooting Complex are no longer a part of this project. Should improvements be considered in the future, a new and separate EIS that describes that project and assesses its potential impacts will be required at that time. This would be the appropriate time to address the detailed questions and concerns raised in your letter.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ray Fortmore*  
Ray Fortmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/20/2003 10:00 AM  
11/20/2003 10:00 AM

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
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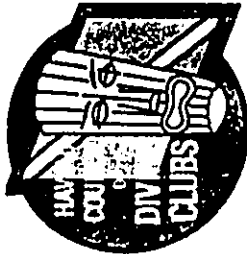
May 6, 1999

Jim Nakasone  
City & County of Honolulu  
Department of Design and Construction  
650 South King Street - 9th Floor '99  
Honolulu, HI 96813

RECEIVED

MAY 10 8 53

Re: Koko Head Regional Park and Nature Preserve  
Draft EIS Comments  
C & C OF HONOLULU



Jim Nakasone, DDC  
City & County of Honolulu  
Page 2

Dear Mr. Nakasone:

The Hawaii Council of Diving Clubs (HCDC) appreciates the opportunity to provide the following comments concerning the Koko Head Regional Park and Nature Preserve Draft EIS:

The Council and its member clubs were disappointed that many of the interests and needs of SCUBA divers and free divers were omitted or made unnecessarily complicated in the Draft EIS. Items of particular concern to HCDC include:

- Intent to reduce convenience of access to the Hanauma Bay Nature Preserve and implement poorly identified "comprehensive and restrictive" management practices (DEIS para 1.4.2).
- Issues associated with handling and safety of diver equipment and feasibility of the proposed transportation plan (DEIS para 3.2.4.2).
- Need/requirement for guided tours of Hanauma Bay for experienced resident divers (DEIS para 3.4.2.4).
- Plan provision for bus/taxi access to Hanauma Bay at the expense of other visitors (DEIS 5.9).
- Ambiguous fee structure proposed for plan implementation (DEIS para 1.5 & 3.4.2.1-3.4.2.4).
- The lack of public access to a water safety observation post so that diving and snorkeling decisions may be made prior to central parking and equipment transportation (DEIS para 5.3.2).

For divers belonging to the Hawaii Council of Diving Clubs and the diving community in general, it is the direct access and exploration of the natural environment, both within Hanauma Bay and outside the bay within the Park boundary, that is the key to a quality and enhanced recreational experience. We believe the DEIS plan fails to successfully address this issue and those noted above.

Divers do understand the need for stewardship of the ocean (and land) resource and minimization of diving impacts within the Preserve. This is why HCDC was one of the lead agencies in the creation of the MCLD.

We propose the following elements for your consideration in the plan.

- Recognize that divers have special advance observational, equipment transportation and access needs. Consult with divers and HCDC on these matters.
- Maintain a portion of existing upper level parking available for cliff side site water safety observation accessible by private vehicle for short term parking.
- Provide sale of "annual passes" available to resident divers having completed "resource awareness training" and provide reservation based parking with "first come first served" private vehicle parking at the upper level with lower level equipment drop-off.
- Consider access improvements to other shoreline areas of the park, including toilet bowl and Lanai lookout. Identify environmental impacts and costs associated with added accesses.
- Clarify the fee structures proposed for various park venues to explain the approach and quality assurance for balancing visitor impacts by fees. The implementation of "excess" fees for a public owned park is regressive and irresponsible.

We look forward to working with you and your staff in the resolution of these items. HCDC holds monthly general council meetings on the second Wednesday of each month at 7:00 pm at 505 Ward Avenue, Suite 204. You, your staff and your consultants are invited to any of our meetings, and with some advance notice of your attendance, we are sure that many divers would be interested to discuss the proposed action. You may reach me directly at 596-7833 or fax me at 596-7836.

Sincerely,

Robert W. Purdie, Jr.  
HCDC Secretary



Francis S. Ode, AIA, AICP  
 Norman G. Y. Hong, AIA  
 Sheryl B. Scannan, AIA, ASID  
 Hiroshi Iida, AIA  
 Ray H. Niles, AIA, CSI  
 James I. Nishimura, AIA  
 Ralph E. Pinner, AICP  
 Stephen H. Voss, AIA  
 Linda L. Chung, AIA

Paul P. Oberst, AIA  
 Dean H. Keener, RA  
 Vivian J. Sait, RA  
 George I. Alt, AICP  
 Jeffrey H. O'Brien, AICP  
 Kathleen A. Nam  
 Roy A. Inverett, MA, CSI  
 Frank B. McGee, RA  
 Christine M. Rowell, AICP  
 Stuart M. Jyn, AIA

July 30, 1999

Mr. Robert W. Purdie, Jr., Secretary  
 Hawaii Council of Diving Clubs  
 P.O. Box 298  
 Honolulu, HI 96809

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Dear Mr. Purdie:

Thank you for your May 6, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hananuma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

We greatly appreciate your active participation in the recently completed series of Hananuma Bay Task Force meetings. It added significantly to the positive results that were achieved. Thanks to your and others' help, we believe we now have a project proposal that will be of great benefit to Hananuma Bay Nature Preserve and is worthy of widespread community support.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
 Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5538), fax (527-

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
 925 Kihel Street, Fifth Floor • Honolulu, Hawaii 96813-1917 • Phone (808) 527-5466 • FAX (808) 527-5467 • http://www.group70.com • e-mail: madd@group70.com

Letter to Mr. Robert W. Purdie, Jr.  
 Hawaii Council of Diving Clubs  
 July 30, 1999  
 Page 2

5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Convenience of Access to Hananuma Bay Nature Preserve**

The revised project proposal no longer includes any major changes to the existing management practices affecting the convenience of access to the Nature Preserve. The only change now being proposed that would impact accessibility is a requirement that all visitors to Hananuma Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training. It is our understanding, based on your participation as a member of the Hananuma Bay Task Force, that your organization supports this change.

**Issues Associated With Handling and Safety of Diver Equipment**

As noted above, proposals that would have impacted the handling and safety of diver equipment have been dropped. No changes in existing practices are proposed.

**Need/Requirement of Guided Tours of Hananuma Bay**

Any requirement for experienced resident divers to participate in guided tours has been dropped. However, as noted in the first response above, they would be required to do the resource awareness training.

**Provisions for Bus/Taxi Access at the Expense of Other Visitors**

The revised proposal does not include any changes in existing restrictions on bus access to Hananuma Bay Nature Preserve. They will continue to be limited to a maximum length of stay of 15 minutes.

We agree that the current policy of allowing taxis to directly enter Hananuma Bay Nature Preserve is being used by some visitors - primarily tour operators - to circumvent the current regulations and management practices that are intended to control access to the bay. However, as discussions at the Hananuma Bay Improvements Task Force meetings indicated, a blanket prohibition on this form of access would likely preclude access to the Nature Preserve for residents who need to use taxi cabs to get there. Essentially, there are no easy solutions to this problem that became apparent in these discussions.

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Letter to Mr. Robert W. Purdie, Jr.  
 Hawaiki Council of Diving Clubs  
 July 30, 1999  
 Page 3

The proposals to be discussed in the Final EIS do not include or reflect any changes to the existing manner in which taxi access is being regulated. However, it is our understanding that the City will continue to monitor this situation closely and, if it becomes an increasingly serious problem, will actively look into ways to address it without inconveniencing "legitimate" taxi users.

Ambiguous Fee Structure

The revised project proposal maintains the existing fee structure. It is expected that the added costs of operating the proposed new marine education center, including conducting the resource awareness training, will be covered by the existing entry fee.

Lack of Public Access to a Water Safety Observation Post

The existing ability of divers and snorkelers to check out the conditions in the bay before unloading their gear will be maintained. The improvements included in the current project proposal will not impact this.

Annual Passes for People Who Have Completed "Resource Awareness Training"

As indicated in the first response above, annual passes will be available to all park users who have completed the resource awareness training, whether or not they are Hawaiki residents.

Access Improvements to Other Shoreline Areas

The revised project scope does not include any recommendations for shoreline area access improvements. As you are aware, the Hanalei Bay Improvements Task Force only briefly addressed this subject, and did not recommend any such improvements. However, this would be an appropriate subject for consideration as part of the master plan preparation process for Koko Head Regional Park and Nature Preserve, as discussed at the beginning of this letter.

CONCLUSION

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*  
 Ralph Portmore, AICP  
 Principal

Attachment

cc: Mr. Jim Nakasone  
 Department of Design and Construction

11/09/1999 10:00 AM FAX TO THE HAWAIIAN ISLANDS PRESERVE

June 1, 1999

City and County of Honolulu  
 Dept. of Design and Construction  
 650 South King St., 9th Floor  
 Honolulu, HI 97813  
 Attn: Mr. Jim Nakasone, Project Mgr.

Re: Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement East Honolulu, Island of Oahu, Hawaii

Dear Mr. Nakasone,

The Hawaii Historic Arm Association members, who are also representatives of many of the more than 50 firearm owner organizations in the state of Hawaii, have some concerns related to, and questions about, the City and County plans for the Koko Head Regional Park. We have among our many members, shooters who are older than the range itself, and who have had many years of experience using the range at Koko Head as well as ranges in other venues. We have a broad mix of backgrounds and experience. Many of us question the wisdom of the overall plans outlined in the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement East Honolulu, Island of Oahu, Hawaii (hereafter referred to as the EIS). This is due mostly to fair use issues, traffic problems, potential legal and liability problems, and the inability of the environment in the Koko Head area to recover from the disruption that construction would cause. Our primary interest and expertise relates to the issues surrounding the Koko Head Shooting Range Complex. We are confident that other community members will address the numerous problems they see with other aspects of the Koko Head Regional Park plans. Our questions and concerns about the plans for the Koko Head Shooting Range Complex are as follows:

We applaud efforts to make the range theoretically safer, even though there is no demonstrated public hazard at the present time. Range improvements are always welcome, as the Koko Head site is the only public range on Oahu and well as the only suitable site for certain types of firearms and tactical training for the police department and other public safety officers.

- Is it true that efforts to identify a suitable alternative site have been abandoned as is indicated by the EIS?
- If that is the case, should the City and County be considering plans that might put the availability of the range by law enforcement for required training (as well as the needs of the public) in question in order to build a tramway and observation deck. The placement of said deck which might increase the liability potential to the City and County of Honolulu since it conflicts with a facility necessary for law enforcement training?
- Is it a good idea to put a tourist attraction in potential conflict with the range even with the improvements in place, given the current legal climate and recent liability cases involving municipalities?

Given that there is an established need for the range at the present location, (the present scope of facilities serving both the public and law enforcement), the suggested range improvements are desirable, both in and of themselves, and to mitigate potential safety problems with the proposed tramway and observation

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deck. We note, however, that the potential problems cited are theoretical, and have not been verified. Given that each physical site is different, problems may be revealed by testing of unusual circumstances (such as shooting without regard to range safety rules which has been suggested as the cause of previous range safety concerns) even if the full set of improvements is implemented.

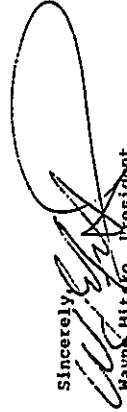
- Will the range tests include only reasonable (that is, within the range operating rules) firing tests, or will extreme tests be carried out to prove resistance of the safety measure to outright abuse?
- While the improvements, such as baffling, are constructed, have plans been formulated to keep the range operating to serve the public and law enforcement during such construction?
- Will the range be able to operate while other phases of the park plan are implemented?
- Will the work have to be carried out at night with additional labor and equipment expense?
- What alternative will be available to the public and law enforcement if the range is required to cease operation during some phases of construction?
- Where has the proposed baffling construction been proven effective and durable in a similar environment to that of Koko Head?
- Is the proposed baffling a proven design, placed in a similar environment, with a proven track record, or will the baffling have to be custom designed for a range as large and varied as the Koko Head site with attendant additional cost?
- How will the effect of strong winds, corrosive atmosphere and insect pests be factored against the degradation of structures put up in the area?
- How will maintenance of the sacrificial portion of the baffling be financed over the years?
- How will the maintenance of the structure degraded by environmental factors be financed in out-years?
- When will the maintenance be carried out, given the daytime use of the facilities by the public, and law enforcement community use at other hours?
- How will the baffling be effective for the silhouette portion of the range and for the long range targets positioned in the ravine across from the right hand portion of the present rifle range?
- Will the baffling increase the noise level for the shooters or for the community?
- Will the multiple echo from the baffling surface be directed to the ground or out towards the adjacent communities?
- Will the sacrificial nature of the baffling require special maintenance for the range grounds as the ablative coating or impact absorption materials degrade?
- What is the expected life of the baffling and a projected replacement/maintenance schedule?
- How has that schedule proven out in other venues?
- Will the nature of the baffling surface or casing make it more vulnerable to insect degradation once it has done the job it is intended to do (been breached by an accidental round) and will insect treatment endanger range users?
- Will the baffling construction make grounds maintenance more difficult by providing additional down range obstructions or degraded materials that must be gathered before mowing or other maintenance can take place? Will the baffling have to be painted or preserved periodically, and when would that

be done, at what cost financially and how would that affect availability of the range to law enforcement and the public?

- How will baffling affect the use of the skeet and trap portions of the range?
- Will any of the baffling or other range improvements make the range ineligible for competition or shooting for record?
- Will the baffling still allow the law enforcement agencies the flexibility they need to qualify under the varying conditions required, or will they be limited to shooting from set locations on the range?
- If so, would the same restrictions apply to other shooting events which rely on varied shooting points (into a safe backstop) to follow match rules?
- Will the range improvements combined with potential conflicts with the tramway and observation deck restrict the range to the use of limited types of ammunition, and if so, how might that affect law enforcement and the public?
- Will bullet traps be required for all impact areas of the range?
- How will bullet traps work for the skeet, trap, long range targets, and silhouette portions of the range?
- Are there bullet impact areas which will not need to be modified, and are safe as they exist?
- Will the proposed changes in berms, baffling, and bullet traps change to view that range officers have down range so as to require changes in operations or the hiring or more range officers in order to ensure the safety of range users?
- Are there plans for undertaking the potential improvements mentioned in the EIS such as classrooms, security upgrades, support facilities, lights for night shooting, caretaker facilities, and police facilities?
- Are the funds already committed to range improvements regardless of the implementation of the Koko Head Regional Park plans?
- If funds are available, is there a timetable for range improvements regardless of the larger Koko Head Regional Park plans?
- The EIS mentions certain deed covenants upon transfer from the Bishop Family Holding to the City and County of Honolulu specifying the use of the site as a range. Is that true and if so, will that potentially block development of the area if the range is threatened, due to legal action by Bishop Estate or other interested parties?
- Is the deed and any other defining documentation available for examination as part of the public comment process?

In our examination of the Koko Head Regional Park plans EIS, many questions came to mind, as you can see. We hope that we have made a valuable contribution to determining the best course of action to promote safety at our only public and law enforcement training range. We would welcome any questions that you might have of us concerning the shooting range portion of the Koko Head Regional Park plans.

Sincerely,



Wayne Hitoko, President  
Hawaii Historic Arm Association  
885-3422

Hawaii Historic Arms Association  
3161 Ala Ilima Street #216  
Honolulu, HI 96818

DEPARTMENT OF PARKS AND RECREATION  
**CITY AND COUNTY OF HONOLULU**  
450 SOUTH KING STREET, 10TH FLOOR • HONOLULU, HAWAII 96813  
PHONE: (808) 532-4182 • FAX: (808) 533-4054



WILLIAM D. BALFOUR, JR.  
DIRECTOR  
MICHAEL P. ARA  
DEPUTY DIRECTOR

JUL 15 1999

JUL 21 1999

GROUP 70

Mr. Wayne Mitsko, President  
Hawaii Historic Arms Association  
3161 Ala Ilima Street, #216  
Honolulu, Hawaii 96818

Dear Mr. Mitsko:

Thank you for your letter regarding the Koko Head Shooting Complex.

As you are aware, this project has been revised and your concerns regarding Koko Head improvements will not be pursued at this time. However, your comments have been forwarded to Group 70 International, Inc., who is the consultant for this project.

We would like to invite you to participate on the Koko Head Task Force. Please call Ms. Cynthia Bond, the Hawaii Kai Vision Team Facilitator, at 527-5558 if you have any questions and for further details on meeting dates and times.

Sincerely,

*W.D. Balfour, Jr.*

WILLIAM D. BALFOUR, JR.  
Director

HDB:fe

cc: Group 70 International, Inc.  
Ms. Cynthia Bond



July 30, 1999

Mr. Wayne Mitsko, President  
Hawaii Historic Arms Association  
92-1254 Uahana Street  
Kapolei, HI 96707

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Mitsko:

Thank you for your June 1, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanuama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

- Frank S. Ode, AIA, AICP
- Norman G.Y. Heng, AIA
- Sheryl D. Seaman, AIA, ACP
- Hiroshi Iishi, AIA
- Ray H. Nohel, AIA, CN
- James I. Nohel, AIA
- Ralph E. Parmenter, AICP
- Nephtali H. Yoon, AIA
- Luella L. Chung, AIA
- Paul F. Cheney, MA
- Dawn H. Kawanaka, RA
- Nancy J. Nave, RA
- George T. Auld, AICP
- Jeffrey H. Osherson, AICP
- Kathryn A. Neri
- Roy A. Inouye, AIA, CN
- Frank H. McGee, RA
- Christine M. Rowland, AICP
- Stuart M. Jew, AIA

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be

FILE COPY

Letter to Mr. Wayne Misko  
Hawai'i Historic Arms Association  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Proposed Action's Impacts on the Koko Head Shooting Complex**

All project proposals that could have raised safety concerns, and/or required improvements to or otherwise impacted the use of the Koko Head Shooting Complex, have been dropped. This in particular includes the proposal to build a funicular railway to the top of Koko Crater and provide a summit lookout. All remaining proposed improvements are to be located at Hanaua Bay Nature Preserve.

Consequently, while "efforts to make the range theoretically safer" may still be appropriate, there is no immediate need to pursue their completion in order to ensure the safety of users of a new funicular and summit lookout. Any future consideration of safety improvements, or possibly of relocating the Shooting Complex to a suitable alternative site, will be done within the context of the upcoming effort to prepare a new master plan for the Koko Head Regional Park and Nature Preserve. Plans for the initiation of this process are described above.

**Detailed Questions on Proposed Safety Improvements**

Since the summit funicular and summit lookout are no longer proposed, any proposals for safety improvements and the Shooting Complex are no longer a part of this project. Should improvements be considered in the future, a new and separate EIS that describes that project and assesses its potential impacts will be required at that time. This would be the appropriate time to address the detailed questions and concerns raised in your letter.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*John Portmore*  
John Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

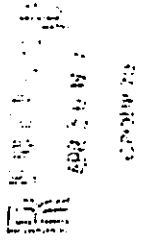
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251 Huihui Street, Suite 200 • Honolulu, Hawaii 96813 • Phone: (808) 525-9646 • FAX: (808) 525-9647 • http://www.group70.com • email: mail@group70.com

**Hawai'i-Kai Youth Baseball**

PO Box 21942

Honolulu, Hawaii 96823



April 27, 1999

Mr. Francis Oda  
Group 70  
925 Beliel Street  
Honolulu, Hawaii 96813

Re: Koko Head Regional Park Plan EIS

Mr. Oda:

I'm submitting these comments on the subject EIS on behalf of nearly 300 youth baseball players and their families and nearly 100 flag football players and their families.

Your design for the Koko Head Regional Park area calls for the elimination of one of our fields, namely the Mike Goetas Field to make room for parking and other developments. After listening to Group 70's presentation and the responses to questions and concerns by Mr. Balfour and Mr. Fujiki of the city administration, we wish to offer the following comments:

1. Since the CIP funds have only been appropriated but revenue bonds not yet sold, this might be the appropriate time to downsize this project in the interest of community concerns. In light of the budget shortfall of approximately \$6.3 million needed to complete the entire project, perhaps it would be more publicly palatable at this juncture to limit the project to \$13 million. To remain within this ceiling, we would not mind having Goetas Field retained but scaled down and buffered by landscaping from the other attractions planned for the area. Mr. Balfour promised a substitute field but was not specific as to where that field would be. However, it is important for parents to have Goetas Field in its current location contiguous to the other fields since they often have more than one child playing at a given time. By redesigning Goetas Field, we would save the City from expending additional CIP funds to build another field--funds that are not in the budget and may not make it into the next biennium budget. This modification to your current design is doable and the amount of parking sacrificed would be minimal. The overall effect is that the City remains within budget, we keep our field and at very little impact to the objectives of your design. It certainly seems like a win-win proposition to us.

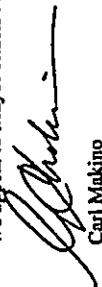
2. While we understand the need to preserve Hanaua Bay and increase city revenues, more thought must be given to the commercialism and "Disneyland" vision for the area. However, should the administration decide to proceed, we

hope that by design, you will keep the vehicular traffic to and from Hanauma Bay and the Koko Head center away from the baseball fields and residential areas. Despite your traffic consultant's study, the area is heavily used during the week by youth activities. On Saturdays, that usage triples and the resulting increase in traffic offers much concern if we are to now contend with the commingling of tour buses, limos and outsider vehicles with residential traffic and youngsters playing in the baseball field area. Please keep outside traffic away from the parks and youth play areas.

3. The community is not against the preservation and better management of our natural resources. It does seem, however, that when so much commercialism is introduced into the community and residents restricted from using those natural resources, there is a credibility gap that must be bridged.
4. I'm familiar with the importance Group 70 places on people and cultural issues when developing your design strategies. Taking away Goegas Field from this community is more than merely paving over paradise and finding us another field. Many little people came together and donated their time, equipment, and whatever they could afford to make Goegas Field into what it is today. The City had given its complete and unconditional approval for this field in 1996. From 1994, when the approval process began, no one from Mayor Harris, to his park administration, to the City Council hinted of any future plans for the area--nor did anyone even imply that we might have the field for only 2-3 years. We were told that we could, at our own expense, improve the field, have it dedicated to Mike Goegas and have use of the field--no strings attached. It seems unconscionable to take this field away from our community and very insensitive for the administration to cavalierly suggest that we should be overjoyed by some nebulous offer of another field. I know that Group 70 is obligated to tow the party line--but I know that this is not how Group 70 prefers to operate in this town. Please take another look at your design to see if a small piece for our future generation can be made to fit.

We are reasonable people. We support the Mayor's wish to better manage Hanauma Bay and understand the need to increase revenues for the City. A reasonable compromise and a win-win position must be reached. We are confident that Group 70, with its record of environmentally, culturally and people friendly projects will be able and willing to actually improve on your current design to also accommodate the needs of our community and especially its youth.

We appeal to Mayor Harris and the City Council to do the right thing.

  
Carl Makino  
President

cc: Mayor Harris  
Members, Honolulu City Council  
Hawai'i Kai Neighborhood Board



July 30, 1999

Mr. Carl Makino, President  
Hawai'i Kai Youth Baseball  
P.O. Box 25942  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Makino:

Thank you for your April 27, 1999 letter to Mr. Francis Oda of Group 70 International regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Interactive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project by phone (577-5558), fax (577-5563) or e-mail (CAA008@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Letter to Mr. Carl Makiino  
Hawaii Kai Youth Baseball  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Overall Project Scope and Size

As noted above and in the attachment, the project scope and size has been significantly downsized in response to community concerns.

Included in these changes is the retention of the existing Gooas Memorial Ballfield.

No changes in existing vehicular traffic patterns are included in the revised proposal. Nothing is planned that would impact the current separation of traffic to the Hanauua Bay Nature Preserve and other areas of the Regional Park from the baseball fields and other recreational facilities in Koko Head District Park, and the nearby residential areas.

Improvements to Hanauua Bay Nature Preserve

We appreciate your support for improvements that would make it possible to better manage the use of Hanauua Bay.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

  
Ralph Fortinore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction



**HAWAII RIFLE  
ASSOCIATION**

Founded 1857

**RECEIVED**

JUN - 21 - 1999

GROUP 70

THE STATE AFFILIATE  
OF THE NATIONAL  
RIFLE ASSOCIATION  
P.O. Box 1175  
Honolulu, HI 96807  
(808) 261-2754

City and County of Honolulu  
Dept. of Design and Construction  
650 South King St., 9<sup>th</sup> Floor  
Attn: Mr. Jim Nakasone  
May 22, 1999

Dear Mr. Nakasone,

This is correspondence related to the Environmental Impact Statement for Koko Head Regional Park and Nature Preserve.

HRA, representing our very interested membership, the users at the Koko Head Shooting Complex, and all gun owners and shooters in the State, respectfully submits the following questions to be addressed by the EIS relevant to the Shooting Complex.


HRA supports the proposed changes to the range, and the planned tramway and observation deck downrange of the firing line, if the continued safe operation of the range is unaffected. We have no other public place to shoot. Thus our concern and our questions. Thank you for your consideration.

1. What are the construction details of the proposed baffling? What materials?
2. Will it encompass all three ranges firing toward Koko Head, the silhouette, rifle, and the pistol ranges?
3. Will the baffling affect air quality (lead levels)? Noise levels?
4. Will downrange bullet traps compromise target visibility?
5. Have mainland ranges of this size been baffled successfully in this manner?



6. Needed safety improvements at the range noted in Mr. McClaren's report have languished for years for lack of funds. Is the City committed to complete these and to maintain them and the baffles after they are installed?
7. What of the other items in the McClaren report? Caretaker's house, fence around the shooting complex, multilingual signage, classroom, secure ammunition storage for HPD?
8. Will the long range targets out to 440 yds. be affected?
9. What disruption of range operation is anticipated during construction of the baffles and berm changes?
10. In the event that the baffling and berm reconfiguration projects should prove not totally effective and require revisions, and range operation is deemed unsafe in the interim, would the tram and observation deck be shut down during adjustments, or the rifle range, or would they alternate operations on a schedule? We recall the range was shut down for an entire year for the 1992 reconfiguration when bullets were allegedly impacting into the newly extended parking lot for Hanauma Bay.
11. Do you plan to include NRA Range Development Division as correspondents? We believe you should. They have extensive experience in baffle systems and would be willing to make an on-site visit and prepare a report for a very modest standard fee (\$300).

Note that the draft EIS incorrectly refers to an existing caretaker's residence. There is currently none. Mr. McClaren's report advised one for security reasons.

Sincerely,  


Dr. Maxwell Cooper  
 Vice President  
 261-8988

cc: Group 70 International, Mr. Ralph Portmore



- Frank S. Ouli, AIA, AICP
- Norman G.V. Hong, AIA
- Sheryl H. Scaman, AIA, AICP
- Hansu Heba, AIA
- Roy H. Niles, AIA, CSI
- James I. Nishimura, AIA
- Ralph E. Pinnacker, AICP
- Stephen H. Yuen, AIA
- Isabel L. Chung, AIA
- Paul P. Chernick, AIA
- Dean H. Klammer, RA
- Nancy J. Saut, RA
- Lawrence I. Mee, AICP
- Kenneth H. O'Brien, AICP
- Kathleen A. Nam
- Ray A. Insapke, AIA, CSI
- Frank B. MacCue, RA
- Christine M. Rueda, AICP
- Stuart M. Jurek, AIA

July 30, 1999

Dr. Maxwell Cooper, Vice President  
 Hawaii Rifle Association  
 P.O. Box 11175  
 Honolulu, HI 96807

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Dear Dr. Cooper:

Thank you for your May 22, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
 Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.



recreational uses" are being considered then they should be included in this DEIS in order to provide a comprehensive evaluation of all potential uses and impacts. Otherwise there is the possibility of "just adding on" under the guise of the FEIS and the cumulative environmental impacts will not be known. If Entry Location for Koko Crater Botanical Garden and Equestrian Center. If improvements or relocation of the entry to the Botanical Garden are anticipated then that issue must be fully discussed in the FEIS so that cumulative impacts can be assessed.

**2.0 Purpose and Need For The Proposed Actions**  
**Goal B.** Since a carrying capacity study has not been completed how was it determined that the proposed actions will not cause irreversible impacts? Local residents have been going to Hanalei Bay for decades and understand the importance of protecting the fragile marine ecosystem. It is insulting to require them to be part of a guided tour or attend a session on resource awareness training. The negative impacts to the Bay began when tourists were dropped off by the bus loads for hours at a time, unsupervised and without being informed of how to take care of the marine environment. What are the implications of this Plan on the right of access for Native Hawaiians? What will it cost the City to conduct the guided tours and provide training sessions? How often will tours and awareness sessions be given? How many people will be on each tour or session? How many people can be processed this way per day? There is a conflict between the statement that the summit funicular route will be "over the existing abandoned railway tracks" and P. 1-5 which states, "views of the new funicular route..." (emphasis added). Which statement is correct?

**Goal C**

**3.1 Overview**

Item #4 states that the shuttle system will transport users to Koko Crater Botanical Garden but the next paragraph states that Koko Crater Botanical Garden is not within the scope of this document. Then Sec. 1.7 states that entry/access to Koko Crater Botanical Garden might need to be changed. If the shuttle is to transport people to the Botanical Garden and improvements are anticipated then changes are very much within the scope of this plan and must be considered in this document so that cumulative impacts can be considered and addressed.

Figure 3-2.

How much will the parking fee be? Impacts to users of Koko Head District Park and residents from construction and heavy equipment noise, user noise, noise generated from cable cars, litter and exhaust fumes needs to be discussed. If all parking spaces are utilized 2000+ people could be throughout the Park at any given time (10 buses @ 50 persons each = 500, 20 vans @ 12 persons each = 240, 450 car stalls @ 3 persons per car = 1350) This does not include persons arriving by taxi, limousine, bus and van drop offs. Tour buses usually do not park. They discharge passengers and come back later to pick them up. This drop off and pick up of hundreds of people is what had the greatest negative impact on the natural environment at Hanalei Bay. How many tour buses are anticipated to bring tourists to the Park per day?

**1.4.1 Beneficial Impacts**  
 What distinctive natural features are referred to? Identify how the "users" contact with the Park's resources" will be enhanced? Explain how implementation of this plan will avoid "potential adverse impacts on traditional Hawaiian archaeological sites, endangered vegetation areas and coastal and marine ecosystems?" Explain how "impacts of park facility improvements on the environmental setting..." will be reduced when the snack bar will be larger than how exists and the bus tour around be enlarged to the point of almost encroaching into the 55 foot setback.

**1.4.2 Adverse Impacts**  
 A negative impact not mentioned is the cost of activities. A break down for all costs for a local family of four to visit Hanalei Bay needs to be included in the FEIS. An adverse impact not mentioned is the amount of time needed for each activity association with going to the Bay. The FEIS must contain a time table showing length of time estimated to park a car, stand in line to purchase tickets for the Bay and the shuttle, length of time waiting to get on shuttle at Nature Learning Center, length of time waiting to get on shuttle to go down to the Bay, length of time waiting to take "resource awareness session" and length of the session. A negative impact not mentioned is the displacement of activities at former Job Crop site such as childrens sports fields and activities. Impacts to residences and district park users below Old Military Radar Station are not addressed. An adverse impact not mentioned is the impact of additional traffic and traffic light on drivers not going to any of the activities.

**1.5 Proposed Mitigative Measures**  
 Controls on Access to Hanalei Bay. What does keeping fees at reasonable levels have to do with "any inconvenience caused by new management practices?" Especially when there are no fees now for local residents. What is considered a "reasonable level?" Removal or Disturbance of Old Military Radar Station Remnants. Why do existing facilities need to be removed? Are these facilities eligible for listing on the State or National Register of Historic Places? Isn't it possible to incorporate the "remnants" into the summit lookout? Impacts on Views of Koko Crater. The following information is not provided: hours of operation, impact of cable car and people noise from summit on residences and district park users, impacts of additional traffic to and from area, location of new funicular route in relation to existing cable car tracks, number of trees to be removed to build new track, types of construction required.

**1.7 Unresolved Issues**  
 If preservation, enhancement and low-impact are goals for Koko Head Park how can this document be considered a complete disclosure document and planning proceed before the carrying capacity study is completed? Public Trails and Other Recreational Facilities on Koko Head. If "additional

- How long is it anticipated that a bus will park in the lot - 1 hour, 2 hours - while passengers visit all the attractions?
- How will van, limousine, taxi and bus drop off and pick up be controlled? Without a carrying capacity study how is it known what the limit of the natural resources are?
- **Figure 3-6**
- It is impossible to detect any difference between the half-tone grey line and the solid black lines on this legend. A clearer rendering must be included in the FEIS.
- What is the percentage of ground covered with impervious surfaces now and percentage of impervious surfaces once all projects are implemented?
- How will the runoff pattern be altered under this new schema?

#### 3.2.4.1 Upper Park Area Improvements

- What is the height of the two buildings? How far back will they be set from the rim?
- Will the buildings be visible from the within the bay from the beach?
- How many people can the observation Plaza, marine education center and snack bar hold at one time? How many people are anticipated to visit these facilities over an eight hour time period?
- Since visitors will arrive by shuttle from the Nature Learning Center what is the purpose of retaining the tour van and bus turn-around area? How many buses and vans will the area hold for parking? How long can they park? Will the area be available for tour bus, taxi, limousine and van drop off and pick up? Will City buses be permitted to stop and pick up here? Is so, how many times will they stop in an 8 hour day? Can private cars, visitors and residents, drop and pick up and stop for a brief period to visit the exhibit? What is the anticipated number of visitors generated from this parking area in an 8 hour day?

#### Figure 3-9

- Why was the picnic area placed away from the rim? There doesn't appear to be any parking near the picnic area, how do people get there?
- This diagram is faulty in that it does not differentiate between physical facilities and landscaping. Since the impacts are different it is imperative that the location and footprint of existing buildings and landscaping be differentiated from each other and shown in relation to what is planned.
- What is the percentage of impervious surface now compared to the percentage upon completion of all anticipated facilities? How will the runoff pattern be altered and how will runoff be contained?

#### 3.2.4.2 Lower Park Area Facilities

- Why is pedestrian traffic on the beach access road being eliminated? What will be the cost to use the shuttle and how will the fee be determined?
- Since the only way to get to the bay is via shuttle which will be greatly increased then impacts from exhaust fumes, oil and gas leaks and runoff on the bay and natural resources must be evaluated and included in the FEIS.
- **Figure 3-10**
- It is impossible to determine existing facilities and landscaping from planned facilities and landscaping. The FEIS must contain a more distinct diagram with the landscaping shown separated from the buildings.

#### Figure 3-11

- What is the purpose of the bus turn-around?
- This diagram shows a viewing area. Will tour buses, City buses, vans, taxis and limousines be permitted to stop/park in this area to allow for viewing, visiting the snack bar, exhibits, and gift shop? If so, how long will each vehicle be allowed to stay? How will stopping time be monitored?
- Will vehicles using this turn-around and viewing area have to pay to get in? Will private cars be permitted to use the turn-around? If not, explain why and how this does not discriminate against local residents who, for the most part, do not use tour buses, taxis, vans and limousines.

#### Figure 3-13

- Will the exhibit areas be above the existing grade? If so, what is the height, how much soil will be removed and/or fill brought in?
- Does this diagram accurately depict the existing grade?

#### Figure 3-14

- Why is the new info. Center being built so close to the 55 foot setback?
- This sketch is incomplete. In order to ascertain visual and other impacts from new construction the new information center and beach activity building, enlarged turn-around, new comfort station and landscaping must be shown in relation to existing buildings, turn-around and landscaping.
- How many trees will be removed to accommodate and enlarged turn-around, underground utilities and new buildings?
- Since Figure 3-14 is a "conceptual site plan" what is the public input process if the FEIS is accepted as is and the "conceptual site plan" is changed?
- How wide will the sandy areas be in comparison with the existing sandy areas?
- Will the Marine Education Center and Snack Bar buildings be visible from the beach and bay area?
- Will soil be brought in to build berms? Is so, how much. If not, where will the soil come from.

#### 3.3.1 Entry Roadways and Kalamanaole Highway Intersection Improvement

- Why won't private cars be permitted to use the entrance road to Hanama Bay? Allowing only shuttle buses, tour buses, taxi cabs and service vehicles to use the entrance road discriminates against local people who drive their car and wish to bring family and visitors to enjoy the view, visit the Marine Education Center, gift shop and snack bar.
- Will limousines be allowed to use this entrance? Explain the answer.
- Will people be allowed to use the entrance road to walk down to the facilities?
- The statement, "Park visitors will travel to Hanama Bay on a shuttle transportation system" is misleading because it infers that the number of people will be controlled through the shuttle system. When in actuality pg. 3-14 still allows commercial tour buses, vans and taxi's, and perhaps limousines, to drop off and pick up passengers at the upper rim.
- The relationship of the new "shuttle loop road" to the existing entrance area of Koko Crater is not shown. The intersection is located in a precarious spot when coming from Waianalo because there is a slight grade and it is hard to see the intersection until you crest the hill.
- The Westbound approach is unfair to traffic as traffic will back up waiting for

left turns to be made. What provisions are being proposed to ease this potential problem?

There appears to be conflict over the Hanalei Bay bus area. Pg. 3-21 identifies the area as a "tour bus parking lot" while Figure 3-11 identifies it as a "bus turn-around & viewing area." What is the purpose of this area?

### 3.3.2 Central Parking Area

How much of the "already developed Hawaii Job Corps Center site and an existing ball field" is presently paved? How much more paved parking area will be added from all the mauka projects?

Were people riding bicycles, mopeds, using the City bus and motorcycles figured into count of people using the Bay and other facilities?

Bicycles, mopeds, limousines and motorcycles were not figured into the parking data of Table 3-1.

How much grading will be required to create the four tiered paved areas? Where will the excess soil be deposited? How much fill will be brought in? How steep are the cuts? How will the drainage pattern be altered and what is the new drainage pattern?

### 3.3.3 Park Shuttle Transportation System

Why wasn't the DTS initial assessment of the transportation system's requirements included in the DEIS?

Has a study evaluating the impact of the mixture of tour buses, cars and 40-foot long transit buses at Lani Lookout and Hakona Blowhole scenic points been done? If yes, why wasn't it included in this DEIS? If not, this information must be included in the FEIS.

Since the drawings don't show maintenance or bus barn facilities where will the shuttles and 40-foot long transit buses be housed?

### 3.3.3.1 Main Shuttle Route-Nature Learning Center and Hanalei Bay

According to the peak hour capacity during an 8 hour day the Bay could have a visiting population of about 9,600. This figure does not count those who arrive in via bus, taxi, limousine or van at the turn-around area. Is this an increase, decrease or about the same as current Bay use levels?

Does the carrying capacity study cover the entire Park including the Botanical Garden and look-out sites?

Why are such large buses necessary? Wouldn't the negative impacts on the natural resources be less if 20 passenger vans were used?

### 3.4.1 Park Usage

Of the 1,600,000 annual visitors what is the estimate of how many will go to the bay? How was this figure determined?

How many guided tours will be given in one hour? In an eight hour day? How many people will one tour hold? How often will they be given?

Where will the "resource awareness training" sessions be held? How many will be given in one hour? How many within an eight hour day? How many people will a session hold? How often will they be given?

Hanalei Bay once was a place where many local people want to celebrate special occasions and have a good time but now only 14% visit the Bay. What a shame. A

good clean local resource has been turned into a tourist mecca and this plan will substantially reduce the remaining 14% of local people. Ever wonder why local residents are resentful of tourists? Here's a good example.

What is the difference between group-tour sightseers and destination group tours?

### 3.4.2 Park Attractions and Activities

Why isn't the City Council involved in ticketing policies and pricing since they approve the City budget?

Why was the DEIS done before the carrying capacity was completed? It should have been done after the carrying capacity study was completed and the information included.

In essence this section is saying that we don't know what the carrying capacity is but an "established usage limit" will be enforced, monitored and maybe adjusted.

How soon we forget the past. It was the lack of information that resulted in massive impacts to the Bay, scrambling to save the resource and closing the Bay so it could mend.

Will the carrying capacity study be available to the public for review and comment? If so, when? If not, explain why? Hopefully the carrying capacity study evaluates the entire Koko Head Regional Park and Nature Preserve.

What activities does a "general Park entrance" cover? All fee-based Park activities and attractions should be listed.

How will fees be determined?

What is the process to obtain "general beach access" tickets?

We support providing educational material but find it insulting to require local island residents to participate in "resource awareness training."

Under this new scheme will the Bay be closed one day a week as is currently being done?

### 3.5 Construction Activities

It is impossible to evaluate potential impacts from grading, grubbing, excavation, trenching, blasting, additional hard surfaces, demolition, cut and fill, earth moving, and general construction activities when estimates are not provided for each construction activity and site. Without this information it is impossible to assess environmental and health impacts.

At what location(s) is "mass grading" anticipated? What is the amount to be graded?

This section does not even mention construction of the new roadway to Koko Crater or the Koko Head road, Hanalei Bay and Kalanamaoale Intersection and the impact that will have on traffic.

The DEIS is negligent in not mentioning mitigation measures, soil, noise, water containment methods and monitoring during construction.

At the very least all the above missing information MUST be in the FEIS.

### 3.5.2 Excavations (cut and fill)

This very brief general description is unsatisfactory. It does not describe how much cut, fill, grading, or soil removal will be required for each construction activity. There is no way to determine impacts of individual or cumulative environmental activities.

The DEIS is negligent in not mentioning mitigation measures, soil, noise, water containment methods and monitoring during construction. At the very least this information must be in the FEIS.

- 3.7 Project Schedule
  - How long will each activity within each phase take to construct?
  - How long will the bay and currently used facilities and areas be closed to the public?
  - What is the process to limit the number of people using the bay before the Koko Crater parking lot is completed?

Table 3-4  
What does Other Sources mean? If a figure is not in the Appropriated Funds category is it unfunded?

4.2.3.3 Cultural Surveys Hawaii Archaeological Inventory Survey  
We agree with the retention of sites and features recommended by Cultural Surveys Hawaii.

4.4.4 Drainage, Flood Tsunami Hazards  
This section is negligent in not identifying present drainage patterns and how these patterns will be changed once the terrain is altered by additional surface hardening from new buildings, new roads, extensive parking, and the new entrance to the Nature Learning Center. Without this information it is impossible to evaluate drainage impacts.

4.4.5.1 Vegetation in Undeveloped Areas  
This section fails to mention how the native 'aili' shrub, kawelu grass, and other native plants will be protected or impacted by construction along the funicular route.  
Will any old kiawe trees be removed to make way for the new buildings at the Hanalei Bay rim? If so, how many and their location should be identified in the FEIS.  
Are the hala and mako located where construction activities will take place? If so, what protection will be provided?

4.4.6. Birds, Fauna and Insects  
How will the Wedge-tailed Shearwaters and Bulwer's Petrel and their nesting be impacted by the construction of the funicular route, the summit lookout? Once constructed how will the continual use of the funicular, summit lookout and noise from large amounts of people impact the birds and their nesting?

4.6.3 Former Hawaii Job Corps Center Site  
Are there arrangements to relocate the two basketball courts, ballfield and stage pavilion for continued community use? Does the community support the new locations?

4.6.4 Koko Head Shooting complex  
Earlier in this report it was stated that some sort of shielding will have to be put up to protect people from stray bullets. Yet, there is no mention of it in this section, the phasing section or any money appropriated to install the shield. Since this is a matter of safety funding must be secured before project construction begins. When is it anticipated that will money be appropriated and the shield installed?

4.7.2 Drainage  
What is the purpose of mentioning how existing drainage patterns will be impacted when the purpose of an EIS is to evaluate the impacts from new drainage patterns?  
This section is remiss in not identifying all existing drainage patterns, how these patterns will be changed and what the impacts will be. At the very least the FEIS must contain this information accompanied by diagrams showing the existing and changed drainage patterns.

5.3.1 Master Plan Goals and Objectives  
Presently only 14% of Hawaii residents now visit Hanalei Bay and this plan of forcing residents to take a "resource awareness training", pay for parking, ride a shuttle, get a ticket to go to the beach (how insulting), and allow only half as many residents as tourists will further reduce this percentage. Thus, this plan does not meet Goal B. Optimize the use of Hanalei Bay as an important recreational resource for the people of the State of Hawaii. (Emphasis added)  
How does bringing in over a million and a half visitors to the new facilities and natural areas meet Objective 1. Limit overall park user volumes as a means of controlling impacts on natural resources and park facilities?

6.0 Relationship to State and City and County of Honolulu Land Use Plans, Policies and Controls  
Since this DEIS is just for the Koko Head Regional Park & Nature Preserve it is inappropriate under 3.1.1 and 3.1.3 to include areas outside of the Park boundaries such as golf courses, and Hawaii Kai Marina.

7.2.10 Recreational Resources  
Pg. 7-16  
It is unacceptable to say that removal of the existing little league ballfield is "acceptable" because it benefits the greater good since children, their parents, and coaches in the immediate area will be impacted.  
It is incorrect to say that "access (to Hanalei Bay) will be managed more intensively than it is now..." when taxis, vans, and buses will still be allowed to drop off and pick up passengers via the bus parking lot near the rim. Will limousines be allowed to use the Hanalei Bay service road and parking lot?  
Pg. 7-17  
Examples of "reasonable levels" for fees should be included in the FEIS?

7.2.14.2 Wastewater Disposal  
What is the justification for the statement that "Total effluent flow from all Park

facilities to the treatment plant...should actually be less compared to when the Job Corps operated on this site...? It is hard to believe that the impact will be less when the Park is expecting over a million and a half visitors a year. If upgrades or modifications to the Hawai'i Kai sewage treatment plant are needed how will they be paid for and by whom?

**Traffic Impact Assessment Report for Koko Head Regional Park and Nature Preserve**

- It is disappointing to note that the traffic study did not seem to think that the new stop light would be much of a problem for through traffic. This is a bad spot as it is around a corner, coming from Waimanalo, and at the down side of a slight rise. Traffic that is backed up it could cause great problems.
- This would ease the back up especially for through-traffic.
- Pg. 5 states that the "Projected attendance for the project is estimated to be from 4,000 to 5,000 visitors per day." Multiplied by 365 days the annual count could be 1,825,000. That is about 200,000 more than stated earlier. What are the correct visitor figures per day and annually?
- Was this analysis based on cars or 40-foot buses which will shuttle people to the various sites?
- The study should evaluate the impact of the 40-foot buses on the traffic pattern at the look out sites i.e. available parking, need for additional parking stalls, ease of ingress and egress, congestion within parking areas etc.
- It is imperative that the FEIS include an analysis on the impacts to traffic and traffic patterns from continual left and right hand turns of the 40-foot shuttles at the look out sites.
- How many manual traffic counts were conducted at each intersection?



July 30, 1999

Hawaii's Thousand Friends  
305 Hahani St., Suite 282  
Kailua, HI 96734

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Members of Hawaii's Thousand Friends:

Thank you for your May 14, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

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Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (522-5558), fax (522-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO APPLICABLE COMMENTS

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#### General/Bullet Comments

- As noted, the scope of the proposed project has been reduced significantly. Cumulative impacts will be fully disclosed and assessed in the FEIS.
- The revised project scope will be fully described in Section 3 of the FEIS, and every effort will be made to avoid having "bits and pieces" of plan elements presented in other sections. In general, the format used in preparing the DEIS follows that prescribed in the "Environmental Impact Statement Rules". This format will also be used in the FEIS.
- The revised project scope is limited to only improvements at Hanauma Bay Nature Preserve that are intended to enhance the ability to minimize the impacts of park users on the Preserve's overall natural environment and, in particular, on the bay's marine ecosystem. No major changes to existing management practices related to access and use of Hanauma Bay Nature Preserve are proposed. There are also no changes whatsoever that are proposed to existing facilities and management practices in the rest of the Koko Head Regional Park and Nature Preserve. Given this reduced project scope, the revised plan should not 'significantly affect the social welfare of local residents'.
- All proposals for improvements or changes in existing park operations or use that could have resulted in establishing an 'arduous process for visiting various sites' or 'take away from the wilderness experience that Hanauma Bay and the Ka Iwi coastline offer' have been deleted from this project.
- The purpose of adding 'Nature Preserve' to the 'Koko Head Regional Park' name is merely to better reflect the existing and desired future use of this area, as reflected in the goal statements in the 1992 Koko Head Regional Park Master Plan (Sections 2.0 and 5.2.1 of the DEIS). There are no other 'implications' or 'advantages' that we are aware of.
- All new facilities will be designed to meet the requirements of the Americans with Disabilities Act guidelines, as stated at the beginning of the description of proposed new facilities (Section 3.2) in the DEIS.
- As noted, the Hanauma Bay Nature Preserve will continue to be operated in essentially the same manner as it is being operated now. New facilities and activities proposed for other areas of Koko Head Regional Park and Nature Preserve are no longer included in this project. There are no plans to sell all day or half-day passes, or yearly passes.

#### Responses to Specific Referenced Comments

##### Section 1.4 Opening Paragraph (Top of Page 1-4)

- **What Park usage?** The reference was to all uses in the Regional Park and Nature Preserve. Under the revised proposal, none of the planned improvements will involve changes in how Hanauma Bay Nature Preserve or other areas of the Koko Head Regional Park and Nature Preserve are currently being used.

##### Section 1.4.1 Beneficial Impacts

(Note that this summary will be substantially revised in the FEIS as a result of the substantial revisions to the project scope.)

- **What distinctive natural features are referred to?** Koko Crater Summit and Botanical Garden, Hanauma Bay, the coastline as seen from the proposed scenic shuttle, as described in Section 3.
- **How enhance users' contact?** Through improved access, establishment of escorted tours, etc., as described in Section 3.
- **How avoid potential adverse impacts?** This is explained in detail in Section 7.
- **How reduce environmental impacts?** The intended emphasis was, and remains, on reducing impacts in environmentally sensitive areas like Hanauma Bay by moving potentially damaging activities like the snack bar to the less sensitive areas like the upper park area. The proposed lower park area turnaround is required for emergency vehicle access and is not much larger than the existing turnaround area.

##### Section 1.4.2 Adverse Impacts

- **Cost of activities.** Existing fees will remain as they are now, and no new fees are planned under the revised proposal. This will be discussed in detail in Section 3 of the FEIS.
- **Time needed for each activity.** Except for proposed resource awareness training, the referenced new activities and access arrangements requiring waiting time have been dropped. The need and reasons for an awareness training will be fully discussed in Section 3 of the FEIS. Please refer also to the 2<sup>nd</sup> bullet response to comments on Section 2.0.
- **Displacement of activities.** Under the revised proposal, there will be no displacement of existing public park activities at the former Hawai'i Job Corps site.
- **Impacts to adjoining uses?** All proposals that would have impacted District Park users and nearby residences have been deleted.
- **Impact of additional traffic.** The revised proposal no longer involves improvements that might generate additional traffic and require installation of a new traffic light at the entry to Hanauma Bay Nature Preserve.

##### Section 1.5 Proposed Mitigation Measures

- **Controls on access to Hanauma Bay.** As noted, the revised project proposal no longer involves any changes in the existing access provisions and fee structure.
- **What is considered a reasonable fee level?** No changes in existing \$1.00 parking fee and \$3.00 non-resident adult entry fee at Hanauma Bay Nature Preserve are proposed.
- **Removal or disturbance of former military radar station remnants.** The revised project no longer involves any improvements that would impact this area.
- **Impacts on views of Koko Crater.** The revised project no longer includes any facilities that would impact these views.



**Section 1.7 Unresolved Issues**

Goals for Koko Head Regional Park. The specific purposes of the proposed new facilities at Hanalei Bay are to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. All "added" (as opposed to replacement) facilities are relatively small in size and are limited to things required for public education/awareness training, public safety (e.g., the new turnaround and lifeguard equipment storage space) or public convenience (e.g., expanded restrooms and new small public lockers for storage of valuables).

Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these goals, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be contrary to, impede or constrain efforts to implement further protective measures, whatever they might be, except possibly in the case of a recommendation to close the bay to public use. A recommendation to do this or impose similar extreme measures is not anticipated.

Therefore, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. The "wait-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve existing master plan goals without compromising future options.

Public trails and other recreational facilities on Koko Head. No such new improvements are included in this project. The planned improvements at Hanalei Bay Nature Preserve will not substantially alter how the general public uses this area. With the exception of the demolition of existing dilapidated buildings at the former Hawai'i Job Corps site, they will have no impacts whatsoever on the physical environment of other areas of Koko Head Regional Park and Nature Preserve, or on the ways these other areas are currently used. Thus, the planned improvements will not be the source of potential cumulative environmental impacts.

Entry location to Koko Crater Botanical Garden and Stables. The revised project proposal does not involve any improvements to this entry or other improvements that would impact the Botanical Garden.

**Section 2.0 Purpose and Need for the Proposed Actions**

Will proposed actions cause irreversible impacts? With the reduced project scope, this is no longer considered a possibility. Please refer also to the responses to comments on Section 1.4.1 (4<sup>th</sup> bullet) and on Section 1.7 (1<sup>st</sup> bullet).

Restrictions on access to Hanalei Bay. The reduced project scope renders many of your comments moot. In particular, there will be no impacts on native Hawaiian access rights. It should be noted that a "Hanalei Bay Improvements Task Force", established by Mayor Harris and made up of a broad cross-section of Hanalei Bay users, caretakers and concerned residents, reached a "strong consensus" that all bay users should be required to go through a resource awareness training.

Cost and capacity of guided tours and training sessions. New guided tours are no longer planned. Existing revenues from parking and entry fees will be used to pay for the costs of conducting the resource awareness training.

The capacity to conduct these sessions will be tailored to limiting the number of people using the lower beach and bay area to a maximum of 2,000, as required under current regulations. However, the precise number of people who could attend a single training session and the duration of each session are still to be determined.

Since the Nature Preserve will continue to be operated in essentially the same manner as it is now, at least until the carrying capacity study is completed, daily attendance is expected to be about the same as it is now. It currently averages around 3,000 people per day, with a peak at or slightly over 5,000 people per day on the busiest days in the year.

Statements on the summit funicular route. The proposed funicular has been dropped from this project.

**Section 3.1 Overview**

Statements on Koko Crater Botanical Garden. The revised project no longer includes a scenic shuttle route and does not include any improvements to the Botanical Garden.

**Section 3.2.1 Nature Learning Center-Former Hawai'i Job Corps Site**

Figure 3-2. With the deletion from the project of the new nature learning center, summit funicular and central parking area, all of these comments are no longer applicable.

Figure 3-6. Same response as immediately above. This figure will not be included in the FEIS.

**Section 3.2.4.1 Hanalei Bay-Upper Park Area Improvements**

Building height and setbacks. The maximum heights of the new marine education center and snack bar will be approximately 15 feet, including the almost level natural grass roof form. Setbacks from the rim will range from approximately 30 to 50 feet. Precise dimensions are still to be worked out in the design process.

View of the buildings from within the bay, and from the beach. The intent is to severely limit, if not eliminate, the ability to view these buildings from the beach. They will also not be visible from many near-shore areas in the bay. The buildings' exterior walls and the roof form are being designed to blend as much as possible with the natural surroundings so that, where they are visible, they are hardly noticeable.

Capacity of the observation plaza, marine education center and snack bar. Please refer to 3<sup>rd</sup> bullet response to comments on Section 2.0 for a discussion of the capacity of resource awareness training sessions. The exhibit/display area and the observation plaza will both have ample space to accommodate number of people who are expected to pass through, and no problems with respect to capacity are anticipated. Most visitors are eager to get to the bay and are not expected to linger for a long period of time in the exhibit/display area or plaza. Space will also be available in the exhibit/display area for sessions with school classes and other small groups. The snack bar will be sized to accommodate roughly the same number of people being served by the existing snack bar in the lower bay area, which is approximately 800 to 1,000 people per day.

Tour bus and bus turnaround area. This area is existing and will continue to be used as it is now. There are 11 existing parking spaces. All tour buses and vans are limited to a maximum length of stay of 15 minutes. This is strictly enforced by a security guard who remains on duty in this location throughout the day.

No private cars are allowed to drop off and pick up people in this location. Only taxis are currently allowed to do this. Occupants of private cars that want to stop for a brief period must park in the automobile parking lot.

The existing parking lots contain 308 parking spaces. Approximately 800 to 1,000 cars pay the parking fee on an average day, including about 100 to 200 cars per day that leave within 15 minutes and thus receive a refund. A significant majority of visitors who go to the lower bay area arrive at the Nature Preserve by private automobile. However, separate counts are not taken of park users who arrive by automobile as opposed to those who arrive by public bus, taxi, moped or bicycle, or walking.

**Figure 3-9. Marine Education Center Site Plan**

- **Location of the picnic area.** This is placed where existing shade trees are available. People currently and will continue to get there from the parking area in the same manner as they get to the nearby entry to the lower bay area, which is by walking or wheelchair. There is a loading/unloading zone provided near the picnic area where picnic gear and passengers can be dropped off before cars are parked.
- **Differentiation between existing and planned physical facilities and landscaping.** Separate figures showing existing conditions and the proposed improvements will be provided in the FEIS to facilitate a comparison. The scale of these graphics, plus technical and cost issues related to multiple reproduction of black-and-white images with clear distinctions between shadings, do not allow for the provision in an EIS of a single illustration that can clearly distinguish between existing and proposed conditions.
- **Percentage of impervious surfaces, and containment of runoff.** The existing and proposed percentages of impervious surfaces have not been calculated. Such a percentage would be just an abstract and very low number in the context of a park of the size of Hanauma Bay Nature Preserve. We believe the extent of such surfaces can be adequately described, and their impacts adequately assessed, without providing such percentage figures.

Runoff will continue to be handled as it is now, which is to channel most of it into retention basins - the primary one being the picnic area - where it is allowed to evaporate and percolate into the ground. These have sufficient capacity to handle all but the most intense storms. Overflow outlets are provided for such basins. These direct the overflow runoff to the base of the cliff in the lower beach area.

**Figure 3-10. Marine Education Center Detailed Site Plan**

- **Differentiation between existing and planned physical facilities and landscaping.** Please refer to the 2<sup>nd</sup> bullet response to comments on Figure 3-9.

**Figure 3-11. Marine Education Center Conceptual Design**

- **Purpose of bus turnaround.** This is an existing facility that accommodates tour buses and vans for a maximum 15-minute stop. No changes are proposed.
- **Viewing area.** Occupants of the buses and vans that stop at the bus turnaround usually use the 15 minutes to view the bay from the viewing area and use the restrooms. Please refer also to the 4<sup>th</sup> bullet response to comments on Section 3.4.2.1.
- **Fee to use the turnaround.** No fee is currently charged.
- **Use of the turnaround by private cars.** Please refer to the 4<sup>th</sup> bullet response to comments on Section 3.4.2.1. It is realized that prohibiting such use raises "fairness" issues. Allowing this area, or the providing a separate area, to be used by private

cars for short stops to view the bay has been investigated by park management personnel. However, there are both management and space issues for which they have found no readily apparent solutions.

It is intended that ways to provide a short-term parking area for cars will be more thoroughly investigated as part of the Koko Head Regional Park and Nature Preserve master plan preparation process outlined at the beginning of this letter.

**Section 3.2.4.2. Lower Park Area Facilities**

- **Pedestrian access.** This will continue to be available to the lower park area.
- **Shuttle to the bay.** No increase in the existing use of the beach shuttle is anticipated.

**Figure 3-13. Marine Education Sections**

- **Placement of facilities vis-à-vis existing grades.** This will be clearly depicted in the FEIS.

**Figure 3-14. Lower Level Facilities Conceptual Site Plan**

- **Location of new information center.** The purpose of this facility (to be located in the lower bay area) is to disseminate educational materials and information on proper use of the bay to those coming down to use the beach and bay. As such, to be reasonably effective, it needs to be in a location where it will catch the attention of most people entering the lower bay area, whether they arrive by walking or the beach shuttle. In other words, it needs to be where people will tend to naturally flow past it.

This is the location recommended by the Hanauma Bay Education Program and Friends of Hanauma Bay, a volunteer group who staff the existing information table on the beach and devotes many hours to other activities aimed at preserving the bay's natural ecosystem, and by the Hanauma Bay Improvements Task Force. It will be located more than 55 feet from the certified shoreline boundary, or 15 feet beyond the minimum required 40-foot setback.

- **Differentiation between existing and planned physical facilities and landscaping.** Separate figures showing existing conditions and the proposed improvements will be provided in the FEIS to facilitate a comparison. The scale of these graphics, plus technical and cost issues related to multiple reproduction of black-and-white images with clear distinctions between shadings, do not allow for the provision in an EIS of a single illustration that can clearly distinguish between existing and proposed conditions.

- **Removal of trees.** Approximately 10 existing coconut trees will be relocated (not removed). New trees and landscaping will also be added.

- **Conceptual site plan.** The proposed lower park area improvements that are now included in this project closely reflect the consensus recommendations of an intensive public input process. Proposals for both the lower and upper park areas have been thoroughly discussed, and recommendations developed, by the community-based Hanauma Bay Improvements Task Force over a series of seven workshops and planning sessions held during June and July. The new site plan that will be included in the FEIS is the result of that process.

- **Width of sandy areas.** The new turnaround will encroach slightly into an existing sandy beach area. This is being kept to a minimum by providing only the minimum allowable turnaround radius. The beach width will be slightly over 55 feet at its narrowest point, which will be the makai-most edge of the turnaround.

- *Visibility of marine education center and snack bar buildings.* Please refer to the 1<sup>st</sup> and 2<sup>nd</sup> bullet responses to comments on Section 3.2.4.1.
- *Soil for berms.* No berms are planned in the lower park area.
- *Section 3.3.1 Entry Roadways and Kalahele Highway Intersection Improvement*
- Many of these comments are moot because the applicable improvements are no longer a part of this project. In these instances, no specific response is provided below. Specific responses to other comments have been provided.
- *Use of Hanalei Bay entry road by private cars.* Existing access will continue to be available. Refer also to 4<sup>th</sup> bullet response to comments on Section 3.2.4.1, and the 3<sup>rd</sup> bullet response to comments on Figure 3-11.
- *Limousine access to Hanalei Bay.* Limousines that are taxis may stop at the tour bus turnaround area to drop off or pick up passengers. Other limousines can only stop in this turnaround area for sightseeing for up to 15 minutes, and must leave.
- *Pedestrian access to Hanalei Bay.* The existing walkway from the Kalahele Highway entrance into Hanalei Bay Nature Preserve will continue to be available for use by pedestrians.

**Section 3.3.2 Central Parking Area**

- All of these comments are moot because the applicable improvements are no longer a part of this project. Consequently, no specific response are provided.

**Section 3.3.3 Park Shuttle Transportation System**

- All of these comments are moot because the applicable improvements are no longer a part of this project. Consequently, no specific response are provided.

**Section 3.3.3.1 Main Shuttle Route-Nature Learning Center and Hanalei Bay**

- The first and third of these comments are moot because the applicable improvements are no longer a part of this project. In these instances, no specific response is provided below.
- *Carrying capacity study.* This study covers only Hanalei Bay.

**Section 3.4.1 Park Usage**

- *Estimation of 1,600,000 annual visitors.* This is the current attendance at Hanalei Bay Nature Preserve. Annual attendance levels have varied only slightly from year to year since the existing park use regulations were put into effect. No changes to these access regulations are proposed in connection with the revised project scope. Consequently, it is expected that the proposed revised project will have very little if any impact on attendance levels, and that they will remain substantially at existing levels after this project is completed. Of the existing visitor count, approximately two-thirds enter the lower bay area, and one-third are tour bus, van and limo passengers who spend up to 15 minutes in the upper park area.
- *Number of guided tours.* Plans for guided tours have been dropped from the project.
- *Location, number and capacity of resource training sessions.* Please refer to 3<sup>rd</sup> bullet response to comments under Section 2.0.
- *Use of Hanalei Bay by local people.* The changes in the scope of the proposed project have deleted all proposals that could have adversely impacted the accessibility of Hanalei Bay Nature Preserve for use by local people.
- *Differences between group tour sightseeing and destination group tours.* Proposals to accommodate some destination group tours have been dropped. Fifteen (15) minute stops at Hanalei Bay by tour buses and vans will continue to be permitted.

**Section 3.4.2 Park Attractions and Activities**

- *City Council involvement in ticketing policies.* The City Council has and will continue to establish any and all ticketing policies. Only proposals can be made by the Department of Parks and Recreation and included in an EIS. The current revised project does not propose any changes in existing ticketing policies.
- *Preparation of the DEIS before completion of the carrying capacity study (2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> comments).* Please refer to 1<sup>st</sup> bullet response to comments under Section 1.7.
- *Timing of completion, availability to the public, and scope of the carrying capacity study.* This study is scheduled for completion in the summer of 2000. It will be available to the public. Its scope covers Hanalei Bay only.
- *Fees and ticketing policies for park entrance and use of various activities and attractions (6<sup>th</sup>, 7<sup>th</sup> and 8<sup>th</sup> comments).* The existing fee and ticketing policies at Hanalei Bay Nature Preserve will remain in effect. These are a \$1.00 fee for parking and a \$3.00 non-resident adult fee for entry to the lower bay area. No fees are currently being charged for use of other public park facilities in Koko Head Regional Park and Nature Preserve. All proposed changes referenced in the DEIS are no longer a part of this project.
- *Requiring residents to participate in a resource awareness training.* Please refer to the 2<sup>nd</sup> bullet response to comments on Section 2.0.
- *Closure of Hanalei Bay Nature Preserve for one day a week.* No changes in this operational policy are proposed as part of this project. It is anticipated that this Nature Preserve will continue to be closed on Tuesdays for maintenance.

**Section 3.5 Construction Activities**

- *Evaluation of construction impacts.* We disagree that detailed figures indicating the precise volumes of every individual demolition and new construction activity, and precise volumes of each distinct site preparation activity, are necessary to an adequate disclosure and assessment of their environmental impacts. Sufficient information for the appropriate level of evaluation will be included in the FEIS. Detailed and accurate estimates of the magnitude of these activities are usually developed close to the end of the design process, which is usually well after the kinds of approvals and permit applications for which an EIS is prepared - in this case, a Special Management Area Use Permit and a Conservation District Use Permit - are filed and processed. To defer the preparation of an EIS until detailed estimates are available would, in our view, be contrary to the legislative mandate in Chapter 343, HRS that environmental assessments and impact statements be prepared "at the earliest practicable opportunity".
- *Locations of "mass grading".* Generally, all areas where new structures and surrounding hardscape and landscaping are to be built, as well as new paved areas, will require regrading. "Mass grading" indicates that an entire area where a new improvement is to be made, as opposed to just portions of it, will be disturbed. It does not mean that there will be "massive" cuts and fills, for example, or otherwise indicate that there will be significant changes to existing terrain conditions. Areas to be disturbed, and the magnitude of any change in the shape and grades of the existing terrain, will be described in the FEIS.
- *Mention of new roadway construction.* Proposals for new roadways have been dropped from the project. All substantive new construction activities will be described in the FEIS.

- Discussion of mitigative measures during construction. These are discussed in Section 7.1.1 of the DEIS. Detailed and comprehensive mitigative measures are well established in the referenced regulations. Per the request of the State Office of Environmental Quality Control, a brief description of required erosion and dust control measures in these regulations will be included in the FEIS.
- Provision of missing information. All required information will be provided at the appropriate level of detail, as discussed above.

**Section 3.5.2 Excavations (Cut and Fill)**

- The comments on this section essentially repeat those on Section 3.5. Please refer to the responses immediately above.

**Section 3.7 Project Schedule**

- Length of time required for each activity within each phase. An appropriate level of detail on the anticipated phasing and timing of construction activities will be included in the FEIS.
- Closure of park facilities during construction. The lower park area, or bay, at Hanalei Bay Nature Preserve will only be closed for a relatively short period during the resurfacing of the beach access road and construction of the turnaround. This will be required because there will be no way for emergency vehicles to get to the lower park area while the existing blacktop pavement on the beach access road is being replaced with concrete. The estimated closure time is a maximum of one week.

The Nature Preserve will be able to remain open to the public, and operate pretty much as it does now, during construction of the new marine education center and snack bar because these new facilities will be built on undeveloped land. This is because the proposed sites for the new facilities has been moved to the Sandy Beach side of the beach access road, and the existing facilities will now be able to remain until after the new facilities are occupied. (A full description and illustrations of the new site locations will be included in the FEIS.)

- Limiting the number of people using the bay. The central parking area on the former Hawai'i Job Corps site is no longer a part of this project. As discussed previously, except for requiring everyone to participate in a resource awareness training, the revised project proposal no longer involves any changes in the existing access provisions and fees related to the use of Hanalei Bay.

**Table 3.4 Cost Estimates**

- Meaning of "other sources". This meant sources of funding over and above the \$13 million CIP appropriation that has already been approved for this project. Due to the reduced project scope, the \$13 million appropriation will now be more than sufficient to fund all proposed capital improvements. However, some "other sources" in the form of the special fund revenues collected at Hanalei Bay Nature Preserve are likely to be used for purposes such as production of a resource awareness training video. The exact source of funds for different parts of the project will be established in consultation with the City Council during the course of their review and approval of the SMA Use Permit application.

**Section 4.2.3.3 Cultural Surveys Hawai'i Archaeological Inventory Survey**

- Retention of sites and features. As a result of the reduced project scope, six of the eight areas surveyed by CSH are outside of areas where improvements are now proposed. None of the sites recommended for retention will be impacted.

**Section 4.4.4 Drainage, Flood and Tsunami Hazards**

- Identification of changes in present drainage patterns. Please note that this section of the EIS only describes the existing environmental setting. The provision of such a separate section is in accordance with the DEIS content requirements stipulated in the "Environmental Impact Statement Rules". It is not intended to also contain information describing proposed changes and impacts. Proposed changes to the existing setting are described in Section 3, and potential impacts and mitigative measures are discussed in Section 7.

**Section 4.4.5.1 Vegetation in Undeveloped Areas**

- Construction impacts along the funicular route. This element of the proposed project has been dropped, and there will be no project impacts on this area.
- Removal of old kiawe trees. The site for the proposed marine education center and snack bar has been moved away from the "grove" of old kiawe trees in the area where the old parking lot was located, to the area between the existing "half moon" parking lot and scenic walkway along the edge of the cliff. Only fairly widely spaced kiawe trees are located in this area. Construction of the new facilities will necessitate the removal of 9 to 11 of these trees, with heights ranging from approximately 10 to 35 feet.
- Location of hala and miihi. Existing hala and erythrina will be replanted in connection with the re-landscaping of area occupied by the existing buildings after they are demolished.

**Section 4.4.6 Birds, Fauna and Insects**

- Construction impacts along the funicular route. As noted, this element of the proposed project has been dropped, and there will be no project impacts on this area.

**Section 4.6.3 Former Hawai'i Job Corps Site**

- Rehabilitation of existing recreational facilities. Except for the demolition of existing dilapidated buildings, the projects that were to be located on this site have been dropped. All existing recreational facilities will remain in their current locations for the time being. As noted at the beginning of this letter, a community-based planning process will be initiated in September to prepare a new master plan for the Koko Head District Park.

**Section 4.6.4 Koko Head Shooting Complex**

- Need for some sort of siting. With the removal from this project of the proposed summit funicular and lookout, there are no longer any proposed improvements in this project that impact or would be impacted by the Koko Head Shooting Complex. Consequently, there is no longer any need being generated by this project to install some form of shielding on the ranges in this complex prior to the construction or operation of any of the proposed improvements.

**Section 4.7.2 Drainage**

- Impacts on existing drainage patterns. The proposed improvements at Hanalei Bay Nature Preserve will be adequately served by existing drainage patterns, with at most only minor modifications. Please refer to the 3<sup>rd</sup> bullet response to comments on Figure 3-9. With the deletion from the project of all new facilities proposed for the former Hawai'i Job Corps site, there will no longer be any alteration to existing

drainage patterns at this site. The amount of surface runoff and intensity of peak runoff volumes at this site should decrease slightly as a result of the demolition of existing buildings and their replacement with grassed areas.

- *Identification of all existing drainage patterns.* Existing drainage patterns and any proposed modifications to them will be fully described in the FEIS for those areas where the construction of new facilities any related improvements is proposed.

**Section 5.3.1 Master Plan Goals and Objectives**

- *Optimizing the use of Hanauma Bay as an important recreational resource for the people of the State of Hawaii.* We believe the revised project scope supports the implementation of this goal, and that it no longer includes any proposals that could lead to a further reduction in the use of Hanauma Bay Nature Preserve by Hawaii residents. This is evidenced by the "strong consensus in favor" findings of the Hanauma Bay Improvements Task Force for all of the project proposals that would impact resident accessibility to Hanauma Bay. This Task Force is composed entirely of Hawaii residents. A copy of the Task Force's final report will be included as an Appendix in the FEIS.
- *Limiting overall park user volumes.* This project no longer includes any proposals that would result in the "bringing in" of more park users. Existing regulations and restrictions on the use of Hanauma Bay Nature Preserve will remain in full force and effect. The proposal to require everyone going to the lower bay to attend a resource awareness training, and the proposed facilities to accommodate this training, are intended to reduce the impacts of users on the bay's marine ecosystem by reducing the potential extent of each individual's impact. It was the consensus recommendation of the Task Force that this approach to reducing impacts is preferable at this time to an arbitrary reduction in the permitted number of users, and that any such reduction should await and be based on the results of the carrying capacity study.

**Section 6.0 Relationship to Land Use Plans, Policies and Controls**

- *Inclusion of areas outside of the Koko Head Regional Park and Nature Preserve Boundaries.* We disagree with your comment (in reference to the discussion in Section 6.2.2 of the East Honolulu Development Plan's policies, principles and guidelines related to open space, parks and recreation facilities) that it is inappropriate to reference park facilities in areas outside of this Park's boundaries. This is inconsistent with clear directives in the "Environmental Impact Statement Rules" that an EIS must address the regional as well as local perspective, assess potential indirect or secondary as well as direct environmental effects, and consider interrelationships and cumulative environmental impacts.

**Section 7.2.10 Recreational Resources**

- *Removal of existing little league ballfield.* This proposal is no longer a part of the revised project. Coeas Memorial Ballfield will remain.
- *Management of access to Hanauma Bay.* All original proposals that impacted the ways different groups of users access Hanauma Bay have been deleted from this project. The revised project maintains the existing access rights and management practices.
- *Examples of reasonable levels of fees.* All proposals for new or changed fees have been dropped. Fees at Hanauma Bay Nature Preserve will continue to be \$1.00 for parking and \$3.00 for non-resident entry to the lower bay area.

**Section 7.2.14.2 Wastewater Disposal**

- *Total effluent flow from all park facilities.* As previously discussed, the limited scope of Hanauma Bay Nature Preserve improvements that are included in the revised proposal are not of a nature that will cause any change in existing park use patterns, and thus are not expected to increase park use over existing levels. Consequently, no increase in sewage effluent flow is expected. There are currently between 1.5 and 1.6 million daily visits to Hanauma Bay Nature Preserve annually.
- *Need for STP upgrades or modifications.* The operator of the Hawaii Kai sewage treatment plant has reviewed the DEIS and indicated that the then-proposed improvements would not result in a need for modifications or upgrades to the plant. With the reduction in project scope, this is undoubtedly still the case.

**Traffic Impact Assessment Report (Appendix I)**

- *Comments related to proposed new signalized park entry, projected visitors per day, and use of 40-foot shuttle buses.* All but the last of the comments on this report are moot because the applicable improvements are no longer a part of this project. In these instances, no specific response is provided.
- *Number of manual traffic counts.* This is indicated in the "Existing Conditions" section of the report.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to your office upon its completion. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction



Hawaiian Trail and Mountain Club

Group 70 International, Inc.  
925 Bethel Street  
5<sup>th</sup> Floor  
Honolulu, HI 96813

June 2, 1999

To Whom It May Concern:

The Hawaiian Trail and Mountain Club has been conducting hikes up Koko Crater and along its rim for over 80 years. This spectacular hike is unique in the islands and a great favorite of our members.

The Board of Directors has discussed the proposal to rebuild the funicular railway to the top. In view of trail conditions there, the Board feels that bringing up large numbers of inexperienced, unsuitably equipped visitors will almost certainly require regulations prohibiting people leaving the viewing platform. It is therefore likely that the rim will be officially closed to visitors and that guards will be stationed there to enforce this. What then of hikers? Will they be regarded as nuisances, or worse, as trespassers and/or liability risks to the City and County? Will the necessary safety regulations be flexible enough to take hikers into account? Until these questions are answered to our satisfaction we cannot support the current plans.

In addition, we feel quite simply that walking and climbing are good for people and ultimately more appropriate for a nature park than riding in a vehicle. If the mountain must be "developed" we recommend building a trail or stairway to the top instead of a railway. Shaded rest areas at the one-quarter, half and three-quarters marks would provide peaceful places for visitors to admire the view without the obtrusive noise of machinery. Interpretive signs and park rangers could point out geological features of interest.

In an age of eco-tourism and physical fitness a natural experience makes more sense to us than just another mechanical ride. We suggest the park challenge visitors a little; offer them a "Climb the Volcano" experience that they will remember, and talk about when they get home.

Similarly, we feel that to prohibit pedestrian access to the beach is inappropriate to a nature park. If parking must be across the road we recommend the construction of a pedestrian overpass or underpass to the overlook area as an alternative to the shuttle ride. (In fact, if one goal of the new park is to reduce the numbers of people on the beach, a good way might be to eliminate the shuttles entirely!)

Another point discussed by the Board was the negative visual impact of a railway. It's lovely to lie in the water in Hanalei Bay and look up at the magnificence of Koko Crater above. A shiny little car shuffling up and down will introduce visual clutter and turn Oahu's most imposing volcano into a glorified carnival ride.

As admirers of nature we are dissatisfied with the current plans. The intent seems to lean more toward exploiting Koko Crater and Hanalei Bay for commercial mass tourism than toward sensitively preserving and enhancing their natural features and beauties. We think the planners can do better.

Thank you for the chance to express our views. We hope you will take them into consideration.

P.O. Box 2238 Honolulu Hawaii 96804



Hawaiian Trail and Mountain Club

Sincerely,

*Grant A. Oka*

Grant A. Oka  
President  
Hawaiian Trail and Mountain Club

cc: Mayor Jeremy Harris  
Councilmember John Henry Felix  
Sierra Club, Hawaii Chapter  
James Nakasone

P.O. Box 2238 Honolulu Hawaii 96804





July 30, 1999

Mr. Grant Oka, President  
Hawaiian Trail and Mountain Club  
P.O. Box 2238  
Honolulu, HI 96804

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Oka:

Thank you for your June 2, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hananua Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project by phone (527-5558), fax (527-5563) or e-mail (CAAD005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

- Francis S. Oka, AIA, AICP
- Norman G.Y. Hoop, AIA
- Sheryl H. Seaman, AIA, AND
- Hiroshi Hida, AIA
- Ray H. Nohel, AIA, CN
- James I. Robinson, AIA
- Ralph E. Pevinore, AICP
- Stephen H. Vann, AIA
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- George L. Uru, AICP
- Kalies H. O'Brien, AICP
- Kathleen A. Nam
- Ray A. Inouye, AIA, CN
- Frank H. MacCac, RA
- Christine M. Ruzicka, AICP
- Stuart A. Jewell, AIA

Letter to Mr. Grant Oka  
Hawaiian Trail and Mountain Club  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new ES will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Proposed Funicular Railway**

This proposal has been dropped from the current project. Any future consideration of the provision of such a facility will be done within the context of the upcoming effort to prepare a new master plan for the Koko Head Regional Park and Nature Preserve. Plans for the initiation of this process are described above.

**Provisions for Walking and Hiking**

No changes to current provisions and access for walking and hiking in the Koko Head Regional Park and Nature Preserve are proposed at this time. As just noted, any future consideration of improvements to pedestrian walkways and hiking trails will be done within the context of the upcoming master planning effort.

**Location of Parking**

Proposals for a new central parking area on the former Hawai'i Job Corps site have been dropped. The existing parking at Hananua Bay will be retained.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

Sincerely,

*Ralph Portmore*

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

GROUP 70 INTERNATIONAL, INC. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asset Management  
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If we lose the beauty of our shoreline...  
we lose what it means  
to live in Hawaii.

## Ka Iwi Action Council

7 May 1997

RECEIVED

MAY 10 1997

GROUP 70

Ms. Mary O'Leary  
Group 70 International, Inc.  
925 Bethel Street, 5/F  
Honolulu, HI 96813-4307

Dear Ms. O'Leary:

The Ka Iwi Action Council (KIAC) has reviewed the Draft Environmental Impact Study (DEIS) for the Kokohead Regional Park and Nature Preserve and wishes to make the following comments:

The central issue that this plan addresses is not an easy issue to resolve. How can the County enable residents and visitors to appreciate the wild beauty of the Ka Iwi Coast, and more particularly of Hanauma Bay, while limiting the degradation that natural environments suffer from the ordinary activities of humans?

The Ka Iwi Action Council is firmly in accord with the first stated goal of the regional park plan: "To preserve and enhance the natural character of Koko Head Regional Park." (Sec.2-0). The Ka Iwi Coast is one of only two remaining undeveloped sections of coastline on O'ahu. As such, this shoreline of sandy beaches, blue ocean waters and volcanic cliffs and craters provides a necessary relief from the urban environment. People come to the Ka Iwi Coast to swim, surf, fish, snorkel, whale watch, picnic and relax in an open and uniquely Hawaiian landscape. It is essential that any changes in the existing facilities and management of Hanauma Bay and the greater Regional Park do not add infrastructure or activities that will alter the wild, natural character of the Coastline.

### Infrastructure

The plan envisions the development of significant additional infrastructure throughout the regional park area. While the additional infrastructure may have minimal impact on the visual integrity of the Ka Iwi Coast, the process set out in the DEIS will greatly impact how people experience Hanauma Bay.

-A new paved area will be placed in the Job Corps Center to serve as a central parking lot. This will replace existing parking at Hanauma Bay, but will the new parking area be limited to the square footage of the currently existing parking?

-Several new facilities will be constructed at the Job Corps Center. There will be an 8,000 square foot Nature Learning Center, a snack bar and the new funicular railway. New tracks will be built over the existing tracks that go up the side of Koko Crater and will be occupied by a funicular train going up and down the crater side almost continuously throughout the day. (Sec. 3.2.2)

-At Hanauma Bay, three new facilities are planned: a new marine education center, a gift shop and a new snack bar with a dining area of up to 150 seats. The snack bar will replace an existing concession in the lower bay area however, the new facility will be significantly larger than the existing concession. The educational center and gift shop will be new and additional to existing facilities at Hanauma Bay.

The infrastructure at the Job Corps Center is somewhat isolated from the coastline and will not visually impact the coastline. However, we are concerned that the new infrastructure and personnel intensive process of getting to Hanauma Bay will markedly alter the existing beach experience. The proposed processing of beachgoers will add significant cost and time. More importantly, the proposed process will detract from the serenity of the simple beach experience.

Many people, particularly local people who visit Hanauma Bay, do so to experience nature in an immediate way. They don't want to see pictures of the fish on a wall or in a replica of the bay - they want to get into the water and swim with the fish. At the same time it should be recognized that many visitors may be interested in something other than the natural coastal experience. For these visitors it may make sense to devise other activities such as learning centers and a train ride.

We suggest that the final EIS consider two questions in this regard.

-Is the Kokohead Regional Park the best place to locate these other experiences?  
-Why must people who want a simple beach and snorkeling experience be ensnared in a process designed to amuse those interested in additional experiences? (We expect that the answer to this will not be premised on the need to limit bay attendance without first exploring the attendance limiting alternatives suggested below.)

### Transportation

The DEIS envisions all people will travel to Hanauma Bay via a shuttle bus system from new parking areas that will be developed at the Job Corps Center. This plan appears to create more, rather than less, automotive traffic and traffic complications in the regional park area.

-The plan eliminates bike and pedestrian access. People who live in the neighborhood and now can walk to the Bay, will need to drive a car to the main parking lot and then take a shuttle. People who would now arrive by bicycle must park their bike and take a shuttle. The final EIS should explain how eliminating bicycle and pedestrian access will protect and enhance Hanauma Bay and surrounding environs.



-Local people will have to drive past the Bay to go park so that they can then be driven back to the bay, increasing the vehicle distance that they must travel. How does this additional vehicle time protect and enhance the natural area?

-At peak hours, the DEIS estimates up to 1200 people per hour being moved by shuttle to and from the bay. At near maximum capacity of 55 people (with snorkel equipment) that is 21 trips an hour crossing Kalaniana'ole Highway. In addition, there will be scenic shuttles taking people from the parking area to points along the coastline. These shuttles crossing and entering the highway will create additional traffic and congestion at the new intersection envisioned by the DEIS. What traffic studies have been done to determine the level of traffic complication or congestion that will result from the shuttle traffic and how will traffic complications be mitigated?

#### Alternatives

The DEIS considers four alternative courses of action. However, this study fails to address one obvious alternative. We ask that the final EIS consider the alternative of limiting the numbers of people visiting Hanauma Bay while simply upgrading existing facilities as necessary but not developing additional facilities.

A carrying capacity study for the Bay is long overdue. Once the carrying capacity study is complete the County will know what are acceptable levels of visitors to the bay. The county could keep attendance numbers within acceptable limits by any of several methods.

-Authorities could limit the daily time period that the bay is open in order to keep attendance levels within the acceptable range.

-Authorities could close the bay for two or three days or half days every week to maintain an acceptable weekly attendance rate.

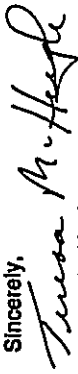
- Or, authorities could simply close the gates for the day once a daily maximum attendance limit has been reached.

In addition to limiting attendance, management strategies could be instituted such as the proposed resource awareness training and greater use of guided tours. Such management does not seem to be dependent upon the development of new parking lots and additional facilities.

#### Conclusion

The Ka Iwi Action Council agrees with the need to protect the resources at Hanauma Bay through a reduction in the numbers of people who go into the bay and through improved management of bay use. These goals should be accomplished without significant additional development of the area in and around Hanauma Bay. We hope that as the EIS process moves forward, less development intensive alternatives will receive serious consideration.

Sincerely,



Teresa McHugh  
Spokesperson, Ka Iwi Action Council

56 Nawiliwili Street  
Honolulu, HI 96825



- Francis S. Ode, MA, AICP
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- Ray A. Inouye, MA, CN
- Frank H. Mc Gee, RA
- Christine M. Buzard, AICP
- Maureen M. Jett, MA

July 30, 1999

Ms. Teresa McHugh, Spokesperson  
Ka Iwi Action Council  
56 Nawiliwili Street  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. McHugh:

Thank you for your May 7, 1999 letter to Ms. Mary O'Leary, Senior Planner of Group 70 International, Inc. regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaua Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA009@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Ms. Teresa McHugh  
Ka Iwi Action Council  
July 30, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Proposed Development of Significant Additional Infrastructure**

As noted above and described in more detail in the attachment, all proposals for the addition of major new park facilities at the former Hawai'i Job Corps site are no longer included as part of this project. The revised project no longer involves any major increase in park infrastructure or additional activities that could alter the existing natural character of the coastline or other areas in Koko Head Regional Park and Nature Preserve.

The current proposal is now limited to only improvements at Hanaua Bay Nature Preserve that are intended to enhance the ability to minimize the impacts of park users on the Preserve's overall natural environment and, in particular, on the bay's marine ecosystem. The proposed new marine education center is intended primarily to provide space to conduct the resource awareness training (as explained in the next paragraph below), as well as an exhibit/display area that can also be used for sessions with school excursions and other small groups. Other activities planned for this facility are limited to the Nature Preserve's existing operations/administrative office, and a small educational gift shop.

The proposed new snack bar is intended to replace the existing snack bar in the lower bay area. The purpose of relocating the food concession is to reduce its impacts on the bay. There are no plans to alter or expand the use of this concession.

No substantive changes in current management practices and regulations controlling access and use of the Nature Preserve are being proposed at this time. The only change now being proposed that would impact accessibility is a requirement that all visitors to Hanaua Bay Nature Preserve who intend to go to the lower bay area, whether they be non-residents or residents, complete one session of resource awareness training. Nature Preserve users would be exempt from the training on subsequent visits for one year following their participation in the training.

**Transportation**

As noted in the attachment, the proposed new central parking area on the former Hawai'i Job Corps site, with access to Hanaua Bay provided by a shuttle system, is no longer part of this project. The revised project proposal retains and makes no changes to the existing accessibility to Hanaua Bay Nature Preserve for people arriving there by foot, bicycle or moped, or automobile. No changes in existing traffic patterns are proposed, nor is there expected to be any increase in the volume of traffic generated by park users. Consequently, no new traffic "complications" or congestion is anticipated that would require mitigation.

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Letter to Ms. Teresa McHugh  
Ka Iwi Action Council  
July 30, 1999  
Page 3

Alternatives

The possibility of immediately establishing new limitations on use of Hanauma Bay was seriously considered by a community-based Hanauma Bay Improvements Task Force that met weekly during June and July. However, it was rejected in favor of the management strategy suggested in your letter - namely, requiring all visitors to the lower bay area to go through a resource awareness training. It was generally felt by the members that instituting such major changes as requiring participation in guided tours, or further limiting the times when the bay is open to the public, should await the results of the carrying capacity study that is currently underway. The Task Force supported the construction of a new marine education center to provide space to conduct the awareness training and accommodate the other activities described above.

CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you upon its completion. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction



**LIFE OF THE LAND**

*Ma Mau Ke Ea O Ka Aina I Ka Po'e*  
Hawaii's own local Community Action Group  
Protecting our Fragile Natural & Cultural Resources  
through Research, Education, Advocacy & Litigation

**RECEIVED**

JUL 30 - 8 1999

GROUP 70

July 6, 1999

Jim Nakasone  
City and County of Honolulu  
Department of Planning and Permitting  
650 S King Street, 9th floor  
Honolulu, HI 96813

Ralph Portmore  
Group 70 International  
925 Bethel Street, 5th floor  
Honolulu, HI 96813

re: Koko Head Regional Park and Nature Preserve

Aloha,

Life of the Land is Hawaii's own local community action group serving Hawaii since 1970. Our mission is to preserve and protect the life of the land, to promote sustainable land use and energy policies and open government through research, education, advocacy and litigation.

The first and most obvious problem with the "revised" plan is that the consultant who wrote both the Draft EIS and the Revised Scope found in the OEQC Bulletin used different chapter designations and different descriptions to describe the components. Therefore, it was not always crystal clear to Life of the Land what was still part of the Draft EIS. The EIS went in a systematic fashion: 3.1 -> 3.2 -> 3.2.1, whereas the OEQC Bulletin Notice stated "A1" three different times to mean three different components. Clarity is important.

Will access be guaranteed for local residents? Will user fees of any kind imposed on local residents? Will local residents have any restrictions on the hours of use for the coast? Would fees be imposed on local residents who have organized activities (section 3.4.2.4)? Who would determine what "organized" means? Who has priority over beach access (section 3.4.2)? How are the visitor impact studies completed? What is the margin for error? What sites are being planned in the future to "absorb" overflow from Hanauma Bay? How are visitor counts calculated? What forms of commercialization are envisioned for the Park? Who would benefit? Who would operate the facilities? How many tour buses a day will the proposed plan be able to handle? What new infrastructural improvements may be needed in the near future? What pesticides and toxics would be used at the site? How would non-point-source-pollution from the application of these chemicals affect the reefs?

*Henry Curtis*  
Henry Curtis  
Executive Director



**GROUP 70**  
INTERNATIONAL

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July 30, 1999

Mr. Henry Curtis, Executive Director  
Life of the Land  
76 North King Street, Suite 203  
Honolulu, HI 96817

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Curtis:

Thank you for your July 6, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

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Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (822-5538), fax (822-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of

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Letter to Mr. Henry Curtis  
Life of the Land  
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Page 2

upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Responses to Specific Comments**

**Use of different chapter designations.** The "organizational" designations used in the OEQC Bulletin description of revisions to the project scope are not and were never intended to reflect the chapter designations in the DEIS. The letter and the DEIS are two completely separate and independent documents. No such correlation was indicated in the letter.

**Will access be guaranteed for local residents?** Currently, resident access to Hanalei Bay Nature Preserve, as well as to other parts of Koko Head Regional Park and Nature Preserve, is constrained only by the availability of parking. This is no different from the situation at other popular parks, and actually serves the important purpose of helping to prevent overuse of the bay and serious damage to its natural environment and marine ecosystem.

**Will user fees of any kind be imposed on local residents?** The existing \$1.00 parking fee at Hanalei Bay Nature Preserve will remain. No other fees will be charged.

**Will local residents have any restrictions on the hours of use for the coast?** No changes to the existing hours when Hanalei Bay Nature Preserve is open to the public — from 6 am to 7 pm in the summer, and from 6 am to 6 pm in the winter — are proposed in connection with this project. The current policy of closing the Nature Preserve on Tuesdays will also remain in effect. We are not aware of what, if any, other restrictions there may be on public to the rest of the Regional Park's coastline. No new restrictions are proposed in connection with this project.

**Would fees be imposed on local residents who have organized activities? Who would determine what "organized" means?** All proposals for park-operated or mandatory participation in organized tours have been dropped. A limited number of commercial snorkel/situa/situa tours are currently allowed under a permit system, and they charge a fee to participants. No changes in these current operations are proposed in connection with this project.

**Who has priority over beach access?** There are no existing established priorities, and none are proposed.

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Life of the Land  
July 30, 1999  
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*How are the visitor impact studies completed? What is the margin for error? It is not clear what studies you are referring to. The reference at the bottom of page 3-26 to the Department of Parks and Recreation monitoring "usage limits" was related to participation in organized tours. As noted above, all proposals for organized tours have been dropped. Dr. Richard Brock of the University of Hawaii is currently conducting a "carrying capacity" study of Hanalei Bay. The results are expected in approximately the summer of 2000. If interested, please consult with Dr. Brock concerning the form and nature of the potential findings and recommendations, and any "margin of error" that may be involved.*

*What sites are being planned in the future to "absorb" overflow from Hanalei Bay? The revised project scope now includes only improvements to Hanalei Bay Nature Preserve. It is anticipated that any plans for facilities that would absorb the current overflow will be developed as part of the master plan preparation effort for Koko Head Regional Park and Nature Preserve that was outlined at the beginning of this letter.*

*How are visitor counts calculated? Visitor counts are currently being taken only at the entry points to Hanalei Bay Nature Preserve. Separate counts are taken at the entries to the parking lot (number of vehicles), tour bus stopping area (number of vehicles and approximate number of passengers), and the lower bay area (number of people).*

*What forms of commercialization are envisioned for the Park? Who would benefit? Who would operate the facilities? As a result of the changes in the project scope, organized tours and any other proposals that could have involved new "forms of commercialization" are no longer a part of this project. If they are to be considered at all in the near future, it would be in the context of the upcoming master plan preparation effort for Koko Head Regional Park and Nature Preserve.*

*How many tour buses a day will the proposed plan be able to handle? All proposals to accommodate four buses and groups have been dropped. The current provisions allowing four buses and vans to stop at Hanalei Bay Nature Preserve for a maximum of 15 minutes will remain.*

*What infrastructural improvements may be needed in the near future? None. All proposals that involved such improvements (e.g., the realigned and signalized entry) have been dropped from the project.*

*What pesticides and toxins would be used at the site? How would non-point-source-pollution from the application of these chemicals affect the reefs? It is not anticipated that any of the proposed improvements in the revised project scope will generate a need for any new uses of pesticides. Currently, "roundup" is the only herbicide being used, and it is used only occasionally and sparingly to control weeds in places, such as pavement cracks, where they cannot be removed by hand. The only pesticides being used are for normal insect and, where necessary, rodent control in existing buildings.*

*There have been no visible or otherwise observed impacts from the use of pesticides or herbicides on the bay waters or reef. A major part of Dr. Brock's carrying capacity study is water sampling and analysis. If there are any such impacts, they should be detected during this study, and appropriate mitigative measures will then be taken.*

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Letter to Mr. Henry Curtis  
Life of the Land  
July 30, 1999  
Page 4

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to your office upon its completion. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
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**THE OUTDOOR CIRCLE**

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Established 1912  
A Non-profit Organization

**BRANCHES**

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**HAWAII**

Hilo  
Kala  
Kona  
Puu  
Waimea

**KAUAI**

Maui

**MOLOKAI**

**GARDEN CIRCLE**

Lani-Ka

May 4, 1999

City and County of Honolulu  
Department of Design and Construction  
650 South King Street - 9<sup>th</sup> Floor  
Honolulu, HI 96813  
Attn: Jim Nakasone, Project Manager

RE: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement  
East Honolulu, Island of Oahu, HI  
TMK: 3-9-12: 1, Por. 2, 4, 8, 10, 12, 14 and 16

Dear Mr. Nakasone:

Thank you for the opportunity to comment on the above referenced Draft Environmental Impact Statement (DEIS). The proposed action calls for the creation of an integrated park/nature preserve out of what are now fairly independent and unconnected park uses. We have reviewed the document and offer the following comments:

**Section 3.0 Project Description:**

**Fees--**

The DEIS is clear that parking fees will be assessed for all vehicles entering the parking lot and that a general park fee for non-resident individuals age 13 and older will be charged. It is also clear that tickets will be sold to snorkel at Hanauma Bay. What is not clear is if a fee will be charged to ride the shuttle to Halona Blowhole or Lanai Lookout, to hike up the crater or to just ride the shuttle around for the view?. Will fees be charged to take the funicular to the summit? And will the public be required to pay to enter the botanical garden and the Nature Learning Center? Please give more information on the fees.

**Summit Funicular--**

More information is required regarding the construction of the funicular. Saying it will use the existing cable car alignment and will require minimal clearing of brush is insufficient. We need to know exactly how the system will be attached to the existing tracks. The information given is so minimal that you cannot know if damage will result or not.

The DEIS admits to a "slightly" altered view as a result of the summit funicular, and because the drawings in the document are quite rudimentary, it is necessary to provide computer generated drawings of how the views will be altered and how

Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement  
May 5, 1999  
Page 2

the Koko Head view will be impacted.

Also, please address how the funicular will be powered. Alternative energy sources should be utilized whenever possible.

**Roadways, Parking and Shuttle Transportation--**

This section states that the City may decide to use an electric trolley as an alternate to buses. More information must be given in the Final EIS as to what this would look like. Would an electric system require wires overhead to feed the trolley power?

It seems that 45-minute head ways between shuttles is too long. If a visitor gets off the shuttle at Halona Blowhole or merely to appreciate the view at Hanauma Bay, that seems to be a long time to wait in the hot sun with little or no shade available. Are there plans to create waiting areas for the shuttle at each stop? What will they look like? This needs to be more fully addressed in the FEIS.

How many parking stalls currently exist at Hanauma Bay? The new parking contains 441 standard stalls. Is this enough when combining the needs of the botanical garden, Hanauma Bay, Halona Blowhole, etc?

Will the parking remain as it is at Blowhole? Local scuba divers often use the parking there to go diving and removing it would create a burden. Please address this in the FEIS.

Please provide a detailed drawing of the central parking area. Will the tiered parking be a structure or something else? What building materials will be used?

Section 5.2 claims that the use of the shuttle reduces the use of private vehicles on Kalaniana'ole Highway. People still have to get to the shuttles, so how will this happen?

If parking is to be at the former Job Corps site, to where will the ballfields be relocated?

**Landscaping--**

The DEIS says that native plant materials will be used in all of the landscaping. Yet the document also says that monkeypod trees and ironwoods will be planted, both non-native. Further information should be provided on who will maintain this new landscaping. All too often we see money spent on extensive landscaping without appropriate funds set aside to for maintenance.

In addition, the DEIS says that it is anticipated that Bermuda grass will be used because it tolerates herbicides, but no information is given on the use of herbicides. Please provide information on what herbicides will be used and how often they will be applied. The use of herbicides creates water quality issues that have not been addressed in the DEIS and should be. Water quality in Hanauma Bay is of the utmost importance to all of us.

Hanauma Bay and the Marine Education Center landscaping plan calls for "undulating grass



Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement  
May 5, 1999  
Page 3

mountains." What will that look like and what kind of grass will be used?

Miscellaneous:

The Summary Section states that "environmental benefits will be achieved upon completion" but the benefits listed are almost entirely focused on the built environment. Please state as to what environmental benefits you are referring.

The realignment of the Kalamanaole Highway intersection will require extensive construction. Please provide more detail on the work to be done. How long will it take? What alternate routes will be used? And what impacts might the neighboring communities endure while this is happening?


Please clarify if there is a Volume II as stated in Section 4.2.3.1 or if this document was put into one volume.

If this project is being done in phases due to funding constraints, please list the order in which the work will be done.

The document is not clear as to how power to the Nature Learning Center will be transmitted. Please clarify that this will be done using underground wiring.

Thank you for the opportunity to comment. We look forward to receiving your response.

Sincerely,

  
Mary Steiner  
CEO

cc: Mayor Jeremy Harris  
Group 70 International  
Office of Environmental Quality Control



**GROUP 70**  
INTERNATIONAL

Frank S. Ode, AIA, AIA, AICP  
Nathan G.Y. Hoang, AIA  
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Frank H. Ak-Oce, RA  
Chester M. Buevick, AICP  
Stuart M. Jones, AIA

July 30, 1999

Ms. Mary Steiner, CEO  
The Outdoor Circle  
1314 S. King, Suite 306  
Honolulu, HI 96814

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Steiner:

Thank you for your May 4, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Interactive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your organization's participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5559), fax (527-5563) or e-mail (CA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Ms. Mary Steiner  
The Outdoor Circle  
July 30, 1999  
Page 2

#### RESPONSES TO APPLICABLE COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

#### Fees for Different Activities

As indicated in the attachment, all proposals for new facilities and shuttle services, etc. have been shelved and are no longer a part of this project. Only the existing fees for parking and non-resident entry to the lower bay at Hanalei Bay Nature Preserve will remain. No changes in these fees are proposed in connection with this project.

#### Summit Funicular

This proposal has been deleted from the project.

#### Roadways, Parking and Shuttle Transportation

The revised project no longer includes any proposals for new parking areas or shuttle transportation systems.

There are currently 308 parking stalls at Hanalei Bay Nature Preserve. These will all remain, and there are no plans in this project to add more parking spaces at the Nature Preserve or elsewhere.

The existing parking will remain at Halona Blowhole. This area has been recently resurfaced.

As noted, plans for a central parking area at the former Hawaiki Job Corps site have been deleted. The existing Coeas Memorial Ballfield will remain at its existing location.

#### Landscaping

Thank you for your comments concerning the proposed use of non-native monkeypod and ironwood trees. Another commenting party pointed out that silver buttonwood are also non-native.

Monkeypod trees were proposed for use as a shade tree in the new central parking area at the former Hawaiki Job Corps site. However, this facility has been deleted from the project. Shade trees proposed for use at Hanalei Bay Nature Preserve no longer include ironwood or silver buttonwood. Instead, it is proposed that species such as Tree Heliotrope, Milo and Loulu palm be used.

St. Augustine grass, rather than Bermuda grass, will be used. Current maintenance practices avoid use of herbicides except in extraordinary circumstances. These practices will be continued following completion of the proposed improvements. The park

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Letter to Ms. Mary Steiner  
The Outdoor Circle  
July 30, 1999  
Page 3

manager (Mr. Alan Hong) has indicated that they have spot-sprayed Roundup only once in the nine years he has been in that position. This was to control weeds that were growing in the cracks between asphalt surfaces and concrete curbing, where they could not be pulled out by the roots. The rest of the lawn area is hand weeded, or just kept mowed short enough so that the weeds are not so apparent.

The "undulating grass mounds" refer to the forms of the proposed new marine education center and snack bar buildings themselves. This represents an environmental approach to architecture, whereby the intent is to have the buildings reflect and blend into the natural surroundings as much as possible. This design approach is conceptually illustrated in Figures 3-11, 3-12 and 3-13 (pages 3-17, 3-18 and 3-19) in the DEIS. No other grass mounds are proposed. Bermuda grass is tentatively proposed to be used, but no final selection has been made.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to your office upon its completion. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC

Sincerely,



Ralph Portmore, AICP

Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/10/2000 10:00 AM - 11/10/2000 10:00 AM - 11/10/2000 10:00 AM - 11/10/2000 10:00 AM

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RECEIVED

MAY 19 1999

GROUP 70

Bob and Diane Ackerson  
808 Koko Isle Circle  
Honolulu, HI 96825  
(808)395-7878

MEMO TO Group 70 International, Inc. *Subject: 5-15-99*  
FROM: Ms. Mary O'Leary, AICP  
DATE: D. Diane Ackerson *Bob Ackerson, Bob Ackerson*  
RE: May 17, 1999  
C & C Plans for Koko Head District Park

As they are now presented, we wish to inform you that we are against the City plans for the Koko Head District Park.

Previously having served on the C & C Koko Head District Park task force with Tony Robinson, and working with the City to accomplish certain improvements there and also at Maimalua Bay Park, we feel any large undertaking such as is being proposed is unrealistic, mainly benefits the tourist population, does not address the basic needs of the local citizens, will create increased traffic in residential and park areas, and detracts from the needed and not completed upkeep of the present facilities. In addition, it will create a huge albatross around the neck of the C & C in terms of ongoing maintenance in the light of ever present budget shortfalls.

One simple example: to date Maimalua Bay Park, in one of the most beautiful settings on all of Oahu, is without adequate landscaping and upkeep; the reason has always been that of money and labor shortages to even include not enough money for grass seed and fertilizer! If something as beautiful and visible as Maimalua Bay Park cannot be maintained for local and tourist populations to enjoy, the City has no business creating huge areas which will need even more attention and money.

This lack of upkeep can be seen in all City parks which are in bad repair and need and deserve much attention to become the beautiful places they can be. Let's take care of what we have rather than create something new and let the old go by the wayside. We local citizens and tourists deserve better. Mahalo!



Francis S. Ode, AIA, AICP  
Norman G.V. Hong, AIA  
Meryl B. Neuman, AIA, ASID  
Harshi Hada, AIA  
Roy H. Nibel, AIA, CN  
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Roy A. Inouye, AIA, CN  
Frank B. Ak Ode, RA  
Clarence M. Rosada, AICP  
Stuart M. Jew, AIA

August 5, 1999

Mr. and Mrs. Robert Ackerson  
808 Koko Isle Circle  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. and Mrs. Ackerson:

Thank you for your May 17, 1999 letter to Ms. Mary O'Leary, Senior Planner of Group 70 International, Inc., regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanatama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS  
To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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JUL - 6 1999

GROUP 70

Letter to Mr. and Mrs. Robert Anderson  
August 5, 1999  
Page 2

To: Group 70, International  
925 Bethel Street  
5th floor  
Honolulu, 96813-4307

From: Eve G. Anderson  
P.O. Box 25550  
Honolulu, 96825 (259-7706)

I am expressing my opinion against most of the Draft Environmental Impact Statement, March 1999, as it pertains to Hanauua Bay part of the plan.

The coastline beginning with the Postlock boat ramp area, along the rugged mountain-side of Kokohead to Hanauua Bay and the breathtaking ocean view that is immediately visible as one travels towards the Blouhole is so spectacular in it's natural undeveloped beauty that we must agree to leave it as undeveloped as possible. No other Nature has done a wonderful job

As written in "Hawaii Kai - The First 20 Years" by Lambeth Hancock, - (a short historical booklet about Henry J. Kaiser's Hawaii-Kai project), page 11:

...The final plan envisioned a water-oriented recreational community that some 20 or more years later would accommodate 60,000 people, yet would seemendete preserve vast areas of open space that would remain in their natural state, areas such as Kokohead and Koko crater which were already dedicated as natural parks by

RESPONSES TO SPECIFIC COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Our detailed responses below address the specific comments in your letter from the perspective of how they are related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

The project mainly benefits tourism. As indicated in the attachment, elements of the original project scope that could be construed and benefiting mainly tourists are no longer a part of the revised project. This proposal is now limited to improvements that will enhance the protection of Hanauua Bay's marine ecosystem within the context of the existing numbers and patterns of use. All proposals that may have adversely affected resident access to Hanauua Bay have been deleted from this project.

The project does not address the basic needs of local citizens. As just noted, this project no longer includes any proposals that would impact resident access to Hanauua Bay and other portions of the Koko Head Regional Park and Nature Preserve. Addressing the basic needs of local citizens will be a key, integral part of the upcoming master plan preparation efforts for both the District Park and Regional Park.

The project will create increased traffic in residential and park areas. All proposals that could have created increased traffic have been deleted from the project. Park usage levels and the related traffic generation are expected to be virtually the same after completion of the proposed improvements as they are now. There will be no increased traffic generated in nearby residential and park areas.

The project detracts from the needed and not completed upkeep of present facilities. The proposed improvements at Hanauua Bay will improve developed areas in ways that will facilitate their maintenance and proper upkeep. Existing revenues from parking and entry fees will be more than sufficient to pay for maintenance of this Nature Preserve.

CONCLUSION

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone

Department of Design and Construction

11/10/99 (Project Number) 1999-11-10 (Date) 1999-11-10 (Date) 1999-11-10 (Date) 1999-11-10 (Date) 1999-11-10 (Date)

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this annual cost on top of the interest charge for the borrowed money?

General information for visitors on how to interact safely with our beaches, nearshore waters and reefs can be presented in welcoming videos on incoming flights, on the T.V. program in hotel rooms, and in pamphlets to hand out. In addition, educational panels at the Bay and inter-action with docents on the trolleys and on the beach can easily spread the information.

If we want visits to the bay to be short but educational, snacks are not needed. Hawaii Kai Shopping Centers have many opportunities for lunch/snacks, and our small businesses will appreciate the visitors, and your Government will enjoy the \$1 tax! Cold water fountains are appropriate, and the rest rooms need to be improved.

At a recent Hanalei Bay meeting, comments were made that tour buses come for a 15 minute visit, but over-stay their time allotment as tour members are lined up to use the restrooms. A following remark was that the park shouldn't be used for this purpose!

Question: Is it appropriate to not allow the large buses to enter the park. The Bay can be pointed out as they go by the entrance on their round the Island tour, and visitors can come to the Bay tomorrow by driving their own car or by riding a Hanalei Bay Shuttle that would bring visitors to the park in smaller numbers. This might also reduce the amount of engine exhaust that the larger buses cause while they wait for their riders to get aboard.

At this same Bay meeting, concerns were raised by DNR about the impact of asphalt and car emissions, carbon, fluids, etc. that

Bishop Estate, and other large areas of hill and mountainside, to be left in conservation."

The May 1992 Hanalei Bay Nature Park Master Plan speaks to the problems of the bay being so popular with visitors that adverse impacts to the park resource were occurring; and visitor safety was a great concern. It also mentions the fact that local families are not able to enjoy this wonderful beach resource.

Objective 2 mentions ... "Design park facilities in the lower park to accommodate limited park usage and to encourage shorter stays."

Objective 6: policies

Conduct studies to answer persistent questions on the role of Hanalei Bay Nature Park and the effects of park usage on its natural eco-system..."

Objective 7:

"De-emphasize provision of facilities and services for recreational activities such as picnicking, sunbathing, and swimming which can be accommodated at other public parks."

With the above statements in mind, I think the proposed education center with aquarium is too grand and inappropriate for the upper park area. A scaled down education display, video, -(what-ever) - should be researched and an appropriate proposal presented to the public for their input. We need to know what the costs to build and to maintain the displays are! As costs rise, we raise the price of the entry tickets, - eventually making a family visit too expensive. The DEIS states that 100 -150 new jobs will be created. What is

drastically impact the corals when rain washes this mixture into the bay.

*Suggestion:* All road ways, paths must be constructed with user friendly materials, such as concrete; and electric vehicles rather than gas powered.

The discussion about the feasibility of a separate pedestrian walk-way and the danger of the pedestrian/shuttles use of the road-way suggested to me that we should stop the shuttlebus trips to the bay .... to only allow foot traffic. This will curtail the usage of the beach area, and eliminate the large turn-arounds for the shuttle. The roadway should be resurfaced in an appropriate material for foot traffic and safety vehicles.

Only the smallest area of the park should be built upon or sealed over with pathways/roadways on other solid surfaces. A visit to the park should be an out-of door experience, - to include trees, grass, perhaps other native plants, flowers, clean air, blue sky, sandy beach and ocean water! Kiosk or building like structures should be kept to a minimum, - for snorkel/fn rental, suntan provisions, fish identification cards, first aid requirements, storage, and the Friends of Hanaua Bay docent/educational program.

The comfort stations need to be properly renewed, and all waste from the luas and the snoble disinfective wash water must be contained and pumped out via the sewage system

*Putting utility:* Lines underground is appropriate.

The landscaping should be appropriate to the area - a dry land environment, but also landscaping that is easy to maintain.

A transportation system that might be appropriate:

Visitors can ride to Hawaii Kai on the tourist shuttle. I think a day-pass can be purchased that allows the individual to get on and off the trolley at the various stops all day long. We could have a Hanaua Bay Shuttle that would pick up passengers at the Hawaii Kai Park and Ride area, the Pointlock boat ramp area, at the Hawaii Kai Shopping Center, and then to Hanaua Bay. This would make the walk from the shopping center to the park unnecessary. The walk is long, uphill, and hot in the middle of the day and dangerous alongside the cars.

Visitors could stay at the Bay as long as they want, and then catch the next Hanaua trolley to the Blowhole, Sandy Beach, the Botanical garden, back to the park and ride, Pointlock, and the shopping center where visitors can purchase souvenirs and something to eat before catching the Waikiki trolley back to their hotel .... a fun, active day at each visitor's own pace!

To encourage more local use of the Bay, allow local families to go to the Bay from sunrise to 9:30 am during the summer and to 10:am during the winter months before visitors and everyone else arrives. This would also give the maintenance people more time to accomplish their work before the major number of visitors arrive.

Local families should be able to buy an annual pass, and tourists can buy entry tickets at their hotel recreation desk, including the shuttle ride, - this may cut down on the amount of money collecting at the entry gate.

The fees charged must remain at the \$3.00 amount. If visitors

have a good experience at the beach and don't feel that they were over-charged, they are more likely to spend their money on meals, gifts, and other experiences. Everyone benefits!

*Educational Tours: beach near-shore tour, snorkle tours inside the reef, snorkle tours on the ocean side of the inner reef; geological tour, photographic tours; trails to look-outs; bicycle events, ... are all an enhancement of the Hanalei Bay experience.*

*These tours should be available thru out the day, but especially during the cool of the morning, especially for the hiking and geological tours.*

*Our coastline from Poitlock to Nahaou is very special and must be preserved in its natural beauty! We are all surrounded by asphalt and concrete, busy traffic and people in a hurry. This coastline including the Hanalei Bay upper and lower park areas gives us all a time and a place to take a deep breath and relax and to enjoy!*

Mahalo,  
Eve C. Anderson



GROUP 70 INTERNATIONAL

- Francis S. Ohi, AIA, AICP
- Naman G.Y. Heng, AIA
- Sheryl B. Scaman, AIA, ASID
- Hiroshi Hida, AIA
- Roy H. Nohr, AIA, CSI
- James L. Nishimura, AIA
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- Paul P. Chernys, AIA
- Dean H. Williams, BA
- Nancy J. Nye, BA
- George I. Aho, AICP
- Jillory H. Overton, AICP
- Kathya A. Nani
- Roy A. Inoué, AIA, CSI
- Frank H. McCue, BA
- Christine M. Russell, AICP
- Susan M. Jew, AIA

August 5, 1999

Ms. Eve C. Anderson  
P.O. Box 25550  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Anderson:

Thank you for your letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve and the demolition of existing structure at the former Koko Head Job Corps site have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bord, East Honolulu Vision Team Facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0006@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

#### RESPONSES TO SPECIFIC COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

#### Natural Undeveloped Beauty of the Ka Iwi Coastline

This project does not include any proposals that would adversely impact the natural beauty and undeveloped character of the Ka Iwi Coastline. Virtually all proposals are directed at lessening the impacts of Hanauma Bay users on the bay's marine ecosystem. There are only a few very small proposed improvements that are not directly intended to help achieve this goal. These are mostly to improve public safety or, as in the case of additional landscaping, to improve the Nature Preserve's appearance and natural character.

Current proposals are not directed specifically at reducing park usage or encouraging shorter stays at Hanauma Bay. As was explained at the first of the Hanauma Bay Improvements Task Force meetings, proposals with these goals in mind are being deferred. The intention is to consider such ideas within the context of a more deliberative and comprehensive planning process that is directed at preparing a new master plan for the entire Koko Head Regional Park and Nature Preserve. As noted at the beginning of this letter, this process is scheduled to begin with an intensive planning "charrette" in October 1999.

#### A Scaled-Down Hanauma Bay Marine Education Center

The revised proposal for the marine education center does "scale down" its size. An aquarium is no longer included, and the activities that will be accommodated are intended solely for educating the public on the importance of this natural resource and ways to avoid or minimize any damage to the bay's marine ecosystem, or for housing on-site operations staff. Every activity that is planned for this facility received a "strong consensus in favor" from the Hanauma Bay Improvements Task Force.

The number of additional jobs that would be created to support the operation and maintenance of this center and other proposed improvements would be relatively small, almost certainly less than 10. All of the original proposals for escorted tours, etc. have been dropped. Revenues from the existing parking and entry fees is expected to be more than sufficient to pay for the additional staff.

#### Replacement of the Existing Hanauma Bay Snack Bar

We disagree that a snack bar is not needed at Hanauma Bay Nature Preserve, and that the existing establishments in Hawaii Kai are conveniently located to meet the legitimate needs of many park users for some food and refreshment during their stay. Without a snack bar, more people are likely to bring in their own food. This would increase the

litter and other problems associated with people consuming food in the lower bay area. Relocation of the snack bar to the upper park area is intended to reduce these problems.

#### Accommodations for 15-Minute Tour Bus Stops at Hanauma Bay

We believe allowing tourists on buses to make a brief stop in order to view Hanauma Bay is an appropriate way to extend at least a reasonable degree of aloha to our visitors, while at the same time ensuring that these stops have very little if any impacts on the natural environment. The impacts of these stops are really very limited and mostly affect the tranquility of the park setting for other visitors who happen to be nearby or within earshot. They do no serious or permanent damage to the physical environment or the bay's marine ecosystem. We consider this a small price to pay in return for allowing more of our visitors at least the opportunity for a brief glimpse at one of the most beautiful places in the world.

In any event, as explained above, proposals that would significantly alter current patterns of use at Hanauma Bay Nature Preserve are being deferred for consideration in the context of the overall master planning effort for Koko Head Regional Park and Nature Preserve.

#### Use of "User-Friendly" Paving Materials and Electric Trams

In response to concerns expressed by the DLNR representative and others on the Hanauma Bay Improvements Task Force, it is planned to use portland cement concrete, rather than asphaltic concrete or blacktop, to repave the beach access road and construct the turnarounds. The use of less polluting as well as narrower (for increased public safety) tram vehicles will be investigated. However, it may not be possible to use electric powered vehicles because of the steep grade.

#### Discontinuance of Hanauma Bay Beach Tram Service

We disagree with your suggestion that only foot traffic should be allowed to go down to the bay. This would deny access to a significant portion of our population, and seems like a very arbitrary, and potentially illegal, way to "curtail the usage of the beach area".

#### Extent of Built-Up Area at Hanauma Bay Nature Preserve

The built-up area in the Nature Preserve will not be significantly altered, and will continue to be very limited. Uses and activities requiring buildings and other structures in the lower beach area are being restricted to those which either "absolutely have to be there", or provide a substantial benefit that outweighs the drawbacks of building a facility to accommodate it. All of the proposed improvements in the lower beach area received a "strong consensus in favor" from the Hanauma Bay Improvements Task Force.

#### Comfort Stations; Disposal of Snorkel Disinfectant Wash Water

Comfort Station No. 1 in the lower beach area at Hanauma Bay will be replaced with a new facility that has an appropriate number and adequately sized stalls for both women and men. As explained at a Hanauma Bay Improvements Task Force meeting, the extent to which snorkel disinfectant wash water impacts Hanauma Bay will be assessed by Dr. Richard Brock as part of his carrying capacity study. If the results indicate that there are

Letter to Ms. Eve Anderson  
August 5, 1999  
Page 4

adverse impacts, steps will then be taken to dispose of the wash water in the Nature Preserve's sewerage system. The Task Force reached a consensus on deferring a decision to make this connection pending the completion of Dr. Brock's study.

Undergrounding of Utility Lines

We appreciate your support of the proposal to place underground the existing utility lines that run to the lower beach area at Hanauma Bay Nature Preserve.

Landscaping Materials

We agree with your comments that new landscaping should be appropriate to a dry land environment and easy to maintain. It will also need to be salt tolerant. New plantings will be in accordance with these guidelines.

Alternative Transportation Systems

Your suggestions raise some concerns that, by increasing transportation options, they could encourage more people to come to Hanauma Bay. However, it has been generally accepted that any actions that could increase the daily visitor count should be avoided pending the results of the carrying capacity study. It has also been generally agreed that any proposals that would impact the use of other areas of Koko Head Regional Park and Nature Preserve should be considered within the context of the upcoming effort to prepare a new master plan for the Regional Park.

Encouraging More Local Use of the Bay

We support efforts to increase resident use of Hanauma Bay, but believe that proposals involving the establishment of exclusive resident access times or similar major differences in access rights for different groups of people would be inappropriate. It may also be illegal.

Annual Passes for Residents: Hotel Purchase of Non-Resident Entry Passes

Residents will continue to not be charged an entry fee at Hanauma Bay Nature Preserve, so there is no need to issue an annual pass for this purpose. Annual passes will be issued for those who have completed the planned resource awareness training.

Selling entry tickets at hotel desks could lead to an increase in visitor counts at Hanauma Bay. We believe consideration of any proposal that would make it more convenient for people to visit the Nature Preserve should be deferred pending completion of the carrying capacity study.

Entry Fees

There are no plans included in this project to change the existing non-resident entry fee. It is expected to remain at \$3.00.

Letter to Ms. Eve Anderson  
August 5, 1999  
Page 5

Educational Tours

Proposals to establish and accommodate regularly scheduled educational or other forms of escorted tours have been deferred for consideration as part of upcoming master plan preparation program for Koko Head Regional Park and Nature Preserve. The current practice of accommodating when possible school classes and other community groups that request an educational presentation will be continued.

CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you and other participants the Hanauma Bay Improvements Task Force upon its completion. We greatly appreciate your active interest and input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

MAYOR'S OFFICE  
CITY & COUNTY  
HONOLULU

Jerry Chang  
3215 Ala Ilima Street # B210  
Honolulu, Hawaii 96818

June 1, 1999

99 JUN -3 P4:21

Mayor Jeremy Harris  
City & County of Honolulu  
530 South King Street Room 300  
Honolulu, Hawaii 96813

Dear Mayor Harris:

I understand that the City is considering placing a restaurant on the ridge of Koko Head Crater, overlooking the Koko Head Shooting Complex that could result in the closing of the Complex.

As a voter, taxpayer, and user of the Complex, I want to express my objections to the possibility of closing the Complex. For my friends and I the Complex has been a source of recreation just as public tennis courts or golf courses would be for others.

There are no other public facilities on this island to allow residents to legally and safely shoot their firearms. To close the Complex would essentially deny firearm owners a place to shoot.

I hope you will reconsider placing a restaurant so close to a shooting range. It is a safety hazard, and ultimately would punish responsible firearm owners who use the Complex by closing it.

Very truly yours,

  
Jerry Chang

OFFICE OF THE MAYOR  
CITY AND COUNTY OF HONOLULU  
530 SOUTH KING STREET ROOM 300 • HONOLULU HAWAII 96813  
PHONE (808) 522-8141 • FAX (808) 527-5552



JEREMY HARRIS  
MAYOR

RECEIVED

JUN 13 1999

GROUP 70

July 6, 1999

Mr. Jerry Chang  
3215 Ala Ilima Street, Number B210  
Honolulu, Hawaii 96818

Dear Mr. Chang:

Thank you for your letter regarding the Koko Head Shooting Complex.

As you are aware, this project has been revised and your concerns regarding Koko Head improvements will not be pursued at this time. However, your comments have been forwarded to Group 70 International, Inc., who is the consultant for this project.

We would like to invite you to participate on the Koko Head Task Force. Please call Cynthia Bond, the Hawaii Kai Vision Team Facilitator at 527-5558 if you have any questions and for further details on meeting dates and times.

Sincerely,



JEREMY HARRIS  
Mayor

JH:jfr

cc: ✓ Group 70 International, Inc.  
Cynthia Bond





Francis S. Ode, AIA, AICP  
 Norman G.Y. Heng, AIA  
 Sheryl B. Scaman, MA, ASD  
 Hando Hida, AIA  
 Ruy H. Nishi, AIA, CN  
 James I. Nishimura, AIA  
 Ralph E. Portmore, AICP  
 Stephen H. Vuori, AIA  
 Linda L. Champ, AIA

Paul P. Cheney, AIA  
 Dean H. Klemmer, RA  
 Norma J. Saret, RA  
 George J. AIA, AICP  
 Jeffrey H. O'Brien, AICP  
 Kathleen A. Nani  
 Ruy A. Inayve, MA, CN  
 Frank B. McGee, RA  
 Christine M. Rueda, AICP  
 Stuart M. Jew, AIA

August 5, 1999

Mr. Jerry Chang  
 3215 Ala Ilima Street # B210  
 Honolulu, HI 96818

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Dear Mr. Chang:

Thank you for your June 1, 1999 letter to Mayor Jeremy Harris regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**  
 To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
 Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (822-5558), fax (822-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
 925 Helelu Street, 14th Floor • Honolulu, Hawaii 96813-1977 • Phone (808) 523-9666 • FAX (808) 523-9673 • http://www.group70.com • e-mail: mail@group70.com

Letter to Mr. Jerry Chang  
 August 5, 1999  
 Page 2

**RESPONSES TO SPECIFIC COMMENTS**

Your primary concern relates to potential impacts of this project on the Koko Head Shooting Complex, and in particular to the possibility that this facility may need to be closed in order to accommodate the proposed improvements.

Please note that placing a restaurant on the ridge of Koko Crater was never part of this project, nor are there any future plans for one. The original project scope did involve the construction of a Koko Crater funicular that would follow the old military cable car alignment and transport park visitors from the base of the crater to a summit lookout. The construction of baffling and other safety improvements at the Shooting Complex was also proposed as a separate project, in order to enable the existing firing ranges to continue to be used once the funicular and lookout were constructed.

The proposals for the summit funicular and lookout have been deleted from this project. There are no longer any active park improvement proposals that would adversely impact the continued use of the Shooting Complex. Funding for safety improvements at the Shooting Complex were included in the City's 1999-2000 Capital Improvements Program Budget. It is our understanding that the City intends to move forward with this project.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

GROUP 70 INTERNATIONAL, INC.

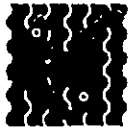
Sincerely,  
  
 Ralph Portmore, AICP  
 Principal

Attachment  
 cc Mr. Jim Nakasone  
 Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Assets Management  
 925 Helelu Street, 14th Floor • Honolulu, Hawaii 96813-1977 • Phone (808) 523-9666 • FAX (808) 523-9673 • http://www.group70.com • e-mail: mail@group70.com

Fax :

May 04 12:04



April 24, 1999

Dear Councilmember \_\_\_\_\_ :

I am concerned that the \$13 million dollars already budgeted to spend this year for the proposed "Koko Head Regional Park & Nature Preserve" is too much money to be spent on such a proposal since the community has had little to do with the planning or funding of this. I understand that the access to Hanauma Bay will be so restrictive that we won't be able to walk down to enjoy it by ourselves. I would have to be part of a group, like I was on a tour.

I also have seen the proposal for the tram to go straight up on the outside of Koko Crater, going up and down every 4.5 minutes from sun up to sun down. That would be very unnatural. Further, the plan is to demolish a much-loved ballfield to make room for more parking. Bad idea!

The point is, we want to keep this coastline a natural, passive area. The State's purchase of the nearby Ka Iwi coastline is to keep it natural and pristine for the benefit of us residents, not to be just another tourist destination. Ruining Hanauma Bay and Koko Crater is not a good vision for O'ahu. And taking them away from our enjoyment is not the future we want.

If the intent of all this is to help protect Hanauma, can't it be closed down for another day for relief to the eco-system and provide some intensive, bi-lingual education for all the people who visit the Bay?

Sincerely,

*Charles K. Pal-Santo*  
name Charles K Pal-Santo  
address 441 Anolani St.  
city Honolulu  
zip code 96821-2032  
phone number 808-791-2034

August 5, 1999

Mr. Chester L. Del Santo  
441 Anolani Street  
Honolulu, HI 96821-2032

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Del Santo:

Thank you for your April 24, 1999 petition regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**  
To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5559), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Asst. Management  
955 Kalia Street, Kalaheo, Hawaii 96841-5197 • Phone: (808) 433-4477 • Fax: (808) 433-4477 • E-Mail: info@group70.com • www.group70.com • e-mail: info@group70.com



April 27, 1999

-2-

To: Group 70 International Inc.  
925 Bethel St., 5th Floor  
Honolulu, HI 96813

From: Sally Drake  
746 Alipo St.  
Honolulu, HI 96825  
395-3998

Re: Draft EIS/Koko Head Regional Park and  
Nature Preserve--reaction

Since your presentation at Koko Head Park on April 26, you have probably already abandoned at least some of the proposals in the Draft EIS, but since we were encouraged to respond in writing, here is my letter.

1.2 "Appreciation . . . will be enhanced"

- This may be your goal, but as reaction at the meeting made clear most of these charges will have the opposite effect.
- Multiple pay booths will aggravate both local users and visitors, both with irritating waits and additional expense.
- Parking lots encroaching an existing baseball diamond upset local users.

1.2 "Integrated Park/Nature preserve"

- The geographic separation of the bay, Koko Crater, the botanical garden, and the blowhole, plus the separation by the busy highway preclude this idea.
- Trying to force users to the nature preserve when they are only interested in the bay will just cause frustration.
- People are not interested in the nice little museum that is most conveniently located on their way to the bay now. This is a clue there will NOT be high interest in an expanded display at this site.

1.2.3 "Demolishing existing . . . parking lots (at Hanauma Bay.)"

- These lots were only built a few years ago, and are in excellent condition.
- The terrain was sloping bare rock, dry scrubby weeds and shrubs and will not be an attractive grassy park.
- The park under the Kiawe trees which is shaded and pleasant IS HARDLY USED NOW. Additional parks and picnic tables are not needed.
- This will cause much negative reaction by both local users and visitors.

1.2.4 "Shuttle transportation System."

- Too time consuming and expensive.
- Pollution from so much vehicular traffic

- Will make the crossing to Hanauma Bay a very busy intersection which will need traffic lights. The approach up a hill from both directions will make a blind stop for drivers and will result in accidents

The only portion of this that bears consideration is the ride to the top of Koko Crater, but this should be developed as a separate facility, not connected in any way to the other sites, in my opinion.

DR  
Sally Drake  
HAI 0319

GROUP 70



**GROUP 70**  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
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Jeffrey H. Ostrom, AICP  
Kathryn A. Nam  
Roy A. Jerny, AIA, CN  
Frank D. McKee, RA  
Christine M. Russell, AICP  
Suatt M. Jurek, AIA

August 5, 1999

Ms. Sally Drake  
746 Aljpo Street  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Drake,  
Thank you for your April 26, 1999 and April 27, 1999 memoranda regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaua Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (927-5558), fax (927-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Bedford Street, Fifth Floor • Honolulu, Hawaii 96813-1407 • Phone (808) 532-5666 • FAX (808) 532-5671 • http://www.group70.com • e-mail: mail@group70.com

Letter to Ms. Sally Drake  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Early Birds at Hanaua Bay

All original project proposals that could have altered or restricted the current accessibility of Hanaua Bay to early morning swimmers and other users have been deleted. No changes are now proposed.

Comments on Original Project Scope

As noted in the attachment, all original project proposals that could have involved multiple pay booths, encroachment of a new parking lot into an area occupied by an existing ballfield, provision of a reef interpretive exhibit in the upper park area at Hanaua Bay, demolition and re-landscaping of the existing Hanaua Bay parking lots, and a shuttle transportation system connecting the various park facilities in Koko Head Regional Park and Nature Preserve have been deleted. The revised project scope involves only limited improvements at Hanaua Bay Nature Preserve that are intended to reduce the impacts of current use of the bay on its marine ecosystem and improve public safety.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you and other participants in the Hanaua Bay Improvements Task Force upon its completion. We greatly appreciate your active interest and input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Principal

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasono  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Bedford Street, Fifth Floor • Honolulu, Hawaii 96813-1407 • Phone (808) 532-5666 • FAX (808) 532-5671 • http://www.group70.com • e-mail: mail@group70.com

The Esplanade, Apt. 11-D  
500 Kunalilo Home Road  
Honolulu, HI 96825-1724

07 June 1999

RECEIVED

JUN - 8 1999

GROUP 70

Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu HI, 96813

Dear Sir or Madam:

I am writing in regards to the Draft RIS on the Koko Head Regional Park & Nature Preserve. Since I do not wish to "reinvent the wheel" I am enclosing a copy of the Friends of Hanalei Bay newsletter, HANAUMANA, with which I am in full agreement. I have been a volunteer docent at the Bay for the last eight years and have seen first-hand the problems there and at the Koko Head area, having lived at the above address for twenty-six years.

I would like to address the following concerns:

- A. Summit Punctular, 3.2.2: Your number of people at 403 is not possible in an hour. If this is a "special design system" your estimated cost seems low.
- B. Lower Bay, 3.2.4.2: Since there will not be any foot traffic to the lower bay I did not find any facts on the number or type of trams required or turn around time.
- C. Shuttle to Hanalei Bay, 3.3.3.1: The peak load of 1100 people to the bay will take 4 buses carrying 60 passengers each an hour, and eight minutes to handle, not counting the time to find a parking space, or standing in line to buy a ticket. You are going to have many unhappy campers.
- D. Pricing Rides, 3.4.2: The price of the rides and parking will be made by the Mayor and Parks Department. I believe that these prices will have a direct bearing on covering the cost of operation and maintenance and should be addressed in the plan. The concept of "if you build it they will come" is a nice, warm, fuzzy feeling for a movie but not to spend taxpayer money.
- E. Fish feeding, 4.5.3.2: You state that fish feeding is "well controlled". Where did you get that fact? I have been down at the bay one day a week for over eight years from 7:30 a.m. to 12:00 noon and over that time have seen the feeding of bread, peas, and Cheese whiz, decrease due to the work of the Friends of Hanalei Bay and the Hanalei Bay Education Program, but I would not say it is controlled, in the least.

Robert Donald Gee  
Koko Head Regional Park  
07 June 1999

Page two

If I can find errors and poorly thought-out ideas in the areas I am familiar with, what about the others such as traffic control, grading, soil control etc.? The \$13 million in the budget is only a down payment on the overall plan, adding greatly to our tax burden in a time of economic stagnation and with no guarantee of success or even a bona fide projection.

Yours very truly,

  
Robert Donald Gee

Enclosure

cc: Councilmember John Henry Felix  
Councilmember Mufi Hannaman  
Hawaii Kai Neighborhood Board Parks Chair, Lisa Carter

# NANAIMO ANA

Look into the Ocean

Honolulu, Hawaii  
Vol. 8, No. 1, May 1999



## FOHB BOARD REPORT

The following is a summary of the response of the Board to the Draft EIS that has been prepared on the Koko Head Regional Park and Nature Preserve. The statements reflect the general feeling of the Board members that they are not supportive of the plan because of its impact on the Bay and its use by residents. The comments were mailed to Eugene Trabocchi, Dept. of Planning and Permitting, City and County of Honolulu, 96813 on May 1 to meet the May 7 deadline. Post-dated comments from persons interested in Hanalei Bay might have an impact should you want to affirm any or all of the Board's concerns. The bold numbers preceding the statements indicate the page of the Draft EIS, which is available in the Site Libraries for reference.

- 1-4 Phases maintains Park usage a substantially the current overall attendance levels' voids the question of the changed mix of use and ignores the goal of possible decreased use to protect the Bay.
- 1-4 Access reduction - especially for Hawaiians and residents. See 3-24.
- 1-5 There is a need to affirm current no fee for residents for beach use and include main park shuttle as well.
- 1-4/7/9 Objective of completing the proposed improvements "as soon as possible" is inconsistent with the statement that construction cannot proceed until funding and timing for safety improvements for the shooting complex, funicular and lookout can be assured.
- 2-2 Goal D: Need to address how guided tours will be operated, training of staff, etc. What is to happen to the Hanalei Bay Educational Program and its many Volunteers?
- 3-7 Both Museum Shop and restaurant are smaller than similar facilities at Bay

- 3-29 Plan for office and other facilities during construction based on dates?
- 3-30 Is funding in place for initial work or part of the 1999-2000 Capital Budget? Buildings at beach in 2000-2001, why?
- 3-31 Road widening to Koko Head Park. Budgeted or future?
- 4-13 Turf cones should be "tuff" cone.
- 5-12 How does the C&C propose to effect the legal changes to restrict Hawaiian traditional and customary rights to the beach designated in Bishop Estate sale? Will this impact all Hawaiian beaches and shore lines?
- 5-12 Assertion that maintenance can be accomplished during visitor activities seems inconsistent with estimates of planned visitors and total facilities usage. Current closure all day Tuesdays is critical for use of oil-based paints needed at the Bay.
- 6-21 Bay is closed all day Tuesday, not Wednesday mornings.
- 6-32 Statement: "no construction...will reduce or further restrict public access" seems inconsistent with the presumed purpose of the project to reduce access to the Bay and early morning use of the Bay for swimming.

upper level. Intentional? How does this impact on length of average visitor stay? Parking? etc. Existing unsightly buildings at beach to be retained is inconsistent with rest of project. Recommend remove and rebuild in initial phase.

- 3-13 Only features over level of viewing from Koko Crater will be "railings". Does this provide adequate protection for ADA or less robust visitor? Recommend safety glass abutler.
- 3-13 Where is storage for Gift Shop(s)?
- 3-14 Beach shuttle: Existing? Timing and numbers planned?
- 3-21 Provision for early morning and late afternoon users? Stay length & parking estimates?
- 3-21 Elimination of Coach Goes Little League ballfield Hawaii Kai Residents oppose!
- 3-22 Access to Learning Center: Bus only? Pedestrian walks from Hawaii Kai and Kalaheo? Hey?
- 3-23 Shuttle buses like City buses? Dice equipment? chairs? cooler? etc. Explore electric buses seems desirable.
- 3-23 Peak capacity of 1100-1200/hr.? About double current Bay average daily visitor numbers!
- 3-24/5 Planning for group-tour sightseers is unclear? Purchase ticket? Only in Advance? etc.
- 3-26 Ticket purchase for visitors who change plans and want to stay at Bay?
- 3-26 How move visitors to beach level? Shuttle only? No walking? Early morning? Late afternoon? Why limit number of residents/day at the beach? How will non-snoozing residents accompany guests to the beach?



- Francis S. Ode, AIA, AICP
- Nirman G.Y. Hoop, AIA, AHD
- Sheryl B. Scamm, AIA, AHD
- Helen Hald, AIA
- Ray H. Niki, AIA, CN
- James T. Robinson, AIA
- Kajiki E. Punnett, AICP
- Stephen H. Yuen, AIA
- Linia L. Chung, AIA
- Paul H. Cheney, AIA
- Dean H. Kamaura, RA
- Nancy J. Netti, RA
- George J. Aita, AICP
- Kelley H. Overton, AICP
- Kathryn A. Nunn
- Ray A. Hawley, AIA, CN
- Frank B. MacCac, RA
- Christine M. Bivens, AICP
- Stuart M. Jew, AIA

August 5, 1999

Mr. Robert Donald Gee  
The Esplanade, Apt. 11-D  
500 Lunalilo Home Road  
Honolulu, HI 96825-1724

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Gee:

Thank you for your June 7, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

### CHANGES IN PROJECT SCOPE

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Letter to Mr. Robert Donald Gee  
August 5, 1999  
Page 2

#### RESPONSES TO SPECIFIC COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Section 3.2.2 Summit Funicular:** As indicated in the attachment, the proposal for a summit funicular has been deleted from this project.

**Section 3.2.4.2 Hanalei Bay Lower Level Facilities:** The option of walking to the lower beach area at Hanalei Bay Nature Preserve will be maintained. Consequently, the required number of beach tram vehicles and frequency of their operation are expected to substantially remain as these are now. Consideration will be given to using an alternative tram vehicle that is narrower (to improve public safety) and/or less polluting. If this is done, the frequency of operation (and possibly the number of vehicles) will likely need to be increased in order to maintain the same overall capacity.

**Section 3.3.3.1 Shuttle to Hanalei Bay:** The existing parking lots in Hanalei Bay Nature Preserve will be retained. Consequently, there will be no need to establish the originally proposed shuttle service.

**Section 3.4.2 Pricing for Shuttle Trips and Parking:** The revised proposal maintains the existing \$1.00 parking fee and \$3.00 non-resident fee at Hanalei Bay Nature Preserve. The original proposals for a new nature learning center and Koko Crater summit funicular and lookout, and a new parking area and shuttle service are all no longer a part of this project. The revised project scope involves only limited improvements at Hanalei Bay Nature Preserve that are intended to reduce the impacts of current use of the bay on its marine ecosystem and improve public safety.

**Section 4.5.2 Fish Feeding:** Your points on existing fish feeding practices are well taken. The description of this activity will be revised in the FEIS to more accurately reflect what is happening now. For your information, fish feeding at Hanalei Bay will be banned effective September 1, 1999.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasono  
Department of Design and Construction

www.group70.com

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Diagnostics • Asset Management  
925 Kalia Street, Fifth Floor • Honolulu, HI 96813 • Phone: (808) 432-9666 • FAX: (808) 432-9674 • http://www.group70.com • e-mail: mail@group70.com

JOHN B. HALL  
5326 KEIKILANI CIRCLE  
HONOLULU, HAWAII 96821-1515  
(808) 377-5442

May 6, 1999

Mr. Francis Oda,  
Group 70 International  
925 Bethel St.  
Honolulu, HI 96813

Re: Comment on Draft Environmental Impact Statement on  
Construction of a Funicular up Koko Crater, Kokohead Regional  
Park and Natural Preserve

Dear Mr. Oda,

I am a private citizen, a retired Professor of Microbiology from  
UH Manoa, and a life-long avid hiker and amateur botanist.

I wish to register my opposition to the construction of the  
funicular on the slopes of Koko Crater. There are already a  
number of hiking routes up the Crater to the summit, and  
additional traffic can only have an adverse impact on this  
fragile dry-land ecosystem which is home to a variety of rare  
plants. Even though the visitors using the funicular, will, I  
understand, be confined to a summit platform, the large number of  
people involved is bound to lead to a great increase in litter  
and will require extensive construction of barriers to insure the  
safety of the visitors in this rugged terrain. The impact on the  
summit is bound to be extensive. The facilities on the summit  
are likely to obliterate a number of populations of *Schiedea*  
*globosa* that I know of, and will interrupt the existing hiking  
route in this area.

If it is necessary to increase the availability of this resource  
to the tourists, a much more economical and less destructive  
alternative would be to repair and upgrade the existing funicular  
route as a trail from the Job Corps site. Public parking and  
clearly marked access from the Job Corps site should be provided,  
and much of the rubbish left at the summit from the days of World  
War II should be cleared away. The existing summit platform  
should be repaired or replaced. Switch-backs could be installed  
on the steeper sections. I believe that this hike, although  
moderately strenuous (I am 65 years old and do it regularly) is  
not very long and would prove to be quite popular, once the  
tourists discovered it. Certainly the very heavy stream of  
visitors up and down the Diamond Head Trail in Leahi Crater  
testifies to the unsatisfied demand for such trails.

My final objection is to the involvement of the government in  
this kind of project. Although I am no fan of universal  
privatization of public services, this is the kind of project



which, if done at all, is done much more successfully by the private sector. If the City undertakes it, there are bound to be massive cost overruns, inefficient operation, and a constant demand for subsidies from public funds to keep the operation running. We had better wait until we find out how much the Natarorium restoration is really going to cost us before we undertake on any more adventures of this kind.

Thank you for your attention to this comment.

Sincerely,

*John B. Hall*  
John B. Hall



August 5, 1999

Mr. John B. Hall  
5326 Keikiani Circle  
Honolulu, HI 96821-1515

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Hall:

Thank you for your May 6, 1999 letter to Mr. Francis Oda, Chairman and CEO of Group 70 International, Inc. regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (522-5558), fax (522-5563) or e-mail (CAA005@caahonolulu.hawaii.gov) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Francis S. Oda, AIA, AICP  
Norman C.Y. Hung, AIA  
Sheryl B. Seaman, AIA, AICP  
Hiroshi Hata, AIA  
Ray H. Nishi, AIA, CN  
James I. Nishimura, AIA  
Ralph E. Rasmussen, AICP  
Stephen H. Yuen, AIA  
Linda L. Chang, AIA  
Paul F. Chermey, AIA  
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Nancy J. Svan, RA  
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Jeffrey H. Overton, AICP  
Kathryn A. Nann  
Ray A. Inouye, AIA, CN  
Frank B. Ak Coo, RA  
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Nancy M. Jarr, AIA

Letter to Mr. John B. Hall  
 August 5, 1999  
 Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Proposed Summit Funicular

As indicated in the attachment, this proposed new facility is no longer a part of this project.

Hiking Trails

No changes to existing hiking trails or access to Koko Crater summit are proposed as part of this project. Proposals to improve existing hiking trails and/or add new trails have been deferred for consideration as part of the upcoming effort to prepare a new master plan for Koko Head Regional Park and Nature Preserve.

Government Versus Private Sector Involvement in This Project

Current plans are for the City to continue to operate and maintain Hanauma Bay Nature Preserve and other areas in the Regional Park. Activities such as operation of the snack bar, beach tram and snorkel rental will continue to be contracted out to a concessionaire. This is also expected to occur with respect to operation of the planned resource awareness training sessions that all visitors to the lower beach area at Hanauma Bay will have to attend.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC

*Ralph Portmore*  
 Ralph Portmore, AICP  
 Principal

Attachment

cc Mr. Jim Nakasone  
 Department of Design and Construction

\\net01\public\Planning\1999\11\26\Hawaii\Project\0105\Design\Proposed\Final\Final\0105\FEIS\FEIS\_0105.pdf

SUZANNE M. HAMMER, M.D.

May 26, 1999

Mayor Jeremy Harris  
 Office of the Mayor  
 530 South King Street, Room 300  
 Honolulu, Hawaii 96813

Century Square, Suite 2408  
 1188 Bishop Street  
 Honolulu, Hawaii 96813  
 Phone/Fax: (808) 524-3393

RECEIVED

JUN - 1 1999  
 GROUP 70

Re: Hanauma Bay Environmental Impact Statement Response

Dear Mayor Harris,

I am writing this letter as a person who swims/snorkels in Hanauma Bay each morning. I communicate with fellow swimmers, staff, caretakers and concessionaires on a regular basis. I have partially reviewed the EIS and have the following concerns and comments regarding the proposed changes for Hanauma Bay.

**Restrooms**

1. The restroom space that currently exists and that which is proposed is inadequate. Caretakers at Hanauma Bay list this as a major complaint of visitors. Women from tour buses spend most of their 15 minutes of allotted time standing in long lines at the restroom instead of enjoying the view (or shopping if a gift shop is added as proposed). Larger restrooms are definitely needed at the upper levels of Hanauma Bay, with more space allotted to women than men.

Walking: Walking is practically eliminated in the current proposal. Walking down to the bay should be included in any plan.

1. The walk is beautiful, spectacular and could not be better planned as an attraction all of us can enjoy.
2. People stop and look and take pictures along the walk down. The current niche is a great place to educate people.
3. People enjoy the walk, and it keeps the flow of bay traffic moving easily.
4. Walking allows people to assess currents, waves and ocean conditions before getting to water level.
5. Walking is free and will save money required for purchase of additional shuttle vehicles, fuel, and maintenance of those vehicles.

**Parking and parks:**

1. The current parking lot was recently constructed at great expense. Why move it?
2. Why tear out good and beautiful trees to construct a shuttle turn around? If a shuttle system is to be used, why not use part of the currently constructed parking lot for the turnaround?
3. Why tear out ball diamonds and disrupt a heavily used recreational area to build another parking lot, and then create, at enormous expense, a major change in traffic flow?

**Summary:**

1. Increase women's restroom facility size. Improve Comfort Station #1.
2. Allow walking.
3. Improve educational exhibits.
4. Leave guided tours optional.
5. Snack bars both levels.
6. Reconsider parking/ park use options.
7. Improve accessibility for and input from local residents.

In general the overall goal of preserving the bay and expanding the educational and local and visitor experience at the bay seems good, visionary, and correct. However, several aspects of the plan seem limited, expensive, restrictive, and unnecessary. I hope this input can be added to the numerous opinions and questions this massive project demands, and that thoughtful and reasonable compromises can be worked out before the project proceeds.

I am willing to give further input or opinions if needed and as my schedule allows.

Mahalo,

*Suzanne M. Hammer, M.D.*

Suzanne M. Hammer, M.D.

SMH/kk

cc: City Councilman John Henry Felix  
City Councilwoman Rene Mansho  
City Councilman Steven Holmes  
City Councilman Mufi Hanneman  
City Councilman Duke Bainum  
City Councilman Andy Mirikitani

6. Walking prevents long lines of people waiting for transport.

7. Far more people prefer walking to riding and want the exercise. Walking everywhere in the park should be an option.

8. The current system of shuttles available for those who want to ride or need to ride works, so why change it?!

**Educational Exhibits and Guided Tours:**

1. Educational exhibits and displays definitely need improving and efforts in this area are a good use of financial resources.

2. A basic education for all visitors is needed, and should be simply stated in multiple languages:

- \*Don't walk on the reef
- \*Don't feed the fish
- \*Don't harass the turtles
- \*Avoid jellyfish
- \*Report sharks
- \*Pee in pots
- \*Have fun

Frequently people want to be educated about what they have seen after snorkeling. How will that be managed?

3. Guided Tours are a great idea, but should be optional, not mandatory.

\*Many people know how to swim and/or snorkel and don't want the restrictions of a tour.

\*Tides and conditions of the ocean prohibit consistency of tours, i.e. tide pools, outer reef exploration etc..

\*Visitors require more help and practice with the use of snorkels.

**Visitors to the Beach:**

The current proposal does not seem to take into consideration people who come to the beach to relax, have picnics, or accompany those who swim.

**Snack bars:**

There should be a snack bar on both levels as people in the lower level frequently eat or drink after swimming.

City Councilman Jon Yoshimura  
 City Councilwoman Donna Mercado Kim  
 City Councilman John DeSoto  
 Group 70 International, Inc.: Ralph Postmore  
 William Balfour: Director Parks and Recreation  
 Department of Design and Construction  
 Department of Planning and Permitting  
 Alan Hong: Director Hanauma Bay  
 Governor Ben Cayetano  
 East Honolulu Community Coalition  
 Hawaii Visitors Bureau

SUZANNE M. HAMMER, M.D.  
 June 02, 1999

Century Square, Suite 2408  
 1189 Bishop Street  
 Honolulu, Hawaii 96813  
 Phone/Fax: (408) 524-3391

Mayor Jeremy Harris  
 Office of the Mayor  
 530 South King Street, Room 300  
 Honolulu, Hawaii 96813

Re: Hanauma Bay

Dear Mayor Harris,

Mahalo nui loa for meeting with members of the East Honolulu Coalition to discuss the complex issues surrounding the Hanauma Bay/Kokohead Crater project. We commend your efforts and goals to preserve the bay. We appreciate your decision to slow down the process to allow community input into the project. As a biologist and former nature instructor and regular user of the bay, I empathize with your feelings about the gradual destruction of the bay. While opinions are gathered for a more comprehensive plan, I have the following suggestions for interim strategies at the bay.

**Damage Prevention**

1. Increase the educational effort towards bay visitors. Hire teenagers or college students wanting to practice their language skills or with interest in science to work for the summer with the Friends of Hanauma Bay to educate Hanauma Bay visitors.
2. Consider training additional bay monitors or staff if needed from the state welfare to work program since significant money is available in that program.
3. Provide snorkeling lessons to visitors to prevent their climbing on the reef when they have problems with their snorkeling equipment.

**Education**

1. Begin optional guided tours to test that program and improve the educational experience for those who want it.
2. Redirect traffic flow through the educational exhibit on the way down to the bay. Create a video instructional program to be viewed if volunteer educators are not available.

**Safety**

1. The life guards need additional equipment, and would like a jet ski for emergencies.



FROM :

PHONE NO. :

Jan. 15 1998 09:47AM P3

2. Lifeguards should continue to start work at 6:30 am instead of 7:30 am to be available for early morning bay visitors. We usually report jellyfish stings to them, and some people may require their assistance.

**Facilities**

Improve comfort station #1. Increase restroom facilities.

**Security Guards**

Change security guard uniform as soon as possible to lighter weight shorts for the hot summer months.

Thank you again for the meeting. Please feel free to contact me if you would like additional comments.

Mahalo,

*Suzanne M. Hammer M.D.*

Suzanne M. Hammer, M.D.

SMH/ak

- cc: City Councilman John Henry Felix
- City Councilwoman Rene Mansho
- City Councilman Steven Holmes
- City Councilman Mufi Hanneman
- City Councilman Duke Baizum
- City Councilman Andy Mirikihani
- City Councilman Jon Yoshimura
- City Councilwoman Donna Mercado Kim
- City Councilman John DeSoto
- Group 70 International, Inc.; Ralph Postmore
- Director Parks and Recreation; William Balfour
- Department of Design and Construction; Jim Nakasone
- Department of Planning and Construction
- Director Hanalei Bay; Alan Hong
- Governor Ben Cayetano
- East Honolulu Community Coalition; Attention Lisa Carter
- Hawaii Visitors Bureau
- Friends of Hanalei Bay

SUZANNE M. HAMMER, M.D.

June 07, 1999

Century Square, Suite 2408  
1188 Bishop Street  
Honolulu, Hawaii 96813  
Phone/Fax: (808) 524-3193

Mayor Jeremy Harris  
Office of the Mayor  
530 South King Street, Room 300  
Honolulu, Hawaii 96813

Re: Response to Environmental Impact Statement: Hanalei Bay/Koko Head Crater  
Dear Mayor Harris,

The East Oahu Coalition would again like to extend our thanks to you and John Felix and the City Council for meeting with us to listen to our concerns and for involving us in the planning of your proposal project.

After attending meetings, reviewing the Environmental Impact Statement (EIS) and listening to a number of people present opinions and positions on the Hanalei Bay/Koko Head Crater project, I have concluded the following:

The collision of science and sentiment creates a kaleidoscope of changing blurred images surrounding the complex issues in this project. Our various viewpoints of this natural treasure erupt from a colorful conundrum of experience and belief, fact and feeling, fantasy and fear. Thus we awkwardly swim with hesitant facts and passionate feelings towards ambivalent resolution of these difficult issues. Graceful and workable solutions may settle from this storming swirl. Clarity is born with time for thoughtful contemplation and open minded dialog.

My input summarizes some of the science, more of the sentiment, and offers some opinions to consider. Some points have been discussed in previous letters.

**Scientific Conclusions and/or Opinions:**

1. The carrying capacity of the bay is unknown, so a comprehensive plan for the bay cannot yet be developed.
2. Scientific data presented in the EIS does not support that there is much "damage" in the bay due to human activity.
3. Might not construction effects alter or damage the bay more than current human lots were constructed?
4. An aquarium would be too expensive, redundant, and too difficult to maintain.

### Bay Viewing/Brief Stops:

Consider using part of the upper parking lot for 30 minute parking for visitors in cars to view and/or photograph bay.

### Entrance and Orientation:

Beautify entrance to bay. Take down orange plastic line organizers and replace with something more aesthetically pleasing, i.e. natural wood, rope. Separate resident and visitor entrance.

Extend aloha. Increase greetings and orientation from volunteers/staff with multiple language skills (add students wishing to practice language skills).

### Walk/Shuttle option to Bay:

The current system of walking or shuffling down and up from the bay works well. Don't change it!! Add a hand rail to the stairs up from bay.

### Snorkeling:

Add lessons on snorkel use.

### Guided Tours:

#### 1. Optional: definitely not mandatory!!

- a. Many people like to be shown sea life, and would appreciate tours. This is a great idea and optional!!
- b. Many people are fearful or the ocean, do not swim, find the water cold, are insecure in the unfamiliar ocean environment, or do not want the restrictions of a tour. Some take a long time to get into the water. Some do not want to go into the water. Some simply accompany others who go into the water.
- c. Many people are thrilled to simply stand in the water and look at the fish.
- d. The conditions of the ocean change frequently with tides, currents, and weather, making tours difficult to consistently manage.

### Educational Displays:

Most people are eager to get down to the bay and walk past the current educational displays. They tend to want to learn about what they have seen after snorkeling. Situate

### Sentiment and other Considerations:

1. Most people seem to want the bay and parks to remain natural with open spaces and with fewer buildings and less restrictions than the EIS proposes. In fact many say "Do nothing".
2. The proposed plan with more commercial attractions would increase the number of visitors to the bay and park.
3. The proposed funicular and current shooting range cannot peacefully and safely co-exist.
4. There is no current or proposed location for people touring the island to briefly stop, look at the bay and/or take pictures, and drive on.
5. Koko Head District Park was promised more ball diamonds and swimming pool(s). It is a busy and important recreational area. There is strong objection to having a parking lot and increased traffic there.

The following suggestions are a possible compromise position for some aspects of the proposed plan.

### Parking and Bay Entrance Ticketing:

1. Keep current parking lots.
2. Eliminate proposed parking at Koko Head Crater.
3. Add shuttle service from 10am-6pm with trolleys (like the Waikiki trolley) from Hawaii Kai Kiss and Park lot (now barely used), and/or Hawaii Kai Boat Ramp, and/or Waikiki.  
Ticket visitors for the shuttle ride, admission to bay, and/or snorkel rental, and/or any optional guided tours. This would reduce long lines for tickets at Hanalei Bay. Offer a discounted rate for bay entrance to visitors using shuttle and/or offer package rates. Provide a bay orientation lecture on shuttle to bay.
4. Shuttle frequency and ticketing could help in control of visitor numbers.
5. Eliminate taxi drop-offs(?)

the museum at the top of the stairs going out of the bay. It is helpful to have additional information available on the bay level.

I am sure you have excellent consultants for the development of museum displays. If you want further input I can personally recommend Lewis Eisenberg, of Pacific Whaling Museums, who designed and built the museums at Sea Life Park and Ka'anapali Maui. His telephone number is 808-661-8046.

**Signs: Lifeguards:**

1. Lifeguards should start at 6:30am, especially in the summer.
2. The 'dangerous current' signs need changing. They point in the wrong direction and are confusing.

**Money:**

In general, spend money on taking down out-dated buildings, wires, tracks etc., landscaping, creating hiking/biking trails, improving restroom and comfort station #1, creating educational displays, and paying staff well!!!

**Summary:**

1. More scientific data is required to more accurately determine a factually based comprehensive plan for this project.
2. Community sentiment and individual or group needs must also be carefully assessed and considered in order to address and accommodate competing and sometimes conflicting desires for this natural resource.
3. In the meantime, some of the changes summarized in this report can be implemented with little or less overall cost to augment the current management and operation of Hanauma Bay.

I am submitting these ideas in writing as I may not be able to attend some of the planning meetings due to my busy schedule. Please feel free to contact me if you have any questions.

Aloha,



Suzanne M. Hammer, M.D.

SMH/kk

cc: City Councilman John Henry Felix  
City Councilwoman Rene Mansho  
City Councilman Steven Holmes  
City Councilman Mufi Hanneman  
City Councilman Duke Bainum  
City Councilman Andy Mirikitani  
City Councilman Jon Yoshimura  
City Councilwoman Donna Mercado Kim  
City Councilman John DeSoto  
Group 70 International, Inc.: Ralph Postmore  
Director of Parks and Recreation: William Balfour  
Department of Design and Construction: Jim Nakasone  
Department of Planning and Permitting  
Director of Hanauma Bay: Alan Hong  
Friends of Hanauma Bay  
Governor Ben Cayetano  
East Honolulu Community Coalition: Attn: Lisa Carter  
Hawaii Visitors Bureau  
Human Resources City and County: Cynthia Bond  
Pacific Whaling Museum: Lewis Eisenberg  
Swimmer: Sally Drake



**GROUP 70**  
INTERNATIONAL

Francis S. Oda, AIA, AICP  
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Frank H. McGee, RA  
Christine M. Rutledge, AICP  
Susan M. Jure, AIA

August 5, 1999

Suzanne M. Hammer, M.D.  
Century Square, Suite 2408  
1188 Bishop Street  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Dr. Hammer:

Thank you for your May 26, June 2 and June 7, 1999 letters to Mayor Jeremy Harris regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will

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Letter to Suzanne M. Hammer, M.D.  
August 5, 1999  
Page 2

also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Community Sentiment [67 Letter, Pages 2 & 4]**

The scope of this project has been significantly reduced in direct response to expressed community sentiment. Specifically, plans for a summit funicular and other facilities that were perceived by some in the community to be "more commercial attractions [that] would increase the number of visitors to the bay and park" are no longer included. Deletion of the proposed funicular and summit lookout renders moot concerns about impacts on the Koko Head Shooting Complex. All proposals for improvements at the former Hawaii Job Corps site that could have impacted plans for a swimming pool, ball diamonds and/or other new park facilities at Koko Head District Park have been deleted.

We appreciate your comments concerning the need to carefully assess individual or group needs in order to address and accommodate sometimes competing and conflicting desires for the future use of Hanalei Bay Nature Preserve. We believe the individuals and groups represented on the Hanalei Bay Improvements Task Force included this kind of diversity of interests, and that their July 21 Report reflects an excellent job of attempting to accommodate different perspectives on what the future use of the bay should be. It is expected that the Task Force will continue to meet to review and comment on plans for the proposed improvements as they are developed. The City's project team will also be reaching out to obtain the input of other individuals and groups in the community during the planning and design process.

**Need for More Scientific Data, Timing of Improvements Vis-à-vis Carrying Capacity Study, Construction Effects [67 Letter, Pages 1 & 4]**

We believe that the improvements included in the revised project scope can and should proceed now, even though the carrying capacity study is not yet completed.

The specific purposes of the proposed new facilities at Hanalei Bay are to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. All "added" (as opposed to replacement) facilities are relatively small in size and are limited to things required for public education/awareness training, public safety (e.g., the new turnaround and lifeguard equipment storage space) or public convenience (e.g., expanded restrooms and new small public lockers for storage of valuables).

Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these goals, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be

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Letter to Suzanne M. Hammer, M.D.  
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- expanding the availability of optional guided tours (beyond those now provided under permits by commercial tour guides); and/or
- requiring some or all bay users to participate in escorted tours.

This deferral is considered appropriate because it is expected that the study's findings will provide valuable direction on what changes, if any, should be made to alter how people are allowed to use the bay.

We agree that providing and training additional beach monitors should be considered as a potentially effective way to help to minimize people's impacts on the bay. However, as noted above, the specifics of how the park is staffed and managed are outside of the scope of this project.

#### Bay Viewing/Brief Stops: Taxi Drop-offs: Shuttle Service from Hawaii Kai [67 Letter, Pages 2 & 3]

Provisions for setting aside part of the existing parking area for people traveling in private automobiles to briefly stop to view the bay, or possibly to allow some form of joint use of the tour bus stopping area, are currently being investigated by park management.

With respect to your question as to whether allowing taxi drop-offs at Hanaua Bay Nature Preserve should be eliminated, we are aware that this is being used by some visitors - primarily tour operators - to circumvent the current regulations and management practices that are intended to control access to the bay. However, as discussions at the Hanaua Bay Improvements Task Force meetings indicated, a blanket prohibition on this form of access would likely preclude access to the Nature Preserve for residents who need to use taxi cabs to get there. Essentially, there are no easy solutions to this problem that became apparent as a result of these discussions.

The proposals to be discussed in the Final EIS do not include or reflect any changes to the existing manner in which taxi access is being regulated. However, it is our understanding that the City will continue to monitor this situation closely and, if it becomes an increasingly serious problem, will actively look into ways to address it without inconveniencing "legitimate" taxi users.

#### Walk/Shuttle Option to the Bay [5/26 Letter, Page 1; 67 Letter, Page 3]

The revised project proposal retains the option of walking or using the beach tram to get and from the lower bay area.

#### Snack Bars [5/26 Letter, Page 2]

It is proposed that the existing snack bar in the lower beach area be removed and replaced with a new snack bar in the upper park area. Only water, including some chilled water fountains, will be available for refreshment in the lower beach area. Removing, rather than replacing, the lower beach snack bar reflects the City's policy of avoiding the provision of any facilities in the lower park area that do not need, or have strong beneficial reasons, to be provided there. It also reflects the Hanaua Bay Improvements Task Force's strong consensus in favor of removing the existing snack bar.

Letter to Suzanne M. Hammer, M.D.  
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contrary to, impede or constrain efforts to implement further protective measures that may be called for by the carrying capacity study, whatever they might be, except possibly in the case of a recommendation to close the bay to public use. A recommendation to do this or impose similar extreme measures is not anticipated.

Current construction management practices are generally effective in avoiding any major adverse impacts and preventing significant environmental damage. Possible exceptions would occur only under extraordinarily unusual and extreme weather conditions, when significant damage would likely occur in any event. We believe there is more than sufficient scientific and other evidence of damage to the bay due to human activity to justify proceeding with the proposed improvements, despite the fact that this would involve a slight risk of construction effects.

In conclusion, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. The "wait-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve existing master plan goals without compromising future options.

#### Impacts on Existing Park Parking and Landscaping [5/26 Letter, Page 3]

The revised project scope includes the retention of the existing parking lots at Hanaua Bay Nature Preserve. The shuttle turnaround will be of a minimum required size and are being located where no major trees will need to be removed. To the extent possible, any existing plants that need to be removed will be relocated.

#### Entrance and Orientation [67 Letter, Page 3]

The proposed new marine education center includes a complete replacement of the entrance to the lower bay area. It will be attractively designed to fit in well with the area's natural character, and will have sufficient ticket windows and space to efficiently and comfortably accommodate park visitors. The extension of "aloha" to park visitors is certainly supported. However, the specifics of how the park is staffed and managed are outside of the scope of this project. We will transmit your suggestion to the Department of Parks and Recreation for their consideration.

#### Damage Prevention: Educational Exhibits and Guided Tours: Snorkel Lessons: Visitors to the Beach [5/26 Letter, Page 2; 67 Letter, Page 1; 67 Letter, Pages 3 & 4]

It is proposed that the new marine education center include space for a resource awareness training and for educational displays and exhibits. Attendance at an awareness training session will be required for everyone going to the lower bay area, whether they intend to scuba dive, snorkel or swim, or just relax on the beach. These plans reflect the strong consensus of the Hanaua Bay Improvements Task Force.

Decisions on whether or not implement any of the following have been deferred pending the completion of the carrying capacity study:

- providing snorkel lessons;

Letter to Suzanne M. Hammer, M.D.  
August 5, 1999  
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Restroom Facilities [676 Letter, Page 1; 672 Letter, Page 2]

Comfort Station No. 1 in the lower beach area will be replaced with a new facility that will have adequately sized stalls and changing rooms. The existing upper park area comfort station will be retained, and will be supplemented with comfort stations next to the new snack bar and within the new marine education center complex.

Safety Issues: Lifeguard Equipment and Hours, Potential Danger Signs [672 Letter, Page 1; 677 Letter, Page 4]

A facility for the storage of a jet-aid and other lifeguard equipment is included in the current project scope.

Issues such as lifeguard hours and the specifics of signage pointing out potential dangers are outside of the scope of this project.

Security Guard Uniforms [672 Letter, Page 2]

Your point is well taken. However, decisions on matters of this kind are outside of the scope of this project.

Summary of Desirable Expenditures [677 Letter, Page 4]

For reasons stated above in the beginning responses to your comments, we consider the proposed improvements that are now included in the revised project scope to be needed now and justified in terms of their costs. We believe the ongoing community outreach process is providing the City with the input it needs to carefully consider all views and reach appropriate decisions on how to proceed. We see no need or substantial potential benefit to waiting for the completion of further studies.

CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you and other participants in the Hanalei Bay Improvements Task Force upon its completion. We greatly appreciate your active interest and input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Mr. William Balfour, Director  
Department of Parks and Recreation  
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Tom Henderson  
5517 Kalanianaʻole Hwy.  
Honolulu Hawaii 96821  
7/7/99

**R E F E R E N C E**  
JUL - 9 1999  
GROUP 70

Ralph Portmore  
Group 70  
725 Beithel  
5<sup>th</sup> Floor  
Honolulu HI 96813

Dear Mr. Portmore:

Hanauma Bay development need a much broader based research project to determine what is truly best for the Bay as well as what is best for the community at large. The caring capacity study is a good start, but only a start. Temporary measures to alleviate the ecological problems are good sense. Let us not jump the gun until we know what is best for the bay and for all the patron who use it.

Mahalo  
*Tom Henderson*  
Tom Henderson



August 5, 1999

Mr. Tom Henderson  
5517 Kalanianaʻole Highway  
Honolulu, HI 96821

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Henderson:

Thank you for your July 7, 1999 letter regarding the Koko Head Regional Park and Nature Preserve project, and more particularly the proposed improvements at Hanauma Bay Nature Preserve. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve and the demolition of existing structure at the former Koko Head Job Corps site have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

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Letter to Mr. Tom Henderson  
August 5, 1999  
Page 2

Your continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Need for a Much Broader Based Research Project**

We disagree with your view that only "temporary measures" should be undertaken at this time to "alleviate the ecological problems" at Hanauma Bay. We believe that more "permanent" measures are justified and called for now, as long as they are clearly focused on achieving goals and objectives that are broadly supported, and as long as they provide the flexibility needed to in the future refine and adapt specific programs and management practices to new information or changed conditions.

The specific purposes of the proposed new facilities at Hanauma Bay are to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. All "added" (as opposed to replacement) facilities are relatively small in size and are limited to things required for public education/awareness training, public safety (e.g., the new turnaround and lifeguard equipment storage space) or public convenience (e.g., expanded restrooms and new small public lockers for storage of valuables).

Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these goals, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be contrary to, impede or constrain efforts to implement further protective measures, whatever they might be, except possibly in the case of a recommendation to close the bay to public use. A recommendation to do this or impose similar extreme measures is not anticipated.

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Letter to Mr. Tom Henderson  
August 5, 1999  
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Therefore, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. The "walk-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve existing master plan goals without compromising future options.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you and other participants in the Hanauma Bay Improvements Task Force upon its completion. We greatly appreciate your active interest and input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

1999/0806-4422

99 JUL -7 PH 1:50

DEPT OF PLANNING  
and PERMITTING  
CITY OF HONOLULU  
Mr. Gordon Wood  
Department of Planning and Permitting  
630 S. King St., 9th floor  
Honolulu, HI 96813

Dear Mr. Wood:

The Koko Head Regional Park & Nature Preserve Draft Environmental Statement (DEIS) fails to identify any current threats to the health of the marine environment in Hanauma Bay. Yet it implies that immediate threats to the Bay's environment justify proceeding with the proposed changes to Hanauma Bay Nature Park before the completion of the current study of human impact on the Bay's marine environment.

The DEIS states, in fact, that

- 1) the Bay's living coral reefs are in excellent health;
- 2) that there has been no significant degradation of water quality in the Bay;
- 3) that the nearshore reef has not been an actively growing reef for at least four centuries (hence has not been killed by people walking on it);
- 4) that the marine life community composition of the Bay is not the result of human impact.

These seems to be a contradiction here.

Little has been published about the marine environment at Hanauma Bay, or the affect that beachgoers and snorkelers have on it. It is imperative, then, that any Final Environmental Impact Statement (FEIS) for changes to Hanauma Bay Nature Park take into account the findings of the current study of Hanauma Bay's carrying capacity, scheduled to be completed a year from now. This is not an not unreasonable period of time to wait. The study may well reveal that the entire project is unnecessary from an environmental point of view, saving millions of dollars. Or it may reveal new aspects or threats to the marine environment at Hanauma Bay, as yet unsuspected and unaddressed in the DEIS.

A Final Environmental Impact Statement issued before the carrying capacity study is finished will almost by definition be incomplete. I urge you to wait until next summer to finalize the FEIS.

Sincerely yours,

*John Hoover*



FRANKS, GARY, WA, ACP  
 ANTHONY, BOB, WA  
 SMITH, SCOTT, WA, NHD  
 HENRIKSEN, WA  
 RYAN, NICK, WA, EN  
 JAMES, NICHOLAS, WA  
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PAUL, PETER, WA  
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 GARDNER, ALAN  
 BOY, A. JENNIFER, WA, EN  
 HICK, B. MARY, WA  
 CHRISTOPHER, M. BOB, WA, ACP  
 SMITH, M. BOB, WA

August 5, 1999

Mr. John P. Hoover  
 1649 Waikalulu Lane #B11  
 Honolulu, HI 96817

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Dear Mr. Hoover:

Thank you for your July 6, 1999 letter to Mr. Gordon Wood of the City Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

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 Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. is a non-profit organization that provides planning, engineering, and construction services to the community. We are currently working on a project in the Koko Head area and would like to have your input.

Letter to Mr. John P. Hoover  
 August 5, 1999  
 Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Threats to the Health of the Marine Environment in Hanauma Bay**

It is true, as stated in the DEIS, that particular elements of Hanauma Bay's marine environment are in good health, and that there are ways in which current levels of human use of the bay are not having significant adverse impacts. However, these findings are specific and limited, rather than comprehensive or indicative of total overall impacts of human activity.

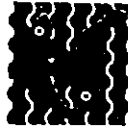
There is ample evidence, even though it may not all be systematically documented in a rigorous scientific manner, of the significant adverse impacts of human activity. The severe depletion of the bay's fish population prior to the establishment of the Marine Life Conservation District in 1967, and the alterations to the bay's fish community composition that have resulted from extensive fish feeding, are but two examples.

New regulations were established earlier this decade that drastically reduced human activity in the bay. As a result of the adoption of these regulations, annual attendance levels at Hanauma Bay Nature Preserve have dropped from 3-1/2 million people in the late 1980's to a little over one million now. While there was certainly opposition to these new regulations at the time they were being considered, we are not aware of major protests about the absence of a well documented scientific basis that came from those primarily concerned about the well being of the bay's marine ecosystem. Like these regulations, the current proposals for improvements to Hanauma Bay Nature Preserve are based on a combination of available scientific evidence and wisdom gained from extensive and long-term observation, and a well thought-out common sense response to what the evidence and observations indicate needs to be done.

**Delaying Further Action Until Completion of the Carrying Capacity Study**

We do not agree that completion of the FEIS, and construction of the Hanauma Bay improvements described in the FEIS, should wait for completion of the carrying capacity study. Current project proposals are not directed at, and will not result in, any major changes to the current numbers of people who "use" Hanauma Bay, nor will they prohibit or significantly alter the kinds of activities and uses that are allowed in the bay. Rather, they are intended to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. The principal means of doing this are to initiate a "resource awareness training" for all visitors who go to the lower beach area, relocate facilities and activities currently in the lower bay area that do not need to be there, and improve the remaining lower bay area facilities and activities in ways that will lessen their impacts on the bay.

Group 70 International, Inc. is a non-profit organization that provides planning, engineering, and construction services to the community. We are currently working on a project in the Koko Head area and would like to have your input.



Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these goals, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be contrary to, impede or constrain efforts to implement further protective measures that the carrying capacity or other studies may recommend.

Therefore, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. The "wait-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve established Hanauma Bay Nature Preserve Master Plan goals without compromising future options.

CONCLUSION

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

April 24, 1999

Dear Councilmember \_\_\_\_\_

I am concerned that the \$13 million dollars already budgeted to spend this year for the proposed "Koko Head Regional Park & Nature Preserve" is too much money to be spent on such a proposal since the community has had little to do with the planning or funding of this. I understand that the access to Hanauma Bay will be so restrictive that we won't be able to walk down to enjoy it by ourselves. I would have to be part of a group, like I was on a tour.

I also have seen the proposal for the tram to go straight up on the outside of Koko Crater, going up and down every 4.5 minutes from sun up to sun down. That would be very unnatural. Further, the plan is to demolish a much-loved ballfield to make room for more parking. Bad idea!

The point is, we want to keep this coastline a natural, passive area. The State's purchase of the nearby Ka Iwi coastline is to keep it natural and pristine for the benefit of us residents, not to be just another tourist destination. Ruining Hanauma Bay and Koko Crater is not a good vision for O'ahu. And taking them away from our enjoyment is not the future we want.

If the intent of all this is to help protect Hanauma, can't it be closed down for another day for relief to the eco-system and provide some intensive, bi-lingual education for all the people who visit the Bay?

Sincerely,  
*Cherie Tsui Kamote*  
name Cherie Tsui Kamote  
address 7520 Punahoa Pl.  
city Ewa, HI  
zip code 96825  
phone number 396-7400



August 5, 1999

Ms. Cherie Tsu Kamoto  
7520 Puu Mahoe Pl.  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Kamoto:

Thank you for your April 24, 1999 petition regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve and the demolition of existing structure at the former Koko Head Job Corps site have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**  
To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
933 Hekia Street, 16th Floor • Honolulu, Hawaii 96813-5071 • Phone: (808) 533-5666 • FAX: (808) 533-5671 • http: www.group70.com • e-mail: mail@group70.com

Letter to Ms. Cherie Tsu Kamoto  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Our detailed responses below address the specific comments in your letter from the perspective of how they are related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Community Involvement in Park Planning** As noted in the prior section of this letter, the City and County has initiated a process that makes community involvement a key and integral component of the planning for future improvements to Koko Head Regional Park and Nature Preserve.

**Restrictions on Access to Hanalei Bay** All proposals that would have involved further restrictions on Hanalei Bay access have been deleted from this project. Access arrangements will remain essentially as they are now, after the proposed improvements are completed.

**Proposal for a Koko Crater Summit Funicular** This proposal has been deleted from this project, which now involves only improvements to Hanalei Bay Nature Preserve.

**Proposal to Demolish Cores Memorial Ballfield** Likewise, this proposal has been deleted from this project.

**Keeping the Coastline a Natural, Passive Area** There are no proposals in the revised project scope that would detract from maintaining the Ka Iwi coastline's natural character.

**Helping to Protect Hanalei Bay** The revised project is almost exclusively intended to help protect Hanalei Bay. All proposals are directed at lessening the impacts of people's use of the bay. The only remaining proposal not involving Hanalei Bay is the demolition of the existing dilapidated buildings on the former Hawai'i Job Corps site.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Services • Building Design • Assets Management  
933 Hekia Street, 16th Floor • Honolulu, Hawaii 96813-5071 • Phone: (808) 533-5666 • FAX: (808) 533-5671 • http: www.group70.com • e-mail: mail@group70.com

To: Hanauma Bay Task Force / Group 70  
Subject: Atmosphere and Improvement to Hanauma Bay  
DEIS

Date: July 7, 1999

I would like to see a free leisure flow of people smoothly down the bay entrance road. The view of the bay should be the bay's natural appearance as unchanged and natural as possible. A simple building that blends into the park should be visual from the bottom parking area so that people know naturally where to flow. Inside the simple building with large eaves for shelter should greet the visitors and channel the flow of people into a greeting desk/counter. This is where the entrance fees, general information about the bay, and the management system are collected and given.

The next step is sending the people into a theater type area where the video education center is. This is where the people will get detailed information about how to enjoy the bay without impacting the ecosystem, and show what happens when it is abused, a cause and effect type of scenario. At the end of the show, the different facilities as well as the rules and regulations of the bay which people will be required to leave the bay if caught violating are given. At this point, the video will end and a bay side door will open. This door will lead to another covered area adjoined to the building where a food concession stand and circular tram turn around is located.

A tram ticket collection booth is there and will pick up riders and belongings as well as disabled patrons (tram rides are to included into the entrance fee). This area is also the beginning of a walking path that leads down to the lower beach for health enthusiasts who would like to walk and enjoy the view. The tram route will end at another circular turnaround that is adjoined to a lower beach activity center. This is again a low maintenance, low profile building set away from the ocean. The walking path will also end and route people to this activity center, which will house the friends of Hanauma Bay, snorkel rental shop, and several other activities as deemed needed.

The beach will also have comfort stations as well as showers/ changing areas. Other than simple roofed shelters from rain and lifeguard and maintenance structures, no other fixed structures should be put into place. This idea is to keep the area as pristine as possible. Ample catches and drainage systems should be made to remove any and all fresh water waste as a result of human presence including showers. Cold water fountains should be placed along the walk path and in the activity center. All the buildings in the Bay should be constructed so as to be easily expandable as well as ADA compliant water, sewage, and power should be provided to all buildings.

The water portion of the bay should be divided into different areas. Some areas where people are not allowed in except with docents, and than other areas where people are freely able to snorkel and swim. Floating viewing boards are an option for not strong swimmer.



Kevin K. Kekona



August 5, 1999

Mr. Kevin K. Kekona  
222 Hanakoa Place  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Kekona:

Thank you for your July 7, 1999 memorandum regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team Facilitator and the City's coordinator of community participation for this project, by phone (522-5538), fax (522-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.





Letter to Mr. Kevin K. Kekona  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**


We share much of your "vision" of people's experience as they enter and pass through or use the various areas and facilities at Hanauma Bay Nature Preserve. We also appreciate the kind of experiential perspective from which you choose to view the various proposals for new facilities and operation and management practices at the bay. Most of the ideas expressed in your vision concerning facility types, designs and locations are reflected in the new project proposals and plans. These will be fully explained in the FEIS.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. A copy of the FEIS will be mailed to you and other participants in the Hanauma Bay Improvements Task Force upon its completion. We greatly appreciate your active interest and input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
Ralph Portmore, AICP  
Principal

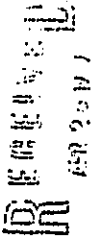
Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

**Kenneth H. S. Kwak**

7144 Kalia Street, Honolulu, Hawaii 96825  
Tel: 808-395-8129 Fax: 808-395-8404  
E-mail: [Kkwak@Pisi.com](mailto:Kkwak@Pisi.com)

April 23, 1999



To: City and County of Honolulu  
Department of Design and Construction  
650 South King Street - 9th Floor  
Honolulu, Hawaii 96813  
Attn: Mr. Jim Nakasone, Project Manager

Group 70 International, Inc.  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813-4307  
Attn: Ms. Mary O'Leary, AICP

GROUP 70

Subject: Koko Head Regional Park and Nature Preserve

The following are my comments on the Koko Head Regional Park & Nature Preserve Draft Environmental Impact Statement.

I am disappointed to see that the Koko Head Regional Park & Nature Preserve report specifically ignored the issues raised in my letter of December 9, 1999 relating to the impact on the users of the Koko Head District Park. These issues must be addressed before decisions on the proposal can proceed.

Let me first make some comments related to the District Park. Then I will add some more general observations.

1. As expressed in my letter, the EIS must address the security and safety questions, that this report completely ignores.
2. The report mistakenly characterizes the four baseball fields in the district park as one baseball and three softball fields. In fact, all the fields are for baseball and are heavily used during the youth baseball season. The lack of sufficient fields was the reason the community built and maintains the baseball field at the job corp site.
3. The manner in which the report handles the Coach Gooas Memorial Park borders on disrespect and outrageousness. The whole paragraph on page 7-16 under "mitigative Measures" is inaccurate and is evidence that those writing the report did not do their research properly and simply fabricated information.

The users of the District Park are the same users of the Gooas Park - the Hawaii Kai Baseball Youth League. The reason the parents and friends of this league spent hundreds

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of community man-hours to build and maintain the Goecas field is that the existing four fields were not enough. Your report contradicts the community's view of this need and refuses to acknowledge that Goecas Park, a community-made resource is currently a defacto part of the District Park. The report is in essence eliminating a community asset without compensation to the community. This is not an acceptable evaluation of the impact from a consultant that is being paid public funds.

4. The report fails to recognize that Anapalau Street is another entry to the Regional Park and connects to Koko Head Road. Koko Head Park Road off of Kalaniano'ole Hwy is not the only entrance to the Job Corp Site. It is also used as an entrance to the District Park. The new visitor attraction will geometrically increase traffic through the neighborhood and the District Park.

5. Since the visitor center will charge a fee for parking, many visitors will use the District Park's parking lot for free. This will compound the parking situation at the District Park during busy hours.

6. What will happen when the visitor center's parking lot is full? Will it spill over to the District Park and neighborhood streets? This is more likely with a highly visible, well-promoted visitor center compared with the current situation at Haunama Bay.

#### General comments

1. A major tourist attraction should not be characterized as a public park. The projected 1.6 million visitors annually would rank it as the State's number one attraction - even more than the Arizona Memorial and more than the Polynesian Cultural Center and Sea Life Park combined. This proposal is to create a Tourist Attraction. Building tourist attractions is not the business of the City and County Government.

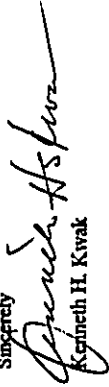
2. I disagree with your report's nonchalant conclusion that expansion of the District Park's recreational facilities should be rejected because it is not "low-impact." (page 1-6). The report then tries to justify turning the youth baseball field into a parking lot for over 400 cars plus busses and shuttle trolleys transporting thousands of non-resident visitors daily.

3. Over the past 10-15 years, the community has been promised additional baseball fields, a swimming pool in the district park and more parking. Needless to say none of this has happened. With your plans for a massive tourist attraction, these will not happen in the future - for the community.

4. Instead of a visitor attraction, the Natural Preserve should be transformed into something for the Hawaii community. It should be turned over to the DOE, University of Hawaii, DLNR or some other public service organization for the stated purposes of nature preservation and education, and for the primary benefit of the people of Hawaii.

5. I question the faulty rationale that the job corp site is more appropriately used as a parking lot and visitor center "rather than being an extension of a community park that has no relationship to the overall regional park." To a large extent "parks" are defined by its users. The community park does not fit into your definition of the regional park only because of your insistence of creating a park for non-residents.

Sincerely



Kerimeth H. Kiwak

Copies:

Council Chairman Mufi Hannemann  
Council Member John Henry Felix  
Senator Sam Slom  
State Representative David Siegrmaier  
Hawaii Kai Neighborhood Board Chairman Mr. Charley Rodgers  
Ms. Beverly Palentapa



August 5, 1999

Mr. Kenneth H. S. Kwak  
7144 Kukui Street  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Kwak:

Thank you for your April 23, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Letter to Mr. Kenneth H. S. Kwak  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Ignoring Issues Raised in Your December 9, 1998 Letter**

We apologize for not directly responding to your earlier letter. The December 24, 1998 letter to you from William Balfour, Director of Parks and Recreation, was mistakenly assumed by us as to have fully responded to your letter.

**Comments Related to Koko Head District Park**

Your comments are well taken. In response to concerns expressed by you and others, all proposals for park improvements that would have impacted Koko Head District Park have been deleted from this project. Instead, programs to prepare new master plans for the District Park, as well as Koko Head Regional Park and Nature Preserve, will be initiated this coming September. We urge you to participate in this process.

**General Comments**

It was not intended to turn the Koko Head Regional Park and Nature Preserve into a major tourist attraction. The facilities and activities that were proposed were intended to facilitate people's enjoyment of the Regional Park's distinctive natural resources and enhance the educational value of their visits. Similar types of facilities are commonly found in nature parks of this size. In any event, they are no longer a part of this project. Appropriate future uses for the Regional Park will be determined in the upcoming community-based master planning process.

The City Administration continues to believe its Department of Parks and Recreation is fully capable and the most appropriate agency to be responsible for the future use of Koko Head Regional Park and Nature Preserve. We are not aware of any public parks or nature preserves that are being operated by the DOE or University of Hawaii, nor are we aware of any advantage that would be gained from turning over its operation to DLNR. It is also unlikely, especially in these difficult economic times, that any of these agencies would be willing to assume responsibility for the operation and maintenance of the Regional Park.

The extent to which part or all of the former Hawaii Job Corps site should be used to accommodate needed new "community park" facilities in Koko Head District Park, or remain a part of Koko Head Regional Park and Nature Preserve and accommodate much more low impact uses and preservation areas, is a legitimate issue. One of the primary purposes of the earlier described master plan preparation programs is to address and resolve this issue to everyone's satisfaction.

Letter to Mr. Kenneth H. S. Kwak  
August 5, 1999  
Page 3

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*

Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

May 4, 1999

RECEIVED

City & County of Honolulu  
Dept. of Design & Construction  
650 S. King St., 9th Flr.  
Honolulu, HI 96813

FACILITIES DIVISION & EMS  
DIVISION

Subject: Draft EIS for Koko Head Park & Nature Preserve

Attn: Mr. Jim Nakasone, Project Manager

Gentlemen:

The following comments on the subject DEIS will focus on the four (4) primary activities or improvements proposed to be located at the Koko Crater site as follows:

- o Nature Learning Center
- o Funicular (Tram) Summit System
- o Scenic Shuttle System
- o Parking Facility & Shuttle System to Serve Hanauma Bay

Unlike the improvements proposed at the Hanauma Bay site which are part of the on-going program under the adopted Master Plan, the above four improvements appear to be new and not previously identified in any of the existing Master Plans. Accordingly, each of these improvements should be individually analyzed and justified to warrant the expenditure of public funds but were not found in the DEIS. An economic feasibility study is required to ensure that there is sufficient visitor demand at various pricing levels for each of the first 3 improvements to justify their implementation. Furthermore, if the market study should show that there is sufficient demand, then the City should let private enterprise finance, build and operate the facilities or systems, particularly the Funicular (Tram) and Scenic Shuttle Systems.

(1)

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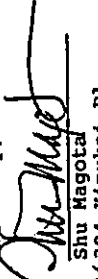
The most critical and controversial improvement is the proposed relocation of the existing parking facility at the Bay to the Koko Crater site which requires the 4-bus shuttle service between the two sites. The DEIS is grossly deficient in providing a clear justification for the need to replace this very convenient and suitable parking facility at the Bay with the very inconvenient location at Koko Crater which commits the City to the everlasting operating expenses of the shuttle system. The two primary and only factors that could justify this relocation were not addressed in the DEIS and they are:

- o the existing facility is inadequate in capacity and there is no way to expand it, and/or
  - o the existing facility creates adverse impacts on the marine environment of the Bay with no mitigating measures available.
- The DEIS must address the above factors or else the City has absolutely no basis for justifying the relocation of this facility.

If part of this relocation decision was due to inadequate space available at the Bay to accommodate tour buses and vans, then the Koko Crater site could be used as staging area for these buses and vans but without relocating the parking facility. Another reason given in the DEIS was that the Koko Crater site is needed to provide means of regulating and managing the number of visitors entering the Bay area. If this a critical factor, then the City should provide an analysis showing that there is absolutely no way to perform this function at the Bay site.

In summary, it is concluded that the DEIS as presented does not provide the required justification to expend public funds for any of the proposed facilities or services at the Koko Crater site.

Sincerely,

  
Shu Magota  
304 Kipukai Pl.  
Honolulu, HI 96825

August 5, 1999

Mr. Shu Magota  
304 Kipukai Pl.  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Magota:

Thank you for your May 4, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.



FORKIN'S FIRM, AIA, MCP  
NORMAN CITY, HONOLULU, HI  
MARTIN SCHEIDT, AIA, AIA, AIA  
HONOLULU, HI  
BOB H. WOOD, AIA, AIA  
JAMES T. ANDERSON, AIA  
ROBERT E. BENTON, MCP  
STEPHEN H. WOOD, AIA  
TODD J. CHONG, AIA

PAUL P. DEZAY, AIA  
DAVID H. KAMMURA, RA  
NORMAN I. NICK, RA  
ROBERT H. WOOD, MCP  
CYNTHIA BOND  
R. J. WOOD, AIA, AIA  
FRANK H. WOOD, RA  
CHRISTOPHER W. BENTON, MCP  
STEPHEN H. WOOD, AIA

Letter to Mr. Shu Magota  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

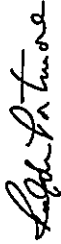
As a result of the scaling back of the project scope, all of the activities and improvements discussed in your letter are no longer a part of this project. The scope of the Final Environmental Impact Statement (FEIS) is being revised to exclude these proposals, and to address only potential impacts of the remaining planned improvements. Any further consideration of the deleted proposals will occur within the context of the upcoming master planning processes described above. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of the new park master plans.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Honolulu Department of Planning and Permitting  
650 S King (8th floor)  
Honolulu, HI 96813  
Attn: Eugene Takahashi

99 APR 20 AM 8:47

Re: Draft EIS for Koko Head Regional Park and Nature Preserve  
Position: Opposed

My name is David Matthews and I am a resident of Hawaii Kai. I sat as a member of the Mayor's Task Force on projected uses of the "Job Corps. site" and its environs. Several of the area citizens came forth with ideas ranging from baseball diamonds to a playing field for in-line hockey and many other community uses in between, nowhere in this EIS are any of these community desires addressed. Instead another give away of an important Hawaiian area to the tourist (visitor) industry is proposed.

When I first came to Hawaii fourteen years ago I used to go down to Hanauma Bay in the morning. Parking was readily available, the area was clean, if not pristine, and it was joy to the body and spirit to go there. When it became a tourist and tour bus stopping place the character and ambience of the place changed. Today, although a severe cigarette butt problem has been dealt with, tourists overrun the park and the approaches to it. Getting in is a chancy situation, and then you have to pay for admittance. When and if you do get in after you're there you wonder why you wanted to go in the first place. I know of no local family that plans a day long outing there for a picnic or swim and relaxation. Now the Mayor comes up with this idea of turning the Job Corp site into a parking lot, where it was once suggested that among other things a Life Guard station could be built.

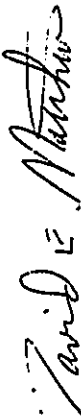
He also suggests a bus or trolley terminal to ferry more tourists into an already crowded park and the already glutted and dirty lookouts and observation points nearby where means are presently being looked for to reduce the number of visitors. The thought of an ugly incline railway running up to a restaurant which would either have to be of the fast food variety or too expensive for the local population almost boggles the mind. Would you like to see the "Golden Arches" shining over Koko Crater? Would there also be a charge for getting to the

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top? Would it be able to operate in inclement weather, and would the hours of operation be such that working people could take advantage of it?

Of all the proposals the only one with merit is that calling for a nature preserve. I'm sure that could be built in the already existing Botanical Garden or the Bay area itself.

At a recent meeting about "Tourist History Reflections on Culture and Performance" a noted performer said, "tourists find themselves isolated from the local culture, and surrounded only by other tourists. I don't think that is what they come here for." I'm certain that most of the local population feels the same way. Let us not turn this area into another Waikiki.



David E. Matthews  
7909 Makaaoa Pl.  
Honolulu, HI 96825

Ph. 395-7600  
FAX 395-1743



**GROUP 70**  
INTERNATIONAL

James S. Cole, MA, MCP  
Susan G. A. Hoag, MA  
Scott B. Scammon, MA, NIP  
Hiroshi Hagi, MA  
Roy H. Nishi, MA, ANI  
James F. Nelson, MA  
Ralph E. Peabody, MCP  
Stephen H. Yuen, MA  
Jack L. Johnson, MA

Paul H. Chivers, MA  
Frank H. Kucharski, MA  
Victoria F. Sack, MA  
George E. West, MA  
Victor H. Westbrook, MA  
Sylvia A. Nam  
R. V. Thompson, MA, CP  
Frank H. McCook, MA  
Christine M. Rosada, MCP  
Scott M. Lee, MA

August 5, 1999

Mr. David E. Matthews  
7909 Makaaoa Place  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Matthews:

Thank you for your letter to Mr. Eugene Takahashi of the Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

As you know, the City and County has initiated a new planning process that is intended to address community concerns by completing a new master plan for Koko Head Regional Park and Nature Preserve. A community task force, of which you are a member, is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Letter to Mr. David E. Matthews  
August 5, 1999  
Page 2

#### RESPONSES TO SPECIFIC COMMENTS

As a result of the scaling back of the project scope, all of the activities and improvements discussed in your letter are no longer a part of this project. The scope of the Final Environmental Impact Statement (FEIS) is being revised to exclude these proposals, and to address only potential impacts of the remaining planned improvements. Any further consideration of the deleted proposals will occur within the context of the upcoming master planning processes described above. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of the new park master plans.

We do not agree with this characterization of the original project proposal as "another give away of an important Hawaiian area to the visitor industry". It was not intended to turn the Koko Head Regional Park and Nature Preserve into a major tourist attraction. The facilities and activities that were proposed were intended to facilitate people's enjoyment of the Regional Park's distinctive natural resources and enhance the educational value of their visits. Similar types of facilities are commonly found in nature parks of this size. In any event, they are no longer a part of this project. Appropriate future uses for the Regional Park will be determined in the upcoming community-based master planning process.

#### CONCLUSION

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

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MAY 12 1999

GROUP 70

Doug Meiler  
2748 Rooke Avenue  
Honolulu, HI 96817

May 10, 1999

City and County of Honolulu  
Department of Design and Construction  
650 South King Street - 9th Floor  
Honolulu, HI 96813  
Attn: Mr. Jim Nakasone, Project Manager

Subject: Koko Head Regional Park and Nature Preserve DEIS

My family currently does not have to compete with tour bus passengers for admission to Hanauma Bay. It now costs us \$1 to park at the existing Hanauma Bay parking lot and takes us less than 10 minutes to walk to the beach.

If I understand correctly, your DEIS proposes that Hawaii residents drive to a remote new parking lot, pay a parking fee, wait in line with unregulated numbers of tour bus passengers for a limited number of Hanauma admission tickets, wait for a bus to Hanauma Bay, wait for a lecture at the upper level of Hanauma Bay, then wait for a shuttle bus to the beach. And if I understand correctly, each time a Hawaii resident is finished looking at the fish, you want us to wait for a shuttle bus from the beach, then wait for a different bus to return to the new parking lot. Your DEIS suggests that fares will be charged for each ride on a bus or a shuttle bus.

I request answers to the following questions:

- A. Counting parking, bus fares, and shuttle bus fares, what are you proposing that it cost my family of four to park in the new Koko Crater parking lot, visit Hanauma Bay, then return to the new parking lot?
- B. Assuming my family arrives at the proposed new parking lot around 8:30 a.m. on a summer Saturday, assuming typical waits to obtain admission tickets, take a bus to Hanauma Bay, get lectured, and take a shuttle bus, how long will it take before we reach the beach?

Based on the DEIS, I have the following suggestions:

1. Do not restrict access by Hawaii residents to Hanauma Bay. Hawaii residents are not overcrowding the beach. If you need to limit access, make nonresidents compete for admission tickets. You can experiment right now with restrictions on non-resident admissions using existing Hanauma Bay facilities.
2. Do not tear out the existing Hanauma Bay parking lot. Add trees and reserve all parking for Hawaii residents. Direct non-residents to park and obtain Hanauma admission tickets at the new Koko Crater parking lot.

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- 3. Do not force people to ride buses if they want to walk. Instead, provide safe pedestrian walkways.
- 4. Construct a loop trail on Koko Head and the ridge above Hanauma Bay. There are outstanding views comparable to the top of Koko Crater.
- 5. Find a concession willing to restore and operate cable car access to the top of Koko Crater. Do not let the Hawaii Kai NIMBYs talk you out of it.
- 6. Consider expanding the park boundaries. After completing improvements to the Makapuu Lookout and the Lighthouse Road, the State is willing to transfer Queen's Beach and Makapuu Head to the City.

Sincerely,

Doug Meiller

c: Council Member John Yoshimura  
Group 70 International, Inc. ✓  
OEOC

a:HB1



August 5, 1999

Mr. Doug Meiller  
2749 Rooke Avenue  
Honolulu, HI 96817

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Meiller:

Thank you for your letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

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Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAI006@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who

Letter to Mr. Doug Mellier  
July 30, 1999  
Page 2

cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are primarily limited to those comments related to the planned improvements that are being retained, and to your proposals for new improvements and actions that were not considered in the DEIS. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Restrictions on Hawai'i Resident Access to Hanauma Bay**

All original proposals that would have altered or further restricted resident access are no longer included in this project. Access arrangements will remain essentially as they are now.

**Existing Hanauma Bay Parking Lots**

This parking lots are now being retained. Landscaping will be added. Neither the original nor the revised proposal includes plans to reserve all parking for Hawai'i residents. The current plans do not involve any major changes that would impact the accessibility of Hanauma Bay to residents or non-residents. Such a significant change could have broad implications and impacts on park use and should be considered within the context of the upcoming effort to prepare an overall master plan for Koko Head Regional Park and Nature Preserve.

**Pedestrian Traffic Down to Hanauma Bay**

Park users will continue to have the option of walking or using the beach tram when going to and coming from the lower beach area. Proposals that would have impacted this existing condition are no longer a part of the project.

**Loop Trail on Koko Head**

Per Mayor Harris' announcement on June 1<sup>st</sup>, which was made in response to expressed community concerns, the current project scope is limited to improvements at Hanauma Bay Nature Preserve. All proposals for improvements in other areas in Koko Head Regional Park and Nature Preserve will be considered as part of the master plan preparation program for the Regional Park.

**Restoration of Cable Car Access**

The response immediately above applies here as well.

**Expanding the Park Boundaries**

The response immediately above applies here as well.

Letter to Mr. Doug Mellier  
July 30, 1999  
Page 3

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

11/19/2000 10:00 AM Group 70 International, Inc. 11 Koko Head Regional Park Final Environmental Impact Statement (FEIS) - Planning & Design

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1999  
99 JUL -2 PH 1:02  
99 JUL -1 PH 1:27

Mr. Gordon Wood  
Department of Planning and Permitting  
City and County of Honolulu  
650 S. King Street  
Honolulu, Hawaii 96813

Dear Mr. Wood,

The following are comments and concerns regarding the Draft Environmental Statement (DEIS) for the Koko Head Regional Park and Nature Preserve that I have.

1. page 4-3, section 4.2.2  
Is the Police substation mentioned in this section an official one or are individual officers just utilizing vacant space.
2. page 4-6, section 4.2.3.2  
What is the historical significance of the platform on the side of Kahauloa Crater.  
Why does the CSH recommend that the tramway and wooden utility poles be preserved? The tramway and poles are an eyesore and should be removed. The area should be restored to the pristine conditions that existed prior to the war.
3. page 4-12, section 4.3  
Was there a contingency plan to address the occasional high winds that buffet the Koko Head Crater summit?
4. page 4-36, section 4.6.4  
Where is the caretaker's residence located? Although there are no regular night time shooting hours, there is night firing on many nights by permit. There are fees for certain shooting sports.
5. page 5-10, section 5.4  
Will the field archery range at the Kapolei Regional Park be permanently closed when the archery facilities at the former Job Corps site is completed. Will there be supervision at the target archery range at the Job Corps site as opposed to the unsupervised chaos that existed at the Kapiolani Park range.
6. page 6-12, section 6.3.4.2  
The paragraph relating to the sewage problem seems to address the avoidance of any adverse impacts to the bay or the parks resources but doesn't indicate if the treatment facilities are adequate for the expected additional load.

7. page 7-20, section 7.2.14.2  
SSFM indicated that the design flow of 24,000 gpd is adequate. They based this premise on the fact that "considerably fewer fixtures will be hooked up to the collection system." Did SSFM take into consideration the number of expected visitors to the facility as opposed to the static number of residents when the Job Corps was still operational?
8. page 9-2, section 9.2  
Is there an example of a baffled 200 yard metallic silhouette range. Would it be possible without going underground?
9. page 11-1, section 11.0  
Does the ESH and Parametrix assessment address the safety issue of stray rounds affecting the area of the tramway? If their assessment was cogent to this study why wasn't a copy included in the appendix?  
Why aren't there any references from the C & C Division of Wastewater Management or American Wastewater Corporation included?  
Is the NRA report available and does it actually address the problem the tram would create?
10. page 12-3, section C.  
Why wasn't Wastewater Management invited to respond to the Notice of Preparation?  
page 12-3, Section D.  
Why wasn't the American Wastewater Corporation invited to respond to the Notice of Preparation?
11. Appendix L, page 2  
What were the covenants attached to the deed to the range.  
Appendix L, page 6  
The signage is needed now even if this project doesn't go through.  
Appendix L, page 14  
Are the security concerns, housing a full time caretaker on site, secure perimeter fence and multilingual signage be implemented soon?



August 5, 1999

Mr. Gary Miyakawa  
402 East Hind Drive  
Honolulu, HI 96821  
Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Miyakawa:

Thank you for your June 24, 1999 letter to Mr. Gordon Wood of the Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawai'i Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project by phone (527-5558), fax (527-5563) or e-mail (CAA0006@hawaii.gov) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

I believe this project should be placed on hold until the carrying capacity studies are completed and the fiscal situation in Honolulu improves. Until that time funds collected at Hanauma Bay should be used to first improve the maintenance and repair of existing upper and lower bay, and secondly as needed at other facilities within the Koko Head Regional Park.

Please send me a copy of the Final Environmental Impact Statement when it is completed.

Sincerely,

Gary Miyakawa  
402 East Hind Drive  
Honolulu, HI 96821

- Frank S. Dale, AIA, AICP
- Norman G.V. Bence, AIA
- Sheryl R. Scaman, AIA, AIAI
- Hiroshi Hida, AIA
- Ray H. Akers, AIA, AIAI
- James I. Nakamura, AIA
- Ralph E. Peckham, AICP
- Stephen H. Vison, AIA
- Frank L. Chung, AIA
- David P. Davies, AIA
- Douglas H. Kaminaga, AIA
- Norman J. Suter, AIA
- Stephen L. Goff, AIA
- James J. Kim, AICP
- Leah H. H. Kim, AICP
- Adrian A. Nam
- Ben A. Brouwer, AIA, CSI
- Mary J. O'Brien, AICP
- Frank B. Moore, AIA
- Chad M. Anderson, AIA
- Christine M. Rowland, AICP
- Shane W. Joss, AIA

Letter to Mr. Gary Miyakawa  
August 5, 1999  
Page 2

**RESPONSES TO APPLICABLE COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Police Substation [Page 4-3]**

This facility is not an "official" substation. As you indicate, it more of a vacant space used by officers to handle paperwork and other tasks that cannot easily be done in their vehicles. Demolition of this building is included in the scope of this project.

**Platform Site on Kahauleoa Crater [Page 4-6]**

Its historical significance is not known. It was identified in "Archaeology of Oahu", a 1933 report by J. Gilbert McAllister that documented his 1920 survey of archaeological sites on Oahu. McAllister's report indicates that he was informed about the site by a colleague at Bishop Museum, but was not able to locate it when he conducted his survey.

**Preservation of Old Military Radar Station "Tramway" and Utility Poles [Page 4-10]**

Preservation of these and other remnants of this installation are recommended by CSH because they "represent a unique engineering accomplishment dating back to Hawaii's World War II experience". Please refer to the CSH Report (Appendix E) for more detailed information. Given the deletion of the proposed summit funicular from this project, there are no plans to "restore" this area "to the pristine conditions", or to otherwise disturb it.

**Contingency Plan for High Winds [Page 4-12]**

Given the deletion of the proposed summit funicular from this project, this is no longer necessary.

**Caretaker's Residence at the Koko Head Shooting Complex [Page 4-56]**

This statement is in error - while existing plans for improvements at the Shooting Complex include a caretaker's residence, such a facility has not yet been provided.

**Field Archery Range [Page 5-10]**

Plans for target archery and field archery ranges on the former Hawaii Job Corps site have not been implemented. This proposal will be considered again as part of the effort to prepare a new master plan for Koko Head District Park, as outlined at the beginning of this letter.

Letter to Mr. Gary Miyakawa  
August 5, 1999  
Page 3

**Adequacy of Wastewater Treatment Facilities [Pages 6-32, 7-20 & 12-3]**

The operators of the East Honolulu Wastewater Treatment Plant (Hawaii-America Water Company) have indicated that the existing treatment facilities are adequate to accommodate the originally planned improvements, as described in the DEIS. Given the reductions in the project scope, this obviously applies as well to the current proposal. The results of their review will be clearly stated in the FEIS.

The revised project proposal is limited to improvements at Hanauma Bay Nature Preserve, and does not involve the provision on any new facilities that should generate an increase in the number of park users.

**Examples of Baffled Shooting Ranges [Page 9-2]**

Given the deletion from this project of the proposed summit funicular and lookout, this project no longer includes any facilities that will impact current use of the Koko Head Shooting Complex.

**Safety Issue of Stray Rounds from the Shooting Complex's Ranges [Page 11-1]**

As noted, there is no longer a safety issue with respect to construction of a new summit funicular, since plans to build this new facility have been deleted from the project. However, funding has been included in the FY 1999-2000 Capital Improvements Budget for safety improvements at the Shooting Complex. This issue will obviously be considered in the course of determining what type of improvements would be appropriate.

**Availability of the NRA Report [Page 11-1]**

This report is available from the City's Department of Parks and Recreation. It was prepared in 1991 and primarily addresses safety issues for the ranges facing to the southwest, or in the opposite direction of the proposed summit funicular.

**Comments on Wastewater Management [Page 12-3]**

These comments were requested and received. The commenting agency is now part of the recently renamed Department of Environmental Services. As noted, comments have also been received from the operator of the East Honolulu Wastewater Treatment Plant.

**Deed Covenants [Appendix L, Page 2]**

The referenced deed conveyed the entire Koko Head Regional Park and Nature Preserve property to the City and County, not just the Shooting Complex site. A covenant in the deed states that the City may "... use the conveyed premises for purposes of public parks and/or rights of way, and for no other purposes ...".

**Need for Safety Signage and Other Safety and Security Measures at the Koko Head Shooting Complex [Appendix L, Pages 6 & 14]**

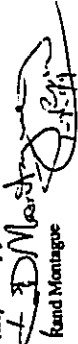
As noted, funding has been included in the FY 1999-2000 Capital Improvements Budget for safety improvements at the Shooting Complex. The need for safety signage will be considered as part of the planning for these improvements.



- Do not Develop just for the sake of Development (Sometimes less really is more)
- Make sure the EIS is Complete (Numbers should check out, all studies be completed, etc.)
- Look at Creative Alternatives (Does Hanalei Bay generate enough income to maintain K.H. Park?)
- Don't Let Tourism Alone Drive Development Plans (Oahu cannot thrive on a tourism focus)
- Implement Customer-Service Training for all Employees (To keep bringing back customers)
- Institute Appropriate Management Practices at Hanalei Bay and Koko Head Regional Park

Thank you kindly for reviewing this letter and suggestions.

Respectfully yours,



Rand Montague



August 5, 1999

Mr. Rand Montague  
674 Kaunakani St.  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Montague:

Thank you for your July 7, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-3538), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

- James S. Omi, MA, MCP
- Norman G. Y. Hoang, MA
- Shawn H. Scammon, MA, AHD
- Hiroshi Iida, MA
- Ray H. Nishi, MA, CSI
- James E. Nishimura, MA
- Kojiro E. Nishimura, MCP
- Stephen H. Vachon, MA
- Leslie L. Chung, MA
- Paul J. Stevens, MA
- Dean H. Keenan, MA
- Norman F. Wu, MA
- Stephen F. White, CPA
- Charles M. Allen, MCP
- Thomas H. Lee, MA, MCP
- Richard A. Vann
- Ray A. Bennett, MA, CSI
- Alan E. O'Hara, MCP
- Frank B. McFadden, MA
- Clayton M. Anderson, AIGA
- Christine M. Burrows, MCP
- Scott M. Jew, MA

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Letter to Mr. Montague  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

Your overview of what interested community residents have done over the two-plus months prior to the date of your letter (now three-plus months), and of where the community is now, is well taken and appreciated. We sincerely regret any actions on the part of the City's project team that may have given people in Hawai'i Kai the impression that you are not important to the process of planning new facilities and other changes that affect the community. This is not the City's intended attitude or approach to planning for our future.

On the contrary, the work of the East Honolulu Vision Team and the Hanauma Bay Improvements Task Force offers, in our view, solid examples of the intended approach and the City's commitment to fully involving the community in setting planning policy and making environmental, land use and development decisions that determine and impact our future. The City is committed to continuing these efforts and to fully applying this approach to the upcoming preparation of new master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve.

All of your specific ideas are good ones. We believe that the applicable ones have been and will continue to be reflected in the current ongoing process of developing, reviewing and approving proposed improvements to Hanauma Bay Nature Preserve. It is also intended that they be incorporated into the upcoming planning processes described above. A copy of your letter and this response has been forwarded to Alan Hong, Manager of Hanauma Bay Nature Preserve, for his consideration in establishing management policies and procedures.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. Again, we appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Mr. Alan Hong  
Department of Parks and Recreation

\\snp\cvs\parks\parks\11\Koko Head Regional Park\0008\group70\0008\_group70\_international.doc

GROUP 70 INTERNATIONAL, INC. • 1000 KALANIAN'OLELI DRIVE, SUITE 1000, HONOLULU, HAWAII 96813 • PHONE: (808) 531-1111 • FAX: (808) 531-1112 • WWW: WWW.G70.COM

May 4, 1999

Mr. Ralph Portmore  
Group 70 International, Inc.  
925 Bethel Street, 5<sup>th</sup> Floor  
Honolulu, Hawaii 96813

re: Draft Environmental Impact Statement for the proposed Koko Head Regional Park

Dear Mr. Portmore and others concerned with creating the Koko Head Regional Park,

Please consider the following objections to the plan proposed in the draft environmental impact statement (DEIS) for the creation of Koko Head Regional Park.

In section 1.4.1 (page 1-4), the DEIS states that "The ease and safety of public access to many of the Park's distinctive natural features and areas will be increased." It is clear from the changes proposed in this document that exactly the opposite will be true for the residents of the City and County of Honolulu. This was verified during the Hawai'i Kai neighborhood meeting on Monday, April 26<sup>th</sup>. The proposed park will: destroy a baseball field that residents of the area have improved and enjoyed in the past few years; restrict residents' access to Hanauma Bay by imposing fees and managerial impediments; prohibit scuba diving in the Bay; prohibit hiking and bicycling in the area; create traffic problems on the highway at the park entrance; encourage use of the park by commercial bus and taxi companies who will be exempt from the restrictions that will be imposed on residents; and create noise and exhaust pollution that will affect residential areas near Koko Crater. It is clear that this plan was developed with little regard for the citizens of O'ahu.

I ask that the plan not be implemented in its present form. Instead, the interests and needs of Honolulu's residents regarding this area should be actively solicited and incorporated into a revised plan before it is approved.

Other objections are:

In section 1.4.2 the DEIS states that "The ease and convenience of access to Hanauma Bay Nature Preserve will be reduced due to the relocation of the parking and the institution of more comprehensive and restrictive management practices." It is stated that these measures will be mitigated by "reasonable fees" and shuttles at "frequent intervals." Again, it is clear from the DEIS that these newly restrictive measures will have a greater adverse impact on residents than on visitors. Parking for buses and taxis will not be removed. I request that parking for residents be retained adjacent to the bay as it now exists, that a management system be established that will allow residents to use the bay frequently without undue fees, and that the shuttle schedule be planned to accommodate the needs of those residents who now use the bay during very early hours. A number of local residents including many who live on fixed retirement incomes use the bay frequently for walking, swimming, snorkeling, and diving. Many elderly people go there early to avoid skin cancer dangers. The "reasonable fee," shuttle service, and guided-tour-only policy will be unreasonable for them.

In section 2.0, goal B (page 2-1), it is stated that "at lower Hanauma Bay beach and reef area, in addition to daily attendance limits, Park visitors will be required to be part of a guided tour or complete one session of resource awareness training." A session of resource training would be good if it then allows unrestricted access to the bay by residents who complete the training. Those who



receive the training should then be exempt from having to go with guided tours. As a local resident, would you go back to the bay more than once if the only thing that you were allowed to do was to go on the same guided tour that you had been on before? Obviously not. But what provisions will be made for the families and friends of residents who live off island, who visit us personally, and wish to enjoy the bay? Are we not to take our friends and relatives to the Bay? The plan should be changed to consider this. Above all, don't reduce use of the bay by the taxpayers that support the City and County's parks while promoting its use by tourists.

In section 3.2.4.1, plans for an aquarium or an "outdoor reef interpretive exhibit" are discussed. Where will the animals for this exhibit come from? The obvious source is the bay itself, but this would do great environmental damage to the bay. The primary reason that Hanauma Bay is worth preserving is that it is the only true Marine Life Conservation District on O'ahu. All other O'ahu MLCDs allow some form of fishing within their boundaries. If the taking of marine life is allowed in Hanauma Bay to stock the exhibit, the environmental integrity of the bay as a preserve will be compromised. Do not allow or encourage this. Hanauma Bay is the only place on the southeast coast where fish can be approached with ease; collecting them for the exhibit would be like "shooting fish in a barrel" now that the fish are habituated to being fed. Hanauma Bay is the only place on O'ahu where some species, such as the spectacled parrotfish, awa awa, and white ulua, can be reliably found; this will make the temptation to fish the bay for representative species almost irresistible. Likewise, some species that are very characteristic for the bay do not survive well in aquaria. For example, several of the bay's most brightly colored butterflyfish eat only live coral polyps. These will either die in the displays every few weeks or they will have to be fed live coral. If uninformed park employees attempt to keep displays with these species the fish will likely die regularly, creating the temptation to fish the bay continually to maintain displays of species seen in the wild. And where will the coral and live rock for these displays come from? Taking coral or live rock from anywhere in state waters is illegal and it would be even more damaging in Hanauma Bay than in other places. On the other hand, if the animals used in the exhibit are brought from elsewhere, what measures will be taken to ensure that alien diseases, parasites, or even larger species are not released into the bay from the aquaria? Will effluent water from the exhibit be discharged in a way that will prevent the flushing of disease organisms into the bay's waters? Will measures be taken to ensure that only species indigenous to Hawaii are used in the displays? Introduced species would do great environmental harm to the Bay. The potential ecological impacts from ill-informed management of this display could be very damaging to the very environmental quality of the bay that the plan claims to protect. The unique and most valuable things about Hanauma Bay are that fishes can be seen there that are rare elsewhere around O'ahu and that species can be seen there that are almost impossible to keep in aquaria even by the most skilled professionals. It is not worth putting the environment of Hanauma Bay at risk to create a "marine-land/sea-world" attraction for tourists.

On page 3-14, section 3.2.4.2, the DEIS states "The beach access road will not be used to accommodate pedestrian traffic. The beach shuttle will be the single means of access to the lower beach level." Please allow pedestrian traffic. Please plan for walking, hiking, and bicycling trails in the park, including the area of Hanauma Bay. The plan now encourages polluting vehicular traffic and prohibits non-polluting recreational activities such as hiking. This is an environmentally damaging plan for a park and it is exactly the wrong direction that such planning should take.

On page 3-23, section 3.3.3, the DEIS states that the shuttle buses will be standard City and County buses. City buses prohibit large items. Many residents who now enjoy Hanauma Bay have

children or are scuba divers. Please make provisions to allow the transport of larger items than are now allowed on city buses, including such things as diving equipment and the various items that families with several small children need for an enjoyable time at the beach.

In reference to page 3-25, section 3.4.2.1, please modify the plan so that minimal fees for parking and other activities will be required of City and County residents. The fees proposed in the plan will discriminate against Oahu's low-income residents and prevent them from using this public park. All residents have a right to enjoy their parks without onerous fees.

On page 3-26, section 3.4.2.4, the DEIS states that "In addition ... residents will have general access to the beach after completing one session of resource awareness training." Please retain the current access that residents have to all parts of this park, including Toilet Bowl, Witch's Brew, and the thriving outer reef now accessible to swimmers and scuba divers. There is a state law that gives citizens the right of ocean access through public lands. Please do not implement a plan that attempts to deny this ocean access in a City and County Park.

The previous points also apply to college students and military personnel who temporarily reside on O'ahu. The same provisions should be made for them, with aloha for these guest residents.

This is a City and County Park. Honolulu's citizens, including myself, provide significant support for our parks through our taxes. Please consider our needs to have fair use of the park as you modify these plans. Please make this a park that doesn't take things away from the residents of East O'ahu. Please make this a park that doesn't add to the noise and air pollution of the area. Please make this a park that Oahu's families can enjoy. Please make this park accessible to the many families struggling to get by on small incomes - the families with parents who take their children to Oahu's beaches as an inexpensive source of enjoyment.

At the end of their presentations, Group 70 showed photographs of Hawaii's smiling children and grandparents, claiming that these are the people for whom this park is being planned. But this plan will actually take the area away from Hawaii's youth and elders. Please don't take this area away from the citizens of Hawaii by imposing changes, fees, and restrictions that will make use of the park prohibitively difficult for residents.

I encourage the park's planners to temporarily adopt the option in section 8.2 of the DEIS of "Postponing action pending further study." The "study" that is needed is to solicit suggestions from the community and to then incorporate of the recreational and residential needs of Oahu's citizens into the development of the park plan. Section 8.2 states that postponing the developments in the current plan will postpone the "environmental benefits that will be achieved upon their completion." To the contrary, postponing action now will allow a better park to be planned for Oahu's residents that will result in greater environmental benefits in the long run. The plan must be revised to make this park one that enhances the quality of life for Oahu's residents.

Sincerely,

*Bruce C. Mundy*

Bruce C. Mundy

965 Prospect St., #510  
Honolulu, Hawaii 96822



August 5, 1999

Mr. Bruce C. Mundy  
965 Prospect St., #510  
Honolulu, HI 96822

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Mundy:

Thank you for your May 4, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA006@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Mr. Bruce C. Mundy  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Sections 1.4.1, 1.4.2 & 2.0 Ease, Safety and Convenience of Access**

As indicated in the attachment, all original proposals that would have impacted access to existing park facilities have been deleted from this project. Provisions for access to Hanauma Bay Nature Preserve will essentially remain as they are now. The existing parking lots will remain, and there will be no need for or provision of a new shuttle service.

The only change being proposed at this time is to require everyone wanting to go to the lower beach area at Hanauma Bay Nature Preserve to first attend a "resource awareness training". Attendees will then be given an annual pass that will allow them to go directly to the lower beach area, without again attending the awareness training, for the next 12 months.

The costs of conducting this training will be paid out of existing revenues from parking fees (\$1.00 per car) and non-resident entry fees (\$3.00 per adult) at Hanauma Bay Nature Preserve. No new fees or changes in the amounts of these existing fees are proposed.

There will be no provision of or requirement for participation in new guided tours.

No changes whatsoever are proposed that would impact existing access to and use of Koko Head District Park or other areas in Koko Head Regional Park and Nature Preserve. No existing ballfields or other facilities in areas outside of Hanauma Bay Nature Preserve will be removed or otherwise impacted by the revised project.

**Section 3.2.4.1 Outdoor Reef Interpretive Exhibit**

Plans for such an exhibit have been deleted from this project.

**Section 3.2.4.2 Access to the Lower Beach Area at Hanauma Bay**

It is no longer proposed that everyone going to the lower beach area be required to use the beach tram. People will continue to have the option of walking or riding, as they do now.

**Section 3.3.3 New Shuttle Bus Service**

As noted above, with the scaling down of the project scope, a new shuttle bus service is no longer needed or planned.

Letter to Mr. Bruce C. Mundy  
August 5, 1999  
Page 3

Section 3.4.2.4 Lower Beach Area Activities

The revised project no longer includes any proposals that would alter currently available access to the Toilet Bowl, Witch's Brew and other areas of Hanauma Bay Nature Preserve.

Section 8.2 Postponing Action Pending Further Study

As outlined above, the City has been responsive to the concerns voiced by you and many others. All of the proposals that are the source of the concerns and opposition expressed in your letter have been deleted from this project. Given the changes made, we believe it would be appropriate and prudent to move ahead with the implementation of the currently proposed improvements to Hanauma Bay Nature Preserve. This revised project will enhance the quality of Hanauma Bay's natural marine ecosystem without adversely impacting the ability of residents to enjoy it. In this important respect, it will definitely enhance the quality of life for all Oahu residents.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portimore*  
Ralph Portimore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasono  
Department of Design and Construction

11 Source: Prepared Pursuant to Request for Information Pursuant to Public Access to Information Act, Hawaii, Chapter 319A, Section 319A-7.1.



April 24, 1999

Dear Councilmember \_\_\_\_\_

I am concerned that the \$13 million dollars already budgeted to spend this year for the proposed "Koko Head Regional Park & Nature Preserve" is too much money to be spent on such a proposal since the community has had little to do with the planning or funding of this. I understand that the access to Hanauma Bay will be so restrictive that we won't be able to walk down to enjoy it by ourselves. I would have to be part of a group, like I was on a tour.

I also have seen the proposal for the tram to go straight up on the outside of Koko Crater, going up and down every 4.5 minutes from sun up to sun down. That would be very unnatural. Further, the plan is to demolish a much-loved ballfield to make room for more parking. Bad idea!

The point is, we want to keep this coastline a natural, passive area. The State's purchase of the nearby Ka Iwi coastline is to keep it natural and pristine for the benefit of us residents, not to be just another tourist destination. Ruining Hanauma Bay and Koko Crater is not a good vision for O'ahu. And taking them away from our enjoyment is not the future we want.

If the intent of all this is to help protect Hanauma, can't it be closed down for another day for relief to the eco-system and provide some intensive, bi-lingual education for all the people who visit the Bay?

name *David N. Clark*  
address *75 P. Street, Honolulu, HI 96815*  
city *Hon. HI 96815*  
zip code  
phone number *378-9511*

Group 70 International, Inc. • Architecture • Planning • Interior Design • Environmental Systems • Building Design • Arts Management  
11 Source: Prepared Pursuant to Request for Information Pursuant to Public Access to Information Act, Hawaii, Chapter 319A, Section 319A-7.1.



**GROUP 70**  
INTERNATIONAL

- Francis S. Ouli, AIA, AICP
- Nathan G.Y. Heng, AIA
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- Kathryn A. Nam
- Roy A. Inouye, AIA, CSI
- Frank B. Skuse, RA
- Christine M. Baswell, AICP
- Susan M. Jew, AIA

August 5, 1999

Mr. David Nickle  
7518 Olowalu Place  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Nickle:

Thank you for your April 24, 1999 petition regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaua Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5538), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Mr. David Nickle  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Our detailed responses below address the specific comments in your letter from the perspective of how they are related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Community Involvement in Park Planning As noted in the prior section of this letter, the City and County has initiated a process that makes community involvement a key and integral component of the planning for future improvements to Koko Head Regional Park and Nature Preserve.

Restrictions on Access to Hanaua Bay All proposals that would have involved further restrictions on Hanaua Bay access have been deleted from this project. Access arrangements will remain essentially as they are now, after the proposed improvements are completed.

Proposal for a Koko Center Summit Funicular This proposal has been deleted from this project, which now involves only improvements to Hanaua Bay Nature Preserve.

Proposal to Demolish Goetz Memorial Ballfield Likewise, this proposal has been deleted from this project.

Keeping the Coastline a Natural, Passive Area There are no proposals in the revised project scope that would detract from maintaining the Ka Iwi coastline's natural character.

Helping to Protect Hanaua Bay The revised project is almost exclusively intended to help protect Hanaua Bay. All proposals are directed at lessening the impacts of people's use of the bay. The only remaining proposal not involving Hanaua Bay is the demolition of the existing dilapidated buildings on the former Hawaii Job Corps site.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

http://www.group70.com

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157 Pelepe Drive  
Honolulu, HI 96826  
6 May 1999  
DEPT. OF DESIGN & CONSTRUCTION  
C&C (EHP/PLN)

99 MAY 10 AM 8:24

Dept of Design and Construction  
650 S. King, 9th Floor  
Honolulu, HI 96813

Attn: Mr. Jim Nakasone  
Fax 808.523.4767

Subject: Draft Environmental Impact Statement (EIS) Prepared for the Koko Head Regional Park  
And Nature Preserve, dated March 1999

Dear Mr. Nakasone,

I have the following comments:

1. The EIS contains many assumptions, some stated and some implicit, which are made without explanation and without justification. For example,
  - a. Implicit assumption: Existing facilities should be retained and improved, rather than removed and the land restored to its original natural character. (eg: replacing the Job Corps Site with a Nature Learning Center; replacing existing railway tracks and concrete bunkers with a funicular and lookout atop Koko Crater Rim). Any justification for this assumption places a higher priority on Tourism than on Goal A: To preserve and enhance the natural character of Koko Head Regional Park.
  - b. Explicit Assumption: The estimated attendance after completion of the proposed changes will be the same as the total numbers experienced at Hanama Bay in 1997.  
Why wouldn't the increased number of attractions (Nature Learning Center, Funicular to Viewing Station, Marine Education Center at Hanama Bay, etc) attract MORE visitors than Hanama Bay alone did, especially when considering that so many of these attractions attract Passive Eco-Tourists (viewing stations) rather than Active Eco-Tourists (skin- and scuba-divers, swimmers, bikers, boaters)?  
The proposal calls for 450 parking stalls. Existing parking facilities at Hanama Bay provide 300 car stalls. And yet there is no expectation of increased attendance?
2. Some assertions simply make no sense. For example,
  - a. None of the planned improvements will generate significant amounts of noise.  
The addition of all these diesel-powered shuttle vehicles won't add significant amounts of noise? The tennis courts, baseball fields, and classrooms of the Regional Park won't be significantly noisier than when the parking lots were located across the highway near Hanama Bay?
  - b. The new traffic light at the Park entrance, and the shuttles that will use Kalahelesole Highway... may cause some minor delays as compared to existing conditions.  
Minor delays! All the data used to substantiate this conclusion was based on the assumption that these enhanced tourist attractions would not increase the visitor attendance. No computer simulations were used to determine the anticipated delays produced by the interaction of traffic light and traffic flow with the proposed changes. Conclusions were simply guesses.
3. The proposal to require resource awareness training prior to use of Hanama Bay seems worthwhile. To waive this requirement if the visitors are part of a guided tour seems to be a backward step, giving tourism a higher priority than preservation.
4. The continuum between license tourist utilization and total banning of any human presence contains many compromise positions. The proposing agencies should defer to a full and open community forum for the determination of this compromise, because the local community has the most to lose if this determination is not well thought out.

Very truly yours,

*Peter Sofman*

Peter Sofman  
Local resident  
808.396.8397

cc: Lisa Keala Carter,  
Hawaii Kai Neighborhood Board

Councilmember John Henry Felix, District 3

Francis Oda,  
Group 70 Iuni



August 5, 1999

Mr. Peter Sofman  
157 Poipu Drive  
Honolulu, HI 96826

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

HANKS (SG, MA, WPP)  
Norfolk, VA  
SHERIDAN (MA, AND)  
Hickory, VA  
HICKS (MA, WPP)  
Box 11, Asher, VA, USA  
HARRIS (MA, WPP)  
Raleigh, NC  
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Box 11, Asher, VA, USA  
KIM (MA, WPP)  
Box 11, Asher, VA, USA  
TAYLOR (MA, WPP)  
Box 11, Asher, VA, USA  
TAYLOR (MA, WPP)  
Box 11, Asher, VA, USA  
TAYLOR (MA, WPP)  
Box 11, Asher, VA, USA

Dear Mr. Sofman:  
Thank you for your May 6, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanama Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAAI0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

GROUP 70 INTERNATIONAL  
157 POIPU DRIVE  
HONOLULU, HI 96826  
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FAX: (808) 943-1112  
WWW: WWW.GROUP70.COM

Letter to Mr. Peter Sofman  
July 30, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

**Implicit and Explicit Assumptions and Assertions**

The scaling back of the project scope to now include only improvements at Hanama Bay Nature Preserve has, at least with respect to this project, effectively addressed your comments concerning proposals to improve some currently unused or little used park facilities, and to add attractions and parking. This is also true for the "assertions" in the DEIS concerning noise impacts and traffic delays, etc. However, these concerns will be appropriate for consideration in the context of the upcoming programs to prepare new master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve. It is our intention to give them their due consideration at that time.

**Resource Awareness Training**

We appreciate and share your view that this "seems worthwhile". The Hanama Bay Improvements Task Force, made up of a broad cross-section of Hanama Bay users, caretakers and concerned residents, reached a "strong consensus in favor" of requiring everyone going to the lower beach area to attend such a training. Attendees will be issued "passes" which will allow them to go directly to the lower beach area for the next 12 months following their completion of the training.

**Compromise Positions**

We appreciate your understanding that compromises are sometimes necessary, and that they should be reasonably easy to reach when everyone in the affected community is given an opportunity to participate in formulating them. It is our intention to continue to strive, as we have been doing for the past two months, for full community participation in the ongoing review and approval of this project, as well as in the preparation of new master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

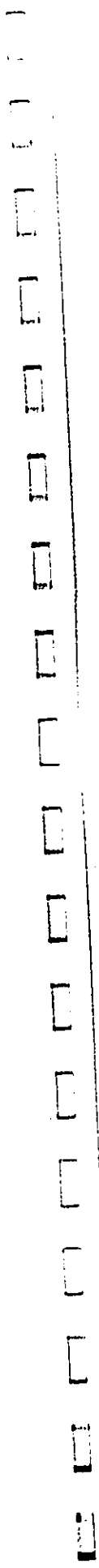
*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

157 POIPU DRIVE, HONOLULU, HI 96826  
PHONE: (808) 943-1111  
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Bryan Suntheimer  
47-265A Hui Iwa Street  
Kaneohe, HI 96744

May 20, 1999

City and County of Honolulu  
Dept. of Design and Construction  
650 South King Street  
Honolulu, HI 97813  
Attn: Mr. Jim Nakasone

RE: Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement, East Honolulu, Island of Oahu, Hawaii

Dear Mr. Nakasone:

I have a number of questions regarding the referenced project and DEIS:

1. Will this new "baffle" at Koko Head Range Complex change in any way the current utilization of the range? i.e. Caliber of weapons used, distance available to engage targets, hours of operation, etc.
2. Is there a proven design for the "baffle" system that will keep 100% of the rounds fired at Koko Head Shooting Complex within the confines of the ranges?
3. If the answer to number 1 is no then what is the acceptable percentage of rounds that will be allowed to exit the range and still maintain a reasonable risk level for those using the new park?
4. Will the construction of any portion of the new park that is in the surface danger zone of the range be contingent on the "baffle" being built?
5. What will be the annual maintenance cost for the "baffle" structure?
6. How will noise from the range detract from the atmosphere of the new park?
7. Will the "baffle" system increase the lead exposure level to people using the range?
8. How will the construction of the park affect ownership of the land? The covenant deeding the land to the City and county dictates it's sole use as a range.
9. Has the City and County consulted with the Hawaii Army National Guard concerning their use of a baffled range in Hilo and the positive and negative experience they have had?
10. Is it possible to reorient all ranges to the southeast, placing all administrative and support functions on the northwest side, thereby eliminating the need for baffles?
11. Can the street and trap ranges be placed on the northwest side since their SDZ is smaller?

Sincerely,

*Bryan Suntheimer*  
Bryan E. Suntheimer



- THOMAS S. ANG, AIA, AICP
- Wendy G. Berg, AIA
- Sheryl H. Sautter, AIA, AIAI
- Harold Hale, AIA
- Bob H. Niles, AIA, CSI
- James I. Nishimoto, MA
- Ralph E. Brimmer, AICP
- Stephen H. Allen, AIA
- David L. Chang, MA
- Paul P. Harvey, MA
- John H. Asanuma, AIA
- Norval J. Scott, AIA
- Gregory W. W. W. W.
- Edwin H. ...
- Kathleen A. ...
- Bob A. ...
- Alan J. O'Leary, AICP
- Frank B. ...
- David M. ...
- Charles M. ...
- Stuart M. ...

August 5, 1999

Mr. Bryan E. Suntheimer  
47-265A Hui Iwa St.  
Kaneohe, HI 96744

Subject: Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement

Dear Mr. Suntheimer:

Thank you for your May 20, 1999 letter to Mr. Jim Nakasone of the Department of Design and Construction regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanalei Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14th and 21st  
Koko Head Regional Park and Nature Preserve: October 5th and 12th

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 International, Inc. • An Inland Empire • Planning • Interior Design • Environmental Services • Building Processes • Asset Management  
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DEPT. OF DESIGN & CONSTRUCTION  
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C & C OF HONOLULU

Letter to Mr. Bryan Suntheimer  
 August 5, 1999  
 Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

**Proposed Action's Impacts on the Koko Head Shooting Complex**

All project proposals that could have raised safety concerns, and/or required improvements to or otherwise impacted the use of the Koko Head Shooting Complex, have been deleted from this project. This in particular includes the proposal to build a funicular railway to the top of Koko Crater and provide a summit lookout. All remaining proposed improvements are to be located at Hanauma Bay Nature Preserve.

Consequently, while safety and/or other improvements at the Shooting Complex may still be appropriate, there is no immediate need to pursue their completion in order to ensure the safety of users of a new funicular and summit lookout. Any future consideration of safety improvements, or possibly of relocating the Shooting Complex to a suitable alternative site, will be done within the context of the upcoming effort to prepare a new master plan for the Koko Head Regional Park and Nature Preserve. Plans for the initiation of this process are described above.

**Detailed Questions on Proposed Safety Improvements**

Since the summit funicular and summit lookout are no longer proposed, any proposals for safety improvements and the Shooting Complex are no longer a part of this project. Should improvements be considered in the future, a new and separate EIS that describes that project and assesses its potential impacts will be required at that time. This would be the appropriate time to address the detailed questions and concerns raised in your letter.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC

*Ralph Fortmore*

Ralph Fortmore, AICP  
 Principal

Attachment

cc: Mr. Jim Nakasone  
 Department of Design and Construction

Environmental Impact Statement for the Proposed Hanauma Bay Park, Prepared by Group 70 International, Inc., August 1999

This document is the property of Group 70 International, Inc. It is not to be distributed outside of the project team or the Department of Design and Construction without the written approval of Group 70 International, Inc.

(808) 983-1467

Wayne C. Thieszen  
 1551 South Beretania St., #1401  
 Honolulu, Hawaii 96826

May 29, 1999

Group 70 International  
 925 Bethel Street, 5th Floor  
 Honolulu, Hawaii 96813

To Whom It May Concern:

I would like to see the development of the Koko Head Regional Park and Nature Preserve consider a comprehensive program to make the Koko Crater section of East Oahu a major tourist attraction - and still retain the essence of the present beauty of Hawaii Kai and the citizen's baseball team's use of Mike Goas Field.

I and members of my family have resided in Hawaii Kai since 1967. Enclosed is a photograph of three of my children atop Koko Crater a "few" years ago.

First, the former Job Corps Center site would be the Global Progress Center location for Honolulu. See the enclosed Optimum Schedule, the Special for the USA, the World and Hawaii.

Second, a 1,200 car parking lot would be constructed in the unused land between Anapala Street and Kalaniana'ole Highway.

Third, six (blend-in-with-the-terrain) rest stops would be developed ascending with the physical climb up to the top of Koko Crater. With somewhat upgraded wooden "railroad" ties, the climb to the top would not be much different than it is today.

The ascending rest stops would be designated: African Rest Stop, Asian Rest Stop, European Rest Stop, Latin American Rest Stop, North American Rest Stop and the Australasian / Pacific Islands Rest Stop. The sixth location (Australasian / Pacific Islands) would be atop the Crater. All interested individuals or groups who wished to climb part or all of the present route would be able to have their names recorded (by computer) at each location to which they ascended. Descriptive information concerning each of the continental areas and relevant historic information would be made available at each Rest Stop. All of this data would also be available at the Global Progress Center at the base of the "mountain". You could come back in 30 years and note the record of your earlier "adventure".

The relationships to Hanauma Bay would continue as earlier planned.

If these proposals are implemented, many more tourists (and locals) would come to the Koko Head Regional Park. The income from the parking lot and other relationships would provide an extremely large benefit to the City and County of Honolulu - without diminishing the beauty of Hawaii Kai.

With best regards and aloha,

cc: Mayor Jeremy Harris  
 Governor Benjamin Cayetano

*Wayne C. Thieszen*

Wayne C. Thieszen



Optimum Schedule (continued)

OPTIMUM SCHEDULE

|           |  |                   |   |
|-----------|--|-------------------|---|
| Month #1  | Establish preliminary (Global Progress Center) SAROMI Scores information focal point at a special location in Honolulu, Hawaii. *  | Month #12         | Commence construction of a second (larger) SEHLTCRAFT.  |
| Month #2  | Obtain financing (approximately \$4 million) to both acquire a specially located hotel on the shores of Pearl Harbor and concurrently finance the completion of the proof-of-concept construction of a special design of the small Surface-Effect Heavy-Lift Transport Craft (SEHLTCRAFT). The eventual "large sized" SEHLTCRAFT will be able to carry eight to ten times the payload (including passengers) of the largest conventional aircraft, and move at 300 to 400 MPH in SAFETY and COMFORT; fifty to seventy feet above the ocean waves. If some mechanical problem develops (as with several recent aviation disasters) or some terrorist bomb is detonated, the craft will come down safely on the ocean's surface - and save the lives of all of the passengers. | Month #13         | "Unify" the synergistic objectives of the Global Progress Centers, the appropriate hotels in Hawaii, California, Virginia and other locations with a portion of the ANTRAK "future" planning and TOMCO's trans-ocean planning. Establish solid cooperative relationships with Russia and seven other appropriate foreign countries.   |
| Month #3  | Have the social accounting "Scores" for the initial five cities, five counties and five states (Hawaii, California, Washington, Michigan and Virginia) available at the Honolulu Global Progress Center. At this time, this would be the only place in the world where this information is available.  | Month #14 and #15 | Acquire a second (small) SEHLTCRAFT and augment the open-ocean-waves "testing" operations out of Pearl Harbor, Hawaii. The self-financing revenues from these operations (including the hotels) will make much more attractive the overall program for major financing groups and appropriate state, city and national government organizations.  |
| Month #4  | Have the changes in "SAROMI Scores" available at the Honolulu Global Progress Center. These scores will be compiled and published monthly (for an expanding number of national and international political jurisdictions) and may have a very positive effect on the results of many local, state and national elections. The Global Progress Center displays will also demonstrate how forward-looking communities have improved their SAROMI Scores.   | Month #17         | Complete construction of the second-phase size of SEHLTCRAFT and commence construction (possibly in Hawaii) of the 200 mile to 400 mile size of open-ocean-capable SEHLTCRAFT transport "vessels".  |
| Month #10 | Complete construction of the first (American-built) small SEHLTCRAFT that is capable of traversing a specific level of open-ocean-waves - and conduct testing at specified Hawaii locations.   | Month #18         | Commence over-open-ocean-waves testing of the second-phase size of SEHLTCRAFT in Hawaiian waters while establishing three other Global Progress Centers with SAROMI "Scores" information available monthly. These locations would probably be: 1) the particular location on the west coast of North America which is also a "special" ANTRAK rail terminal, 2) a particular Atlantic coast location which is also a "special" ANTRAK rail terminal and 3) a specific location in the Mediterranean Sea region. |
| Month #11 | At several key cities across North America, display the elements of the Global Beltway program (with videos of the small SEHLTCRAFT and related information; as well as the current SAROMI SCORES) to strongly acquaint the public with the benefits of the combined Global Beltway and SAROMI Programs for the new millennium.  | Month #29         | Complete construction of SEHLTCRAFT capable of travelling 900 miles across open-ocean waters at 350 miles per hour - with full passenger safety and comfort. Have this craft available in Hawaii. Start construction (possibly in Hawaii) of the very large trans-ocean SEHLTCRAFT.   |
|           |  | Month #33         | Commence regular (fully licensed) passenger and high-value cargo transport between Hawaii, Island X, Island Y, Island Z and then Sydney, Australia. Tie these services to the developing Global Beltway system with the interim use of conventional aircraft between Honolulu and either the San Francisco airport (with shuttle to Oakland) or, the augmented Oakland International Airport.   |

Inaugurate the same type of "combined services" in the Atlantic region in conjunction with operations in the Mediterranean Sea and land connections throughout Europe, western Asia and portions of Africa. Use the ANTRAK rail system across North America (and the Russian rail system across Asia) to implement the overall Global Beltway System.

\* Social-Accounting Results-Oriented Multiple-Impact (SAROMI) Scores provide a non-biased calculation of: Adequacy of Food Supply, Adequacy of Shelter (Housing), Environmental Cleanliness, Absence (or Presence) of Crimes & "Casualties" and Citizen Gainful Employment.



**TRANSOCEANIC NAVIGATION COMPANY**  
 "Portal to Porral Cargo Care"  
 Regional Contact Facility  
 (including Global Progress Centers)

Post Office Box 22389  
 Honolulu, Hawaii 96823-2389  
 (808) 983-1468

**Optimum Schedule (continued)**

**Month #42**  
 Move a fully-licensed passenger-carrying large SEHLTCRAFT between Honolulu, Hawaii and Oakland, California. This "voyage" would be about 2,200 miles. The craft will transport between eight and ten times the payload of the largest conventional aircraft.

**Month #45/46**  
 Transport passengers with comfort, safety, speed and economy between Oakland, California and Sydney, Australia (via Honolulu). If the government or Hawaii (and appropriate members of congress) had cooperated when the original start date of June 1996 was proposed, these passengers could have included those who were going to (or coming back from) the Year 2000 Olympics (from North America, Europe, Latin America, Africa and Asia) using the SEHLTCRAFT for the over-ocean portion of the route. Continue to use the upgraded North American, Latin American, Asian, African and European rail systems for the overland portions (in excellent comfort and safety) of all "visitors" travel.

The results of this cooperatively developed program will include making Oahu (and most of the Hawaiian Islands) the most important tourism (and passenger/ high-value cargo interchange) location in the Central Pacific. With the new technology information displays of the SARONI Program and the new technology displays of the Global Beltway Program, visitors will come to Hawaii from all over the world to witness and participate in some of the most important technology of the New Millennium (as well as the traditional attractions of Hawaii). The economy and the quality-of-life of the citizens of Hawaii will be dramatically, and very extensively, re-vitalized.

With effective government support this major Hawaii economic re-vitalization could commence in Month #24.

No other combination of programs could re-vitalize the Hawaii tourism industry - or (due to the SARONI Program's potential relationship to the University of Hawaii) influence a re-vitalization of the "world class" status and financial strength of the University of Hawaii.

All that is needed is timely and forward-looking government and tourism industry support.

SPECIAL FOR USA

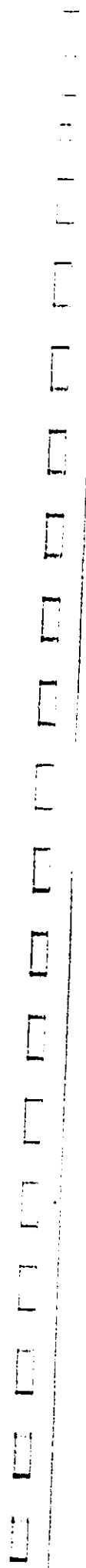
1. American leadership in transocean SEHLTCRAFT development
2. Save 500 million to 600 million a year of taxpayer losses from the ANTRAK relationship
3. Develop a much more cost-effective American Defense Establishment
4. Mideast Problems Solutions
5. Russian Problems Solutions
6. Korean Problems Solutions
7. Much more effective state and local governments
8. Major export advantages / opportunities for the USA

SPECIAL FOR THE WORLD

1. Mideast peace and stability solutions
2. Russian peace and stability solutions
3. Korean / East Asian peace and stability solutions
4. More effective national, state, provincial and city governments

SPECIAL FOR HAWAII

1. Many more tourists / many more JOBS
2. World's first over-ocean wing-in-ground-effect craft operating in eighteen months after constructive Hawaii government action
3. World class University of Hawaii
4. Economic revival of the Aloha State twenty-four months after constructive Hawaii government action





GROUP 70  
INTERNATIONAL

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August 5, 1999

Mr. Wayne C. Thiessen  
1551 S. Beretania St., #1401  
Honolulu, HI 96826

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Thiessen:

Thank you for your May 29, 1999 letter to Group 70 International, Inc. regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

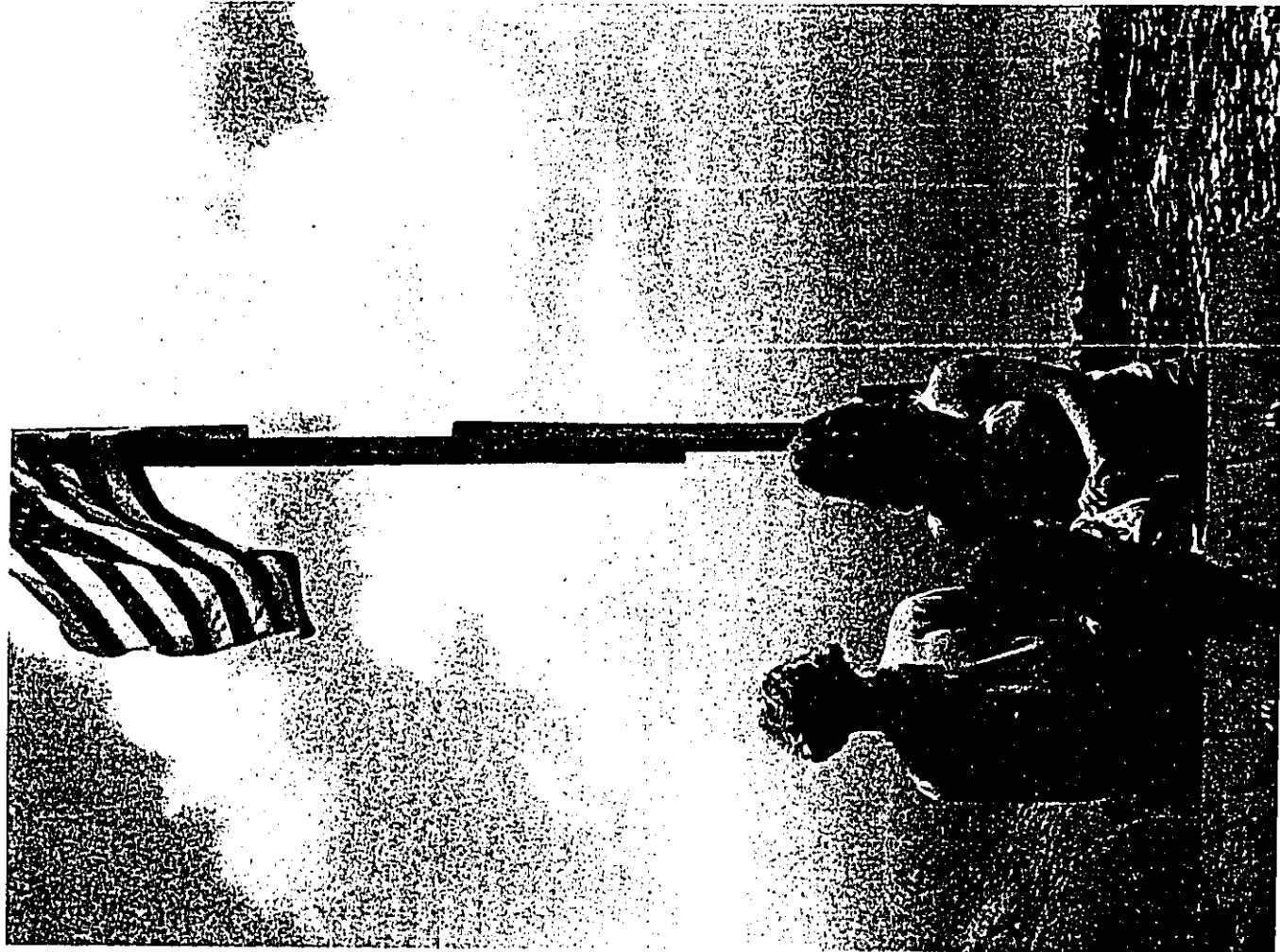
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Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5538), fax (527-5563) or e-mail (CAA00056@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.



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Letter to Mr. Wayne C. Thiessen  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

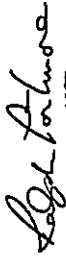
Your ideas for the development of Koko Head Regional Park and Nature Preserve are truly visionary. However, as noted above, there has been widespread community concern and opposition with respect to proceeding with any major changes in the existing natural character of the Regional Park without first allowing more time for community review and input. In response, Mayor Harris has scaled back the current project to include only improvements to Hanalei Bay Nature Preserve. Further improvements to the Regional Park will be considered within the context of the upcoming program to prepare a new master plan. You are urged to participate in that process, and in particular to bring your ideas to the intensive planning sessions that will start it off. As noted, these are tentatively scheduled for October 5 and 12, 1999. Please contact Cynthia Bond for further details.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

U.S. Government Printing Office: 2025-11-18. Printed on Recycled Paper. 50% Recycled Content, 10% Post Consumer Waste. Price: \$0.50. GPO: 2025-11-18. PSN: 0-570-010-900-0-2.

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Wesley M. Thorsson  
122 Waialeale St.  
Honolulu HI 96825-2020

Group 70 International  
925 Behel St. 5<sup>th</sup> Floor  
Honolulu HI 96813

Dear Sirs:

Relative to the Plans for Koko Head Park:

It is obvious from the plan that the writers have absolutely no knowledge of the desires and habits of local people regarding park use. Or, they place zero importance on local people in their grand plans.

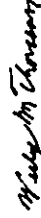
Have the writers ever gone to a park themselves, and particularly as a family? If so, did they have an intense desire to be herded from place to place by guides with a fixed agenda and speeches intended for foreign tourists and repeated verbatim day after day? Do the writers have so little knowledge of their local areas that they feel the desire for total explanations of all aspects of the parks they visit. Do they never want to be spontaneous and go where the particular day and weather dictates?

If the writers are sincere in their plans, and place any importance in local use of local parks, the answers to the above questions must be "Yes, indeed." However, I doubt that that is the case, leaving the answer to be that local desires are not to be considered, and that only tourists are important. This in spite of the fact that almost all things done "for tourists" basically are making Hawaii a less and less attractive place for tourists. Tourists have a large place in the economy, but the islands should not be ruined to increase their numbers endlessly. Enough, even of a good thing, is enough.

I also found no indication that the concerns of the electronic installations on Koko Head were taken into account in the slightest degree. The plans would definitely detract from security of installations that are of importance to air traffic and communications/media. There was no indication that the operators involved were, or will be interviewed. I am not involved personally in any of the installations except as a knowledgeable citizen who realizes their vulnerability.

The oversights are typical of shoddy work on the entire plan, which should be discarded forthwith.

A discouraged citizen,



Wesley M. Thorsson

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GROUP 70

9 May, 1999



August 5, 1999

Mr. Wesley M. Thorsson  
122 Wai'alea Street  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Mr. Thorsson:

Thank you for your May 9, 1999 letter regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanaleia Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Mr. Wesley M. Thorsson  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

We believe the significant changes in the project scope that have been made since you wrote your letter, and the referral to a community-based master planning process of further consideration of any proposals that could involve modifications to areas of Koko Head Regional Park and Nature Preserve outside of Hanaleia Bay, demonstrates that the City responds to local community concerns. We urge your participation in this process, which will be initiated next month. Please contact Cynthia Bond at one of the numbers indicated above for more details.

Both the original and revised project proposals did not involve any improvements or initiation of any new activities that would have impacted the electronic installations on Koko Head. The importance of these installations and the need to avoid any adverse impacts on them will be given full consideration in the upcoming Regional Park master plan preparation program.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Fortmore*  
Ralph Fortmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

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Fax :

May 04 12:04



April 24, 1999

Dear Councilmember \_\_\_\_\_:

I am concerned that the \$13 million dollars already budgeted to spend this year for the proposed "Koko Head Regional Park & Nature Preserve" is too much money to be spent on such a proposal since the community has had little to do with the planning or funding of this. I understand that the access to Hanauma Bay will be so restrictive that we won't be able to walk down to enjoy it by ourselves. I would have to be part of a group, like I was on a tour.

I also have seen the proposal for the tram to go straight up on the outside of Koko Crater, going up and down every 4.5 minutes from sun up to sun down. That would be very unnatural. Further, the plan is to demolish a much-loved ballfield to make room for more parking. Bad idea!

The point is, we want to keep this coastline a natural, passive area. The State's purchase of the nearby Ka Iwi coastline is to keep it natural and pristine for the benefit of us residents, not to be just another tourist destination. Ruining Hanauma Bay and Koko Crater is not a good vision for O'ahu. And taking them away from our enjoyment is not the future we want.

If the intent of all this is to help protect Hanauma, can't it be closed down for another day for relief to the eco-system and provide some intensive, bi-lingual education for all the people who visit the Bay?

Sincerely,

name Virginia K. Travis  
address 640 Hahaione St.  
city Honolulu, HI  
zip code 96825  
phone number 345-3321

August 5, 1999

Ms. Virginia K. Travis  
640 Hahaione St.  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Travis:

Thank you for your April 24, 1999 petition regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

CHANGES IN PROJECT SCOPE

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**  
To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0006@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

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Letter to Ms. Virginia K. Travis  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Our detailed responses below address the specific comments in your letter from the perspective of how they are related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Community Involvement in Park Planning As noted in the prior section of this letter, the City and County has initiated a process that makes community involvement a key and integral component of the planning for future improvements to Koko Head Regional Park and Nature Preserve.

Restrictions on Access to Hanauama Bay All proposals that would have involved further restrictions on Hanauama Bay access have been deleted from this project. Access arrangements will remain essentially as they are now, after the proposed improvements are completed.

Proposal for a Koko Crater Summit Funicular This proposal has been deleted from this project, which now involves only improvements to Hanauama Bay Nature Preserve.

Proposal to Demolish Coates Memorial Ballfield Likewise, this proposal has been deleted from this project.

Keeping the Coastline a Natural, Passive Area There are no proposals in the revised project scope that would detract from maintaining the Ka Iwi coastline's natural character.


Helping to Protect Hanauama Bay The revised project is almost exclusively intended to help protect Hanauama Bay. All proposals are directed at lessening the impacts of people's use of the bay. The only remaining proposal not involving Hanauama Bay is the demolition of the existing dilapidated buildings on the former Hawaii Job Corps site.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

  
Ralph Portmore, AICP  
Principal

Attachment

cc Mr. Jim Nakasono  
Department of Design and Construction

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July 6, 1999

Mr. Gordon Wood  
Department of Planning and Permitting  
650 South King Street, 9<sup>th</sup> Floor  
Honolulu, HI 96813

Dear Mr. Wood,

As concerned residents of the area, we would like to address the following comments to the Koko Head Regional Park and Nature Preserve Draft Environmental Impact Statement (DEIS) for your review and response. Some of the comments may not be applicable per the City's letter dated June 7, 1999 regarding "proposed revisions to project scope" but still wish to be addressed since that letter only states that it is only a proposed scope revision.

Reference: 1.4.2 - Adverse Impacts: The two impacts stated in this section do not adequately cover adverse impacts to the area as follows:

1. Does not address traffic impacts to Koko Head Regional Park and the already congested parking situation on weekends. Beneficial Impact listed under 1.4.1 "The ease and safety of public access...will be increased" has been shifted from Hanauama Bay to Koko Head Regional Park. I would not consider this a Beneficial Impact to the project, but instead moving the problem from one area to another. The big four tiered, 450 parking lot would be a greater impact then to leave the existing parking lot at Hanauama Bay.
2. Does not address people impacts to Koko Head Regional Park including tourists and strangers to our neighborhood. By locating a parking lot, funicular vehicles, and facilities to an adjacent park will no doubt attract people into our local Koko Head Park that was created for use of the locals, not tourist. This park is a neighborhood facility for use by our children and is large enough to accommodate additional visitors.
3. The project is very appealing to tourist and will attract an even greater number of visitors annually. Major developments including snack bar, buildings and educational centers will take away from natural setting at Hanauama Bay. This does not qualify as a Nature Preserve, but more as a theme park or zoo.
4. The Draft EIR does not fully address economical impacts created by the project. No long-term study on maintenance and operating costs has been done on the project, and if the tourist numbers continue to dwindle, the ultimate cost to keep this theme park running will be borne by the local taxpayers. Under a worse case scenario, but not out of the question, could be that the city could no longer absorb annual losses in running this park and would be forced to sell off the park to a private company which would have the authority to "do what it pleases" with our communities natural resources. Clearly this necessitates a long term

economic study be included in this report so that the taxpayers of this community feel confidence in this project.

Reference: 1.6 No Action: The lack of benefits and adverse impacts is not supported in the Draft EIR. Reference section 4.5.2.2, Hanauma Bay. This section concludes that water tests done on freshwater discharge is relatively small in magnitude, and is not having any significant effects on water quality. Also in terms of the temporal differences, the overall water quality of the Bay does not appear to change substantially as a result of human usage, nor are the changes at a level that might raise any health concerns or be considered detrimental to marine biota. In the last sentence of section 4.5.3.1, Nearshore Ocean Waters, it states that no nearshore marine biota are considered either threatened or endangered.

#### 1.7 Unresolved Issues:

1. An addendum should be circulated and included on the Koko Head Park plan drawing shows a jogging path that goes around the parking lot. During a recent meeting discussing this proposal, the Koko Head Park Manager shared a new drawing that showed a jogging path as now part of this project. My concern for this pathway is that it will never be implemented due to limited funding and the promise for this path will be for in the future. Because the future could mean never because there will always be a reason for funds to go elsewhere, the jogging path should be built during the construction phase.

If the goal is to reduce the amount of people to Hanauma Bay this plan is in direct conflict with its goal because this plan calls for 120 shuttles carrying 55 people per trip would transport 6,600 people per day. This is 60% higher than the current attendance of 4,000 people per day. According to 1.4 Significant Beneficial And Adverse Impacts states that this plan is going to maintain Park usage at substantially the current overall attendance levels. Is this not in direct conflict with reducing visitors to the bay?

The traffic study in the DEIS only considers current traffic and does not include the traffic congestion that will be generated by trams that only travel at 10 miles per hour on Kalaniana'ole Highway. To keep traffic flowing at safe and efficient speeds there has to be an average of 35-40 mph. Anything less would create excessive traffic backups that even occur in today's environment. A comprehensive traffic study would reveal this concern.

Putting trams on Kalaniana'ole Highway will be a nightmare of a traffic jam several trams, cars, busses, etc. entering Hanauma Bay will cause a bottle neck effect increasing the danger for accidents.

#### WATER SUPPLY

The DEIS does not properly anticipate the water consumption for the increase in visitors to the bay nor does it properly address wastewater management. How is the waste water and filtration system for the aquarium going to effect the water supply to the bay? Is the current 8" pipe big enough from The Board of Water Supply to accommodate this plan?

What will the cost be for a new water pipe to supply the bay with the necessary water? What are the projected costs for maintaining the aquarium? Oahu already has an aquarium that makes this aquarium redundant and unnecessary. This plan did not fully consider all the needs of an aquarium and what it will cost. Why is that? Obviously the water consumption is going to go way up from the average of 37,000 gallons per day.

The lower park plan includes placing new utility pipes for the new showers & toilets which will cause a need for more water and waste water management. Again will the current 8" pipe be big enough to accommodate the bay?

#### TESTS & STUDIES

All geotechnical tests should be completed before any blasting or rock drilling takes place. The DEIS states that rock removal will be performed at Koko Crater we request that this method of rock removal not be utilized at Hanauma Bay. The capacity study should be completed as well so that there is a good idea on how big the buildings should be.

Request that the carrying capacity study also address the previous practice of feeding the fish. The carrying capacity study in December of this year will have 3 months of feeding the fish and 3 months of non-feeding of the fish. I request that the carrying capacity study be made available to the public so that everyone is informed on the findings. I feel that the feeding of the fish is a wonderful experience of being one with nature in their natural environment. I feel that banning feeding of the fish will eliminate a wonderful experience for our children, the elderly, handicapped people. People that can not swim or dive for one reason or another will not be able to enjoy being with and seeing the fish. This privilege will only therefore be for people that dive, swim, or snorkel. I feel that this experience is for all to enjoy and share in.

#### HANAUMA BAY

The information center located on the lower level is unnecessary. The tourists should receive all information about the bay upon entering. A good time to expose them this information is when they pay to enter the Bay.

#### PAST CONSTRUCTION

In the past construction at Hanauma Bay contaminated the water and caused a cloudy atmosphere and murky water. What precautions are being made to see that this doesn't happen again? It has been said that this damaged the bay way farther than any human usage of the bay. The best way to preserve the bay is to minimize construction to the absolute necessary and to rehab existing buildings. Don't you think that construction should proceed wisely instead of irresponsibly? Let's not overbuild!

Past construction methods of using asphalt should be avoided because of potentials for runoff into the Bay. Recommend the substitution of concrete.




**FUNDS**

According to the city's own records, Hanauma Bay generates considerable revenues that should be reinvested into the Park. Many of the upgrades proposed in this DEIS could be funded by its own generated revenue which is in excess of 1.2 million dollars.

**CONCLUSION**

In closing, the proposal presented in the DEIS appears to be one that satisfies the tourist and fails to incorporate the local citizens concerns or even live up to its name, "Nature Preserve". By constructing funicular trams, new parking lots and new buildings, the project seeks to conquer and destroy more of the natural habitat than to preserve it and in the process restrict public access to Hanauma Bay. The word "Overhaul" comes to mind when reviewing the DEIS and this report needs one. Because there are many concerned and active groups working hard to salvage some of the funding for improvements, a last attempt should be considered, but only if these groups input is incorporated in the DEIS document. Otherwise a resounding NO should be stamped on this plan with the funding returned for better public use. There is always tomorrow and a project of this magnitude, and Hanauma Bay definitely is, should be planned carefully, not hurried, done with insight from local residents and experts and with all who want to be involved. In the mean time, with the surplus of 1.2 million dollars taken in by visitors to Hanauma Bay, the city should be using these funds to make improvements to the park now.

Respectfully,  
  
 Kelly & David Washino



- PARKS, D.E., WA, W.P.
- NORTH HONOLULU, WA, W.P.
- SHARON, WA, W.P.
- HONOLULU, WA, W.P.
- BOB H. ALLEN, WA, W.P.
- BARBARA J. ANDERSON, WA, W.P.
- JOHN B. BARTON, WA, W.P.
- STEPHEN B. BROWN, WA, W.P.
- JOHN C. CHANG, WA, W.P.
- DAVID J. COOPER, WA, W.P.
- FRANK H. DODD, WA, W.P.
- NORBERT H. DUNN, WA, W.P.
- ROBERT E. GIBSON, WA, W.P.
- GORDON A. GUNDEL, WA, W.P.
- BOB A. HARRIS, WA, W.P.
- FRANK H. HARRIS, WA, W.P.
- CLAUDE W. HARRIS, WA, W.P.
- SPENCER W. HARRIS, WA, W.P.

August 5, 1999

Mr. & Mrs. David and Kelly Washino  
 727 Kealahou Street  
 Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
 Draft Environmental Impact Statement

Dear Mr. & Mrs. David and Kelly Washino,

Thank you for your July 6, 1999 letter to Mr. Gordon Wood of the Department of Planning and Permitting regarding the Draft Environmental Impact Statement (DEIS) for the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

As you know, the scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
 Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continuing participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5538), fax (527-5563) or e-mail (CA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Group 70 Interests Group is a public interest group organized by the community for the purpose of providing input to the planning process for the Koko Head Regional Park and Nature Preserve project. The group is not affiliated with any political party or organization.

No Action Alternative: Tests and Studies

We continue to believe that this project, especially in its current revised form, will bring significant benefits and reduce current adverse impacts resulting from people's use of Hanauma Bay. The specific purposes of the proposed new facilities are to contribute to the preservation and enhancement of the bay's natural environment and marine ecosystem by lessening or making more "low-impact" the effects of existing uses on the bay. All "added" (as opposed to replacement) facilities are relatively small in size and are limited to things required for public education/awareness training, public safety (e.g., the new turnaround and lifeguard equipment storage space) or public convenience (e.g., expanded restrooms and new small public lockers for storage of valuables).

Many of these new facilities will also facilitate the implementation of any future additional measures to achieve these goals, should the results of the carrying capacity study indicate that this would be appropriate. The proposed facilities will not be contrary to, impede or constrain efforts to implement further protective measures, whatever they might be, except possibly in the case of a recommendation to close the bay to public use. A recommendation to do this or impose similar extreme measures is not anticipated. The new marine education center will be designed to allow flexibility in how the interior spaces are used, so that it can easily be adapted to accommodate changes in the awareness training, meeting areas and/or displays and exhibits that may be indicated in the future.

Therefore, it appears to us to make more sense to make improvements now that will clearly and substantially help to avoid any further deterioration of the bay, rather than to wait for the completion of the carrying capacity study and the subsequent study and decision-making necessary to translate its findings and recommendations into any needed projects and/or new management practices. The "wait-and-see" or no action alternative is considered clearly inferior to taking positive action now that will be beneficial to the bay and help to achieve existing master plan goals without compromising future options.

As you know, the Hanauma Bay Improvements Task Force, made up of a broad cross-section of over 25 Hanauma Bay users, caretakers and concerned residents, met weekly in June and July to decide whether they considered any improvements at Hanauma Bay Nature Preserve to be appropriate at this time, and if so, what improvements they would recommend. This Task Force reached a "strong consensus in favor" of proceeding with virtually all of the improvements that are now being proposed.

Unresolved Issues

Possible future improvements to Koko Head District Park will be considered as part of the upcoming effort to prepare a new master plan for this park. This begins with a planning "charrette", which will consist of two intensive sessions that are tentatively scheduled for September 14th and 21st. We urge both of you to participate, if possible. Please contact Cynthia Bond for further details.

As noted, the revised project scope no longer includes any proposals for new shuttle service or other improvements that could generate an increase in park use and traffic on nearby streets and highways.

RESPONSES TO SPECIFIC COMMENTS

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Consequently, our detailed responses to your letter are limited to those comments related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Impacts on Traffic, Public Access, Number of Park Users, Koko Head District Park and Surrounding Neighborhoods

With the scaling back of this project to include only improvements at Hanauma Bay Nature Preserve, and given the deletion of proposals that could have attracted more visitors or changed the times they came or the places they visited, it is not expected that the currently proposed improvements will generate any changes in existing traffic volumes or patterns of travel. Specifically, the existing parking at Hanauma Bay will be retained, and no new parking area or other new facilities are planned for the former Hawaii Job Corps site. As a result, there should be no impacts whatsoever on Koko Head District Park or surrounding neighborhoods.

Scope, Design Character and Compatibility of Planned Facilities at Hanauma Bay

We do not consider the proposed Hanauma Bay improvements to be "major developments" that "will take away from the natural setting at Hanauma Bay". Other than the facility needed to accommodate the proposed mandatory "resource awareness training" and a small bookstore/museum shop, all proposed improvements will provide more suitable accommodations for already existing uses and activities. For the most part, they are replacement facilities that will be better designed and suited to serve already established functions. There are no longer any proposed new park facilities that could be considered "very appealing to tourists".

The natural setting in the lower bay area will actually be significantly enhanced by the removal of the existing food concession building and the relocation and replacement of most other structures in the area where people first arrive on the beach. The new buildings in the upper park area will be designed to blend into the natural landscape, and will be set back further from the rim, so that they will be much less noticeable than the two existing buildings.

Economic Impacts

Potential economic impacts have been drastically reduced as a result of the scaling back of the project scope. Operation and maintenance costs for the new marine awareness training facility, displays/exhibits and bookstore/museum shop will be paid with existing revenues from parking (\$1.00 per car) and non-resident entry (\$3.00 per adult). Current revenues from these sources are expected to be more than sufficient to cover these costs, and no increases in these fees or establishment of new fees are anticipated. Less than 10 new staff positions should be required to operate and maintain Hanauma Bay Nature Preserve once the new facilities are completed. Given the very limited and largely known economic impacts of the revised project proposals, there is no longer a need for or benefits to be obtained from completing a "long term economic study".

Group To Implement: Planning & Design Department, Environmental Services & Facilities Division, U.S. Forest Service, Hanauma Bay Nature Preserve, Honolulu, Hawaii

Group To Implement: Planning & Design Department, Environmental Services & Facilities Division, U.S. Forest Service, Hanauma Bay Nature Preserve, Honolulu, Hawaii

Letter to Mr. David and Mrs. Kelly Washino  
July 30, 1999  
Page 5

fees. It has not been determined at this point whether or not some of these funds would be available and used to also fund some of the proposed capital improvements.

Conclusion

The specific responses provided above also address your concluding comments.

CONCLUSION

Your letter and this response letter will be included in the FEIS. We greatly appreciate the input on this project that we have received from you and other residents of Hawai'i Kai. We also look forward to continuing to work together with you and others in the community toward the completion of this project and of new master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve. We intend to work hard to develop plans that are widely supported by the East Honolulu community.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portmore*  
Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Letter to Mr. David and Mrs. Kelly Washino  
July 30, 1999  
Page 4

Water Supply and Wastewater Management

For the same reasons just stated above, no increase in the number of visitors to at Hanauma Bay Nature Preserve, and thus no increase in related water consumption, is anticipated. There are no longer any plans for an aquarium at Hanauma Bay that could generate additional wastewater. The existing 8-inch water pipe has sufficient capacity to provide adequate water service to the new facilities which, as previously noted, are mostly replacement facilities.

Geotechnical Tests

This project no longer includes any improvements or rock removal at Koko Crater. It is expected that a minor amount of excavation, and possibly some rock removal, will be required in order to meet Americans with Disabilities Act and other code requirements at the proposed sites for the new marine education center and snack bar in the upper park area. These normal construction activities will be done in a manner that will not substantially alter the natural form and character of the land in the area where these facilities will be located. If rock removal is found to be necessary, any needed geotechnical tests will be conducted before the removal is undertaken.

Carrying Capacity Study: Fish Feeding

Please refer to our earlier response under the "No Action Alternative; Tests and Studies" heading. It is our understanding that the carrying capacity study is addressing the previous practice of feeding the fish. The study report will be a public document and available to the public. The question of whether or not fish feeding at Hanauma Bay should be banned is being addressed separately and is not within the scope of this project.

"Information Center" in the Lower Beach Area at Hanauma Bay

Those who operate and serve as volunteers at Hanauma Bay Nature Preserve believe such a facility will have important benefits. The Hanauma Bay Improvements Task Force reached a "strong consensus in favor" of providing a small "beach activities support building" in this location. The proposal in this project to provide such a facility is intended to respond to the Task Force's recommendation.

Impacts of Past Construction

Proper precautions will be taken to minimize the likelihood of construction activities causing any environmental damage to Hanauma Bay. All grading, grubbing and stockpiling activities will comply with comprehensive regulations governing soil erosion and sediment control that have been adopted by the U.S. Soil Conservation Service and the City and County have adopted.

It is proposed that concrete, rather than asphalt, be used to repave the beach access road and build the new turnarounds at each end.

Funding of Park Upgrades

All operations and educational programs at Hanauma Bay Nature Preserve will be funded with revenues generated by the existing parking and non-resident adult entry

Group 70 International, Inc. • An Executive • Planning • Research • Environmental Services • Consulting • Design • Construction • Assets Management  
2000 Kalia Road, Suite 1000, Honolulu, HI 96815 • Telephone: (808) 943-1000 • Fax: (808) 943-1001 • Website: www.g70.com

MAILOO DISTRICT  
CITY OF HONOLULU  
HONOLULU, HI 96813

LANE WOODALL  
702 HOOPILI PLACE  
HONOLULU, HI 96825  
PHONE: 398-3818

99 MAY -7 P124

8 MAY 1999

TO: BILL BALFOUR, PARKS DIRECTOR

ALOHA I JUST WANTED TO THANK YOU FOR ALL YOU HAVE DONE FOR HAWAII KAI PARKS SINCE TAKING OVER THE JOB. YOUR PHILOSOPHY OF KEEPING PARKS NEAT, CLEAN AND GREEN IS A GOOD ONE. FINALLY, THE TERMITES PROBLEM AT KAMILOKI NEIGHBORHOOD PARK IS BEING TREATED. MAIALOI

I REALIZE THAT YOU ARE PERHAPS IN AN AWKWARD POSITION WHEN IT COMES TO THE KOKO HEAD REGIONAL PARK PRESENTATION. YOUR BOSS PROBABLY TELLS YOU TO SELL THE IDEA WHETHER YOU AGREE WITH IT OR NOT. I DON'T WANT YOU TO FEEL THAT YOU'RE BEING SINGLED OUT AS "THE BAD GUY." IT'S SIMPLY THAT THIS PROJECT DOESN'T ADDRESS THE WANTS OF THE RESIDENTS. WE SUPPORT THE JOB CORPS SITE MASTER PLAN FROM 1985 WHICH ADDRESSES THE EXPANSION OF KOKO HEAD DISTRICT PARK. THE BASEBALL FIELD ISSUE IS A MAJORITY ONE.

I'VE PROVIDED THE MAYOR WITH SOME SUGGESTIONS: NO TRAM, ONLY GUIDED HIKES UP KOKO CRATER. USE THE WAIKIKI TROLLEY TO SHUTTLE VISITORS FROM WAIKIKI AQUARIUM (WHICH COULD BE UPGRADED TO A MARINE EDUCATION CENTER FOR HANAUMA) TO THE EXISTING PARK AND RIDE LOT LOCATED ON KEAHOLE STREET (WHICH IS EXTREMELY UNDERUTILIZED - SEE COMMENTS IN EAST HONOLULU DEVELOPMENT PLAN) TO HANAUMA BAY. THE USE OF THIS PARKING LOT WOULD REMOVE THE NEED TO BUILD YET ANOTHER ONE. RESIDENTS OR VISITORS DRIVING TO THE BAY COULD PARK THERE AND BOARD THE SHUTTLE. AN INCENTIVE COULD BE INITIATED TO ENCOURAGE USING THE SHUTTLE (I.E., \$1.00 DISCOUNT ADMISSION TO THE BAY WITH SHUTTLE RECEIPT.)

I WOULD BE HAPPY TO SIT IN ON ANY TASK FORCE LOOKING INTO REDEFINING THIS PROJECT. LET'S TRULY MAKE IT A WIN-WIN FOR THE CITY AS WELL AS HAWAII KAI SINCERELY,

*Lane Woodall*  
P.S. THE MEN'S BATHROOM AT KOKO HEAD DISTRICT PARK HAS HAD A BROKEN TOILET FOR THREE MONTHS NOW. WERE TOLD A WORK ORDER HAS BEEN INITIATED, HOWEVER, IT MAY BE CONSIDERED A HEALTH HAZARD. ANY CHANCE IT CAN BE FIXED IN THE NEAR FUTURE?



GROUP 70  
INTERNATIONAL

James S. Dale, AIA, AICP  
Norman G.Y. Hoang, MA  
Sheryl H. Norman, MA, AIA  
Harold Lind, AIA  
Ron H. White, MA, CSI  
James I. Robinson, MA  
Stephen H. Voss, MA  
Frank L. Chung, MA  
Paul P. Peterson, MA  
Dawn H. Korman, MA  
Nancy L. Scott, MA  
Suzanne J. Galloway  
James H. O'Brien, AICP  
Robert A. Cain  
Ray A. Brown, MA, CSI  
Max J. Collins, AICP  
Frank H. McCue, MA  
Chad M. Aunkrant, AIA  
Charles A. Rasmussen, AICP  
Shari M. Lee, MA

August 5, 1999

Ms. Lane Woodall  
702 Hoopili Place  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Woodall:

Thank you for your May 6, 1999 letter to Mr. William D. Balfour, Jr., Director of the City Department of Parks and Recreation, regarding the Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

#### CHANGES IN PROJECT SCOPE

The scope of the planned improvements, as described in the DEIS, has been significantly scaled back in response to requests from you and others for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

#### KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your continued participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (522-5558), fax (522-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to ensure that you are included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

OFFICE OF THE MAYOR  
**CITY AND COUNTY OF HONOLULU**  
330 SOUTH KING STREET, ROOM 300 • HONOLULU, HAWAII 96813  
PHONE: (808) 527-4141 • FAX: (808) 527-5552



JEREMY HARRIS  
MAYOR

June 1, 1999

Letter to Ms. Lane Woodall  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

We appreciate your concerns about the original project proposal not addressing "the wants of the residents". However, we believe the significant changes in the project scope that have been made since you wrote your letter, and the referral to a community-based master planning process of further consideration of any proposals that could involve modifications to areas of Koko Head Regional Park and Nature Preserve outside of Hanaleia Bay, demonstrates that the City does want to respond to local community concerns.

We welcome your offer to sit on "any task force looking into redefining this project" and urge your participation in upcoming planning process that will be initiated next month. It is our intention to consider suggestions such as those offered in your letter as part of this process. Please contact Cynthia Bond at one of the numbers indicated above for more details.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.

*Ralph Portenore*  
Ralph Portenore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Ms. Lane Woodall  
702 Hoopii Place  
Honolulu, Hawaii 96825

Dear Ms. Woodall:

Thank you for your letter of May 5, 1999, regarding Koko Head Regional Park.

You may be assured that your concerns and recommendations will be part of the discussions as we develop the plans for the Koko Head Regional and Nature Preserve.

The broken toilet in the men's restroom at Koko Head District Park was repaired earlier this month. If you have other concerns with the maintenance of the park, please feel free to call Mr. Roy Salo, East Honolulu District Maintenance Superintendent or Ms. Toni Robinson, East Honolulu District Manager, at 973-7250.

I look forward to working with you and the community on the Koko Head Task Force.

Sincerely,

*William D. Balfour, Jr.*

WILLIAM D. BALFOUR, JR.  
Director

WDB:ml

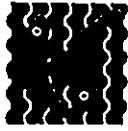
cc: Mayor Jeremy Harris  
Department of Design and Construction  
Cynthia Bond  
Group 70 via Department of  
Design and Construction

1/18/99 (2) (Group 70) (Koko Head Regional Park) (FEIS) (Group 70) (2000) (Group 70) (2000) (Group 70) (2000) (Group 70) (2000)

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Fax :

May 04 12:04



April 24, 1999

Dear Councilmember \_\_\_\_\_:

I am concerned that the \$13 million dollars already budgeted to spend this year for the proposed "Koko Head Regional Park & Nature Preserve" is too much money to be spent on such a proposal since the community has had little to do with the planning or funding of this. I understand that the access to Hanauma Bay will be so restrictive that we won't be able to walk down to enjoy it by ourselves. I would have to be part of a group, like I was on a tour.

I also have seen the proposal for the tram to go straight up on the outside of Koko Crater, going up and down every 4.5 minutes from sun up to sun down. That would be very unnatural. Further, the plan is to demolish a much-loved ballfield to make room for more parking. Bad idea!

The point is, we want to keep this coastline a natural, passive area. The State's purchase of the nearby Ka Iwi coastline is to keep it natural and pristine for the benefit of us residents, not to be just another tourist destination. Ruining Hanauma Bay and Koko Crater is not a good vision for O'ahu. And taking them away from our enjoyment is not the future we want.

If the intent of all this is to help protect Hanauma, can't it be closed down for another day for relief to the eco-system and provide some intensive, bi-lingual education for all the people who visit the Bay?

Sincerely,

*Joreita Young*  
name *Joreita Young*  
address *6750 Hawaii Kai Dr. # 708*  
city *Hon.*  
zip code *96825*  
phone number *375-3837*

August 5, 1999

Ms Joreita Young  
6750 Hawaii Kai Dr., #708  
Honolulu, HI 96825

Subject: Koko Head Regional Park and Nature Preserve  
Draft Environmental Impact Statement

Dear Ms. Young:

Thank you for your April 24, 1999 petition regarding the proposed Koko Head Regional Park and Nature Preserve project. Our responses to your comments are provided below.

**CHANGES IN PROJECT SCOPE**

The scope of the planned improvements as described in the DEIS, has been significantly scaled back in response to requests for additional time for community review and input. Consequently, only those improvements planned for Hanauma Bay Nature Preserve have been retained. The planned demolition of existing unused and dilapidated buildings at the former Hawaii Job Corps Center site will also be retained as part of this project, but there will be no construction of new facilities at this site. A detailed listing of those project improvements or "proposed actions" included in the DEIS that are being retained or deleted is attached to this letter.

**KOKO HEAD REGIONAL PARK AND NATURE PRESERVE PLANNING PROCESS**

To address community concerns, the City and County has initiated a new planning process that is intended to complete a new master plan for Koko Head Regional Park and Nature Preserve. A community task force is establishing an effective community outreach program that will ensure the maximum possible level of community involvement in the process. Intensive planning sessions to develop conceptual master plans for Koko Head District Park and Koko Head Regional Park and Nature Preserve, respectively, have been tentatively scheduled as follows:

Koko Head District Park: September 14<sup>th</sup> and 21<sup>st</sup>  
Koko Head Regional Park and Nature Preserve: October 5<sup>th</sup> and 12<sup>th</sup>

Your participation in this planning process is welcomed and encouraged. Please contact Ms. Cynthia Bond, East Honolulu Vision Team facilitator and the City's coordinator of community participation for this project, by phone (527-5558), fax (527-5563) or e-mail (CAA0005@co.honolulu.hi.us) for more information and to be included on a "contact list" of organizations and individuals who want to be kept informed of upcoming planning sessions and community meetings. A mailing list will also be established for those who cannot attend the planning sessions but wish to receive summaries of the results after they have been held.

Letter to Ms. Joreita Young  
August 5, 1999  
Page 2

**RESPONSES TO SPECIFIC COMMENTS**

As a result of the scaling back of the project scope, the scope of the Final Environmental Impact Statement (FEIS) is being revised to address only potential impacts of the remaining planned improvements. Our detailed responses below address the specific comments in your letter from the perspective of how they are related to the planned improvements that are being retained. A new EIS will be required and prepared for any additional improvements that may be planned in the future as a result of the completion of new park master plans, as described above.

Community Involvement in Park Planning As noted in the prior section of this letter, the City and County has initiated a process that makes community involvement a key and integral component of the planning for future improvements to Koko Head Regional Park and Nature Preserve.

Restrictions on Access to Hanalei Bay All proposals that would have involved further restrictions on Hanalei Bay access have been deleted from this project. Access arrangements will remain essentially as they are now, after the proposed improvements are completed.

Proposal for a Koko Crater Summit Funicular This proposal has been deleted from this project, which now involves only improvements to Hanalei Bay Nature Preserve.

Proposal to Demolish Coors Memorial Ballfield Likewise, this proposal has been deleted from this project.

Keeping the Coastline a Natural, Pesticide Area There are no proposals in the revised project scope that would detract from maintaining the Ka Iwi coastline's natural character.

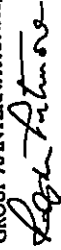
Helping to Protect Hanalei Bay The revised project is almost exclusively intended to help protect Hanalei Bay. All proposals are directed at lessening the impacts of people's use of the bay. The only remaining proposal not involving Hanalei Bay is the demolition of the existing dilapidated buildings on the former Hawai'i Job Corps site.

**CONCLUSION**

Your letter and this response letter will be included in the FEIS. We appreciate your input on this project.

Sincerely,

GROUP 70 INTERNATIONAL, INC.



Ralph Portmore, AICP  
Principal

Attachment

cc: Mr. Jim Nakasone  
Department of Design and Construction

Group 70 International, Inc. is an Equal Opportunity Employer. M/F/V/D. Equal Opportunity Employer.

**Section 13.0**  
**Preparers of the EIS**

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IMPROVEMENTS TO HANAUMA BAY NATURE PRESERVE

• Final Environmental Impact Statement •

13.0 PREPARERS OF THE EIS

This environmental impact statement was prepared for the applicant, the City and County of Honolulu Department of Design and Construction, by Group International, Inc. The following list identifies the individuals and organizations involved in the preparation of this EIS and their respective contributions.

**Group International, Inc.**

- Ralph Portmore, AICP: Project Manager from May 1999 to Present; Principal Author of the FEIS; Co-Author of the DEIS
- Mary O'Leary, AICP: Project Manager from Project Start to April 1999; Principal Author of the EISPN; Co-Author of the DEIS
- Stephen H. Yuen AIA: Project Architect, Hanauma Bay Upper Park Area Improvements and Former Hawaii Job Corps Site Demolition
- Kathryn A. Nam: Graphics Preparation

**Technical Consultants**

Char & Associates  
Cultural Surveys Hawaii  
INK Architects

Kumu Pono Associates  
Marine Research Consultants  
Pacific Planning and Engineering  
SSFM Engineers

**Technical Area**

Botanical Resources  
Archaeology  
Project Architects for the Hanauma Bay  
Lower Park Area Improvements  
Historical Documentary Research  
Marine Environment  
Road and Traffic Conditions  
Civil Engineering/Utilities

**APPENDIX A**

**Report of the Hanauma Bay Improvements Task Force**

**July 21, 1999**

## HANAUMA BAY IMPROVEMENTS TASK FORCE

July 21, 1999

### Summary Report and Recommendations

#### Background on the Task Force

The Task Force was formed at the request of Mayor Harris, to provide advice and recommendations on improvements to the Hanauma Bay Nature Preserve. Specifically, the group was asked to review the improvements included in the Hanauma Bay (makai) portion of the Draft Environmental Impact Statement (EIS) of March 1999 on the "Koko Head Regional Park & Nature Preserve" and to recommend which of these elements should be pursued and in what form. As a practical matter, the Task Force needed to submit its basic report by July 21 if other processing deadlines were to be met to make it possible to use certain Capital Improvement Project funds approved by the City Council in 1998 to finance any of the recommendations.

The Task Force was organized by Cynthia Bond, Deputy Director of the City & County Department of Human Resources and Facilitator of the East Honolulu Vision Team. The Task Force was comprised of members of interested community groups and organizations, park and marine experts, elected officials, representatives of the City & County Department of Parks and Recreation, individuals from firms and organizations in the tourist industry, and representatives of the design and architectural firms involved preparing the EIS and designing specific elements of the Hanauma Bay portion of the EIS. A full listing of individuals who attended one or more Task Force meetings is attached. Not every member attended every meeting, and no inference should be drawn from this report that any specific recommendation necessarily reflects the full views or even the concurrence of any individual member of the group. However, the extent of attendance at the meetings and the number of hours invested by so many people attest to the level of community interest and willingness to contribute to the planning process.

Task Force Co-Facilitators were Dick Baker, President of the Friends of Hanauma Bay, and Alan Hong, Manager of the Hanauma Bay Nature Preserve, who also acted as a primary resource to the Task Force. Ralph Portmore, Executive Vice President of Group 70, the design consultants who prepared the draft EIS, also served as a resource person.

The Task Force held five discussion meetings, on June 9, June 16, June 23, June 30, and July 7. Minutes of these meetings, prepared by Jerry Marr of the Department of Parks and Recreation, are available from Jerry Marr (tel. 527-6042). Task Force members also made field trips to Hanauma Bay and other related sites. All proposals were reviewed at a sixth meeting on July 14. A draft report was reviewed and final language approved at a seventh meeting on July 21.

#### Development of the Recommendations

The recommendations in this report summarize the views of members of the Task Force on questions relating to the proposals in the EIS. They are based on notes from the July 14 meeting and constitute the record of that meeting (there are no separate minutes).

The July 14 meeting reviewed a checklist organized according to the four major areas of the Hanauma Bay Nature Preserve affected by the draft EIS: the lower bay (beach level) area; the facilities at the upper bay (rim) area; the parking lots and surrounding areas; and the entrance/access road. Each section lists the principal suggestions and alternative ideas proposed in the EIS or raised in the group discussions. In each case this report records the overall group view in terms of a single descriptive phrase (strong consensus in favor; general consensus in favor; mixed views; strong differences of view; consensus opposed; or strong consensus opposed). A final section makes recommendations to the City & County regarding possible extension of the work of the Task Force.

Three other aspects of the process of developing the recommendations are worth noting. First, in the discussions at the July 14 meeting, primary emphasis was given to the opinions of the members of the Task Force who are not City & County employees or otherwise directly associated with the project; this reflected the fact that the major purpose of the Task Force was to elicit input from the community. Second, formal votes were not taken; rather, the effort was focused on determining whether there was a general consensus within the group on the various proposals, what was the direction of that consensus, and whether any additional comments or qualifications should be recorded. Third, a preliminary draft of the report was circulated to all members of the Task Force who could be reached prior to the July 21 meeting; comments were invited, and every effort was made to include the substance of these comments in the final report.

#### The Recommendations

Many of the specific recommendations are somewhat technical or minor, in some cases we have merely recommended that certain options be considered by the design team. However, two general points stand out. First, there was a remarkable degree of consensus within the Task Force on most of the recommendations. This in turn appears to reflect fundamental agreement that many improvements can and should be made now at Hanauma Bay, without awaiting the outcome of the carrying capacity study or the broader planning/consultation process for the Koko Crater-Koko Head park complex. Second, the recommendations emphasize practical, flexible, low-profile improvements at the Bay - including its educational facilities - that do not dramatically change either its overall appearance or basic management system. We are aware that many issues remain regarding facilities, preservation measures, and the visitor experience at the Bay. However, we believe that these issues can best be dealt with in a more comprehensive and extended planning process not driven by immediate deadlines.

The recommendations of the Task Force in the four major areas are set out below. The overall group view is highlighted in each case, followed by any comments/notations.

#### The Lower Bay

##### Roadways

- ◆ Construct turnaround for shuttle and emergency vehicles at base of existing road from upper bay; **strong consensus in favor** (notes: the size of the turnaround should be limited to that required for emergency vehicles to negotiate the turnaround, and the setback distance from the shoreline should comply with applicable laws and regulations).
- ◆ Resurface roadway from upper level including turnaround using concrete in place of asphalt (to minimize possible harmful chemical runoff from asphalt); **strong consensus in favor** (note: if a new walkway is to be constructed on the same route as the roadway, concrete resurfacing should follow construction of the new walkway).

##### Concession/Support Buildings

- ◆ Remove existing concession building; **strong consensus in favor**.
- ◆ Construct new multipurpose beach activities support building; **strong consensus in favor**.
- ◆ The new support building should be expandable and flexible (adaptable to changing needs and uses); **strong consensus in favor**.
- ◆ The support building should be located well back from shoreline but close to shuttle stop; **strong consensus in favor**.
- ◆ Support building design should minimize bulk (e.g., multiple cabana-type structures) and should have attractive features (e.g., conical or peaked roofs, moss rock walls, roofs of natural shades - shake or simulated shake, and Hawaiian motifs creating a Hawaiian sense of place); **strong consensus in favor**.
- ◆ Structure(s) should include an educational display area and associated support/storage - replacing the existing beach desk staffed by volunteers; **strong consensus in favor** (with the notation that this display should be in a highly visible location near the shuttle stop and pedestrian entry to the beach area so it is one of the first facilities seen by arriving beach-goers).
- ◆ Snorkel equipment rental facility; **strong consensus in favor** (replaces facility in existing concession building).
- ◆ Storage lockers for use by visitors; **strong consensus in favor** (should be combined with snorkel equipment concession).
- ◆ Lifeguard support/storage space; **strong consensus in favor**.
- ◆ Water fountains at various locations, some of which should have chilled water; **strong consensus in favor**.

- ◆ No snack bar; **strong consensus in favor** (existing snack bar could be relocated to upper bay).

- ◆ Small snack bar facility (e.g. for cold drinks); **strong consensus opposed** (but willingness to reconsider if experience shows strong demand/need and/or increased pedestrian traffic up to upper bay for food and drinks).

##### Comfort Stations, Showers, Runoff

- ◆ Remove existing comfort station number 1; **strong consensus in favor**.
- ◆ Construct new comfort station; **strong consensus in favor**.
- ◆ Increase size of stalls for women in new facility; **strong consensus in favor** (approximately five stalls appears to be an adequate number, in addition to separate changing stalls as in existing facility).
- ◆ Include maintenance space in comfort station structure (for comfort station supplies, etc.); **strong consensus in favor**.
- ◆ Locate new comfort station as far back from the shoreline as feasible; **strong consensus in favor**.
- ◆ Design of comfort station should minimize bulk and profile; **strong consensus in favor**.
- ◆ If this qualifies for inclusion under existing EIS process, add a bench or other changing facility to existing comfort station number 2; **general consensus in favor**.
- ◆ Replace existing shower facility with a new shower farther back from the beach with larger runoff sump than present facility to minimize flow of shower water runoff into bay; **general consensus in favor** (note: some question whether shower facilities with associated fresh-water runoff into the bay need to be located on the lower level; however, general consensus that any shower facilities should include features minimizing water flow, plus low-level faucets for feet and equipment cleaning - as with most present facilities).
- ◆ Include in snorkel supply facility a sink connected with sewer for washup of equipment; **strong consensus in favor** (plus support for testing being conducted in ongoing carrying capacity study to detect any heightened chlorine levels adjacent to areas where equipment is now being washed in the absence of a sewer-connected sink in the existing snorkel facility).
- ◆ All new facilities should be designed with the objective of minimizing environmental impact; **strong consensus in favor**.

**Landscaping** (Note: The suggestion was made that the assistance of the Botanical Garden staff should be drawn on in the selection of species to be used at the bay.)

- ◆ New landscaping to shield protective fence along edge of bay; **strong consensus in favor** (related points recommended for consideration include use of additional vegetation to stabilize and control erosion off slopes adjacent to the beach, contain loose rocks sliding off slopes, etc.);
- ◆ Any new planting should give strong priority to local plant species requiring minimal watering; **strong consensus in favor**.

#### Methods of Access to the Lower Level

- ◆ The existing combination of pedestrian and shuttle access should be maintained (note: the draft EIS proposes a shuttle-only access system); **strong consensus in favor.**
- ◆ There should be no new pedestrian walkway requiring extensive construction, stairs, etc. (i.e., as in plans prepared c. 1997); **strong consensus in favor** (however, if it were not impractical from an engineering standpoint, the Task Force would favor development of a new pedestrian path).
- ◆ Examine measures such as better path separation for pedestrian and trolley traffic on access road to increase safety for pedestrians; **strong consensus in favor.**

#### The Upper Bay

##### Marine Education Center

- ◆ Construct a Marine Education Center; **strong consensus in favor** (note: however, some members question when this facility might best be constructed - i.e., might it be built after the long-term plan is completed?).
- ◆ Building should be modest in scale, expandable, flexible in uses; **strong consensus in favor** (both for ease of adjustment to future park plans and to other changes in the mix of demands/uses for the facility).
- ◆ Building should be sufficiently set back from bay rim so that it is not significantly visible from the beach; **general consensus in favor.**
- ◆ Planners/designers should give serious consideration to the option of siting the education center on the opposite (east) side of the beach access road across from the existing upper bay structures; **strong consensus in favor** (among other points, it was noted that this would allow pedestrian traffic to the beach to avoid crossing the roadway, and would allow continued use of the existing upper level structures during the construction phase).
- ◆ Pedestrian walkway to the beach should not require crossing the existing roadway; **general consensus in favor** (regardless of location of structures).

Educational Elements to be included in Center (note: there was a strong consensus that the major emphasis of the new facility should be on education; however, the Task Force does not recommend at this time that visitor access to the bay be limited to guided tours only, as proposed in the draft EIS).

- ◆ Provide information/training for visitors on the need to preserve the bay and its reefs, and on behavior/activities to avoid; **strong consensus in favor.**
- ◆ The introductory briefing area should be so located that all visitors must receive the training unless they have already done so -- as evidenced by some kind of identification; **strong consensus in favor.**
- ◆ Capability to accommodate school and other groups; **strong consensus in favor** (note: some of this activity could be conducted outdoors or in partially

enclosed areas, but it was also suggested that an indoor area capable of accommodating groups is desirable both for protection against weather and to allow use of various kinds of equipment, displays, etc.).

- ◆ Visual displays featuring bay history, types of fishes, and rules of behavior; **strong consensus in favor.**
- ◆ Displays could be in combination of indoor and outdoor locations; **strong consensus in favor.**
- ◆ Displays could include dioramas; **general consensus in favor** of considering this possibility (though the concern was expressed that there not be excessive use of this type of display - and general agreement that the overriding objective should be an appropriate and effective mix of displays).
- ◆ Hands-on interactive exhibits; **strong consensus in favor** (with caution that use of live animals - e.g. in tanks - is not desirable, as it results in excessive stress and harm to the animals).

##### Other Facilities

- ◆ Adequate "back of house" (support) space at education center for staff, volunteers, storage, etc.; **strong consensus in favor.**
- ◆ Office(s) for park and facility manager at education center; **strong consensus in favor.**
- ◆ Appropriate arrangements in education center for ticket sales, safeguarding of funds, etc.; **strong consensus in favor.**
- ◆ Existing upper rim structures (office, information exhibit, etc.) may be demolished as and when appropriate; **strong consensus in favor.**

##### Aquarium Features

- ◆ No large-scale or technically complex aquarium features in the education center along the lines proposed in the draft EIS; **strong consensus in favor** (i.e., opposed to aquarium features on this large scale; grounds for opposition to this plan include technical difficulties, possible environmental problems, cost, etc.).
- ◆ Possible inclusion in information displays of small tank(s) exhibiting typical fish species from the bay; **mixed views** (including concern that there not be too many such tanks, and some concern as to the sources of specimens to be displayed, but also willingness to have this option considered and not completely rule out any use of tanks in the facility).

##### Language and Cultural Elements

- ◆ Multilingual signage, recordings (headphones), sound tracks for videos, etc.; **strong consensus in favor.**
- ◆ Availability of foreign language materials should be based on visitor census, but initial educational briefing should be available in as many languages as practicable; **strong consensus in favor** (with notation that signage regarding

safety must meet liability requirements for understanding by speakers of a broader range of languages).

- ◆ Include Hawaiian themes and language to emphasize "Hawaiian sense of place"; strong consensus in favor.
- ◆ Have full Hawaiian language materials available for Hawaiian visitors; strong consensus in favor (both reflecting "Hawaiian sense of place" theme and to support use by the growing number of Hawaiian language speakers; Hawaiian groups should be consulted on Hawaiian language materials).

Video or Film Features (Note: There was a strong consensus in favor of consideration by the architects and designers of all the suggestions listed below, but the Task Force did not have time or expertise to choose among the options.)

- ◆ Virtual aquarium;
- ◆ Live underwater video camera (and/or audio) hookup;
- ◆ Panoramic view of bay via video camera located on rim or facility roof;
- ◆ A bay website to carry live video views and other materials to reach larger audiences including those not in Hawaii;
- ◆ Commissioned video(s) introducing the bay, its history, ecology, fish types, etc.;
- ◆ High-impact exhibit such as a 360-degree film or video theater;
- ◆ Educational videos (or special-purpose videos on bay) for use by local hotels and bay-oriented shops, and airlines serving Hawaii.

#### Informational Materials/Shop

- ◆ Bookstore for informational materials; strong consensus in favor.
- ◆ Modest shop selling souvenir items and other items relating to the bay (possibly including suntan lotion, hats, etc.); mixed views (visitor demand as well as revenue possibilities are recognized, but there are some concerns about scale, appropriateness of items to be sold, management requirements, etc.).
- ◆ Library with reference material on marine life, etc.; consensus opposed (many question the demand by bay visitors for detailed reference materials and note the availability of other commercial and institutional sources).

Snack Bar/Food Facility at Upper Bay (Note: There were strong differences of view within the group concerning the desirable size and even the necessity of such a facility.) Options include:

- ◆ A relatively large facility (along the lines of that in the draft EIS, including seating with view of the bay) - note: there was a strong consensus opposed to this option;
- ◆ A small/minimal-impact facility (but built-in, possibly similar in scale to the existing lower-level snack bar);
- ◆ A mobile "lunch-wagon" type service such as that now in Maunaloa Bay (to test the need and market for a future facility);

- ◆ No facility (visitors can bring their own or patronize Hawaii Kai commercial establishments).

Restrooms (Note: The Task Force had mixed views on whether the park should increase the size of its upper level restroom facilities adjacent to the bus parking area to accommodate peak-hour demand by passenger tour buses making 15-minute stops at the bay, or whether the existing restrooms should be left as is and the tour companies be encouraged to meet the needs of their patrons in other ways.)

- ◆ Construct new restroom facility to service education center (if location makes this desirable); strong consensus in favor.

#### The Parking Lot and Surroundings

- ◆ Do not resurface parking lot unless carrying capacity study shows harmful chemical runoff, etc.; strong consensus in favor (i.e., opposed to resurfacing absent further evidence of need).
- ◆ Survey parking lot areas to identify places where runoff goes directly into bay rather than retention ponds, and re-route runoff to retention ponds where feasible; strong consensus in favor.
- ◆ Additional trees and other plantings in and around parking lots for shade emphasizing local varieties requiring minimal watering; strong consensus in favor.
- ◆ Add educational signage (built-in) along the rim wall viewing areas describing prominent features of the bay, history, ecology, etc.; strong consensus in favor.
- ◆ Remove the dumpster now located in staff parking area (and used to store refuse from Hanauma Bay and other areas outside the park as well) to some other site outside the park; strong consensus in favor.
- ◆ Construct new observation post for lifeguards along rim of upper bay with maximum view of the bay; strong consensus in favor (with the comment that a low-visibility design and color scheme for this post would be desirable).
- ◆ Consideration should be given to moving the 15-minute bus parking area farther back from the rim, to reduce exhaust and noise at the rim.
- ◆ Consideration should be given to making arrangements to enable short-term stops by private vehicles for viewing from the rim similar to the arrangement now in place for tour buses.

#### Other

- ◆ To decrease the possibility of construction-caused runoff entering the bay, it is recommended that construction take place during the dry season.

### Park Access and Controls

(Note: With the elimination from the current EIS of the proposed relocation of Hanauma Bay parking to the mauka side of Kalanianaʻole Highway, none of the remaining infrastructure proposals addresses the access/congestion/gate control issues, which therefore will have to be dealt with by other means or through subsequent projects. A number of ideas were suggested during the Task Force discussions for other measures that could affect traffic to the bay and the bottleneck at the entrance to the bay, but all appeared to have practical or financial drawbacks and the Task Force did not reach any definitive views among them.) The following options were mentioned:

- ◆ To alleviate automotive congestion at the bay, the City & County could encourage commercial firms to establish shuttle bus service for 15-minute bay visits from Hawaii Kai Park-and-Ride or another suitable site; and/or
- ◆ The City & County could establish its own or encourage commercial firms to increase their shuttle services to bring tourists from Waikiki to the bay (to reduce number of tourists coming by automobile);
- ◆ Additional signage or communication systems could be installed along the highway approaches to the bay to alert visitors to lot closures and/or waiting periods (e.g., a dedicated radio frequency, or a flashing sign under the pedestrian bridge at Koko Marina);
- ◆ Security staff could be increased to enforce regulations regarding commercial tour activities at the bay and reduce evasion of existing restrictions.

### The Future of the Task Force

The Task Force has spent the past seven weeks intensively studying the infrastructure and management issues associated with the Hanauma Bay Nature Preserve as well as the various proposals contained in the original draft EIS and earlier plans for this area. We are acutely aware that the time limits of our present assignment did not allow us to deal with many of the important issues involved, or even to obtain feedback from the designers and architects on many of the suggestions made by the group. However, we have learned a great deal. We also believe that the broad representation and open discussion format of the Task Force process have been extremely successful in enabling a group of individuals reflecting diverse interests to constructively address some very complex issues. We believe that the Task Force could continue to make a constructive contribution at subsequent stages of the planning process associated with the Hanauma Bay Nature Preserve and the wider Koko Crater-Koko Head park complex.

Based on these considerations, the Task Force makes the following recommendations, on which we have a strong consensus in favor, regarding the future of our group:

- ◆ The City & County should support continuation of the Task Force to consider and comment on further development of plans for any of the improvements contained in the final EIS;
- ◆ The City & County should invite the Task Force to consider in more depth (and over a more extended time period) improvements and alternatives to the visitor management systems at the bay;
- ◆ The City & County should invite the Task Force to develop recommendations on further infrastructure or other innovations (whether or not included in existing or previous plans and whether or not confined solely to the mauka side of Kalanianaʻole Highway) that would improve protection of the bay, reduce crowding or inappropriate activities in and around the bay, improve access control and reduce congestion and related problems at the entrance, etc.

Approved  
July 21, 1999  
Hanauma Bay Improvements Task Force

**HANAUMA BAY IMPROVEMENTS TASK FORCE**  
**Koko Head Regional Park and Nature Preserve**  
**Attendance at Meetings June 9-July 21, 1999**

| NAME   | AFFILIATION                | 6/9 | 6/16 | 6/23 | 6/30 | 7/7 | 7/14 | 7/21 |
|--|----------------------------|-----|------|------|------|-----|------|------|
| Eve Anderson                                 | EHCC                       | X   | X    | X    | X    | X   | X    | X    |
| Dick Baker                                   | Friends of Hanalei Bay     | X   |      | X    | X    | X   | X    | X    |
| Bill Balzar                                  | Dir. Parks & Recreation    |     |      |      |      | X   | X    |      |
| Cynthia Bond                                 | Vision Team                | X   | X    | X    | X    | X   | X    | X    |
| Dr. Bruce Carlson                            | Waikiki Aquarium           | X   | X    | X    | X    |     |      |      |
| Lisa Carter                                  | EHCC                       | X   | X    | X    | X    | X   | X    | X    |
| Athleen Clark*                               | DLNR                       |     |      |      |      |     |      |      |
| Dr. John Cullinney                           | Friends of Hanalei Bay     |     | X    |      | X    |     | X    |      |
| Sally Drake                                  | EHCC                       | X   | X    | X    | X    | X   | X    | X    |
| Councilmember John Henry Felix (B. Yamamoto) | Elected official           |     |      |      |      |     |      |      |
| Randy Fujiki                                 | Dir. Design & Construction |     | X    |      | X    | X   | X    | X    |
| Roy Gritter                                  | Friends of Hanalei Bay     |     |      |      | X    | X   | X    | X    |
| Dave Gullo                                   | DLNR                       |     | X    |      |      |     |      |      |
| Dr. Suzanne Hammer                           | EHCC                       | X   | X    | X    | X    |     |      | X    |
| Tom Henderson                                | Tommy's Tours              |     |      | X    | X    | X   | X    | X    |
| Randy Hoechstink                             | DLNR                       |     |      |      | X    |     |      |      |
| Alan Hong                                    | Manager, Hanalei Bay       | X   | X    | X    | X    | X   | X    | X    |
| Mary Houghton                                | Hi. Kai NP/Vision Team     |     |      |      |      |     | X    | X    |
| Kerina Kekono                                | EHCC                       | X   | X    | X    | X    | X   | X    | X    |
| Bob Kern                                     | Citizens for Ocean Access  | X   | X    | X    | X    | X   | X    | X    |
| Maurice Kanado                               | INK Architects             |     | X    | X    | X    | X   | X    | X    |
| Jerry Marr                                   | Parks Dept.                | X   | X    | X    | X    | X   | X    | X    |
| Colleen Murakami*                            | DOE                        |     |      |      |      |     |      |      |

| NAME                  | AFFILIATION                          | 6/9 | 6/16 | 6/23 | 6/30 | 7/7 | 7/14 | 7/21 |
|-----------------------|--------------------------------------|-----|------|------|------|-----|------|------|
| Kay Marukata          | ECI                                  |     |      |      | X    |     |      |      |
| Dennis Nakamoto       | INK Architects                       | X   | X    | X    | X    | X   | X    | X    |
| Jim Nakasone          | Project Manager                      |     | X    | X    | X    | X   | X    | X    |
| Terry O'Halloran      | HAATA                                | X   |      |      |      |     |      |      |
| Ruipa Portmore        | Group 70                             | X   | X    | X    | X    | X   | X    | X    |
| Jan Peter Preis       | Preis & Associates                   |     |      |      | X    |     |      |      |
| Robert Purdie, Jr.    | Hi. Council of Dive Clubs            | X   | X    | X    |      | X   |      | X    |
| Peter Reppa           | Hanalei Bay Ed. Program/UH Sea Grant |     |      |      | X    | X   | X    | X    |
| Robert Roeder         | EHCC                                 |     | X    | X    | X    | X   | X    | X    |
| Charlie Rodgers*      | Hi. Kai Neigh. Bd. Chair             |     |      |      |      |     |      |      |
| Sen. Sam Slom*        | Elected official                     |     |      |      |      |     |      |      |
| Micki Sush            | Citizens for Ocean Access            | X   | X    | X    | X    | X   | X    | X    |
| Rep. David Stigumaker | Elected official                     | X   |      |      |      |     |      |      |
| Bob Stagle            | Resident                             | X   | X    | X    | X    | X   | X    | X    |
| Dan Takematsu         | Design & Construction                |     |      |      |      |     |      |      |
| George Tamashiro      | Design & Construction                |     | X    |      |      |     |      |      |
| Dave Washino          | EHCC                                 | X   | X    | X    |      |     | X    | X    |
| Kelly Washino         | EHCC                                 |     | X    |      |      |     |      | X    |
| Roger Watson          | E Noa Corp.                          | X   | X    | X    |      |     |      | X    |
| Larry Winnik          | Friends of Hanalei Bay               | X   |      |      | X    |     |      |      |
| Leah Young            | Koko Marina Shopping Center          | X   | X    | X    | X    |     |      | X    |
| Steve Yoon            | Group 70                             |     |      |      | X    | X   | X    | X    |

\*Invited but did not attend.



## **APPENDIX B**

**Historical Documentary Research: Kawaihoa-Kuamo'okane  
Hanauma, and Kohelepelepe -  
The Koko Head Regional Park and Nature Preserve**

**Kumu Pono Associates**

**October 19, 1998**

**HISTORICAL DOCUMENTARY  
RESEARCH:**

**KAWAIHOA-KUAMO'OKANE, HANAUMA,  
AND KOHELEPELEPE - THE KOKO HEAD  
REGIONAL PARK AND NATURE PRESERVE**

**AHUPUA'A OF MAUNALUA,  
DISTRICT OF KONA,  
ISLAND OF O'AHU**



*Kumu Pono Associates*

*Historical & Archival Documentary Research • Oral History Studies • Partnerships in  
Cultural Resources Management • Developing Preservation Plans and Interpretive Programs*

**HISTORICAL DOCUMENTARY RESEARCH:**

**Kawaihoa-Kuamo'okāne, Hanauma, and Kohelepelepe-  
The Koko Head Regional Park and Nature Preserve**

**Ahupua'a of Maunaloa  
District of Kona, Island of O'ahu  
(TMK: 3-6-12; por. 1,2,4,6,8,9,10,12,13,14 & 16)**

BY

*Kepā Maly • Cultural Resources Specialist  
&  
Helen Wong Smith • Archivist.*

PREPARED FOR

*Group 70 International  
925 Bethel Street, Fifth Floor  
Honolulu, Hawaii 96813-4307*

October 19, 1998

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*Kumu Pono Associates  
Kepā Maly, Consultant*

*Historical & Archival Documentary Research • Oral History Studies • Partnerships in  
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*554 Keonana St. • Hilo, Hawaii 96720 • (ph./fax) 808.981.0196 • (e-mail) kcpa@interpac.net*

## EXECUTIVE SUMMARY

### Overview

At the request of Mr. George Alta, AICP, of Group 70 International, Kepā Maly and Helen Wong Smith (Kumu Pono Associates), conducted archival and historical documentary research and prepared the following report in conjunction with the preparation of an Environmental Impact Statement for the Koko Head Regional Park and Nature Preserve (the park). The study area is situated in the *āhupuaʻa* (native land division) of Maunaloa, in the district of Kona (Honolulu), Island of Oʻahu (TMK: 3-9-12; por. 1, 2, 4, 6, 8, 9, 10, 12, 13, 14 & 16). The park is approximately 1,265 acres in size, and includes portions of the shoreline, the summits of two volcanic cones (at elevations of 642 feet and 1208 feet above sea level), and *āua* (flatlands) extending a short distance inland of the craters, on the arid, southeastern side of Oʻahu. The park is fronted by approximately six miles of shoreline and bounds the three landward sides of Hanalei Bay.

### Archival Research

The archival historical documentary research reported in this study was primarily conducted between September 10<sup>th</sup> to October 9<sup>th</sup>, 1998, and includes archival resources from land documents, survey and cartographic records, historic literature and journals, native texts from Hawaiian language newspapers, and selected archaeological studies. Resource materials were reviewed in the collections of the City and County of Honolulu; the Hawaiʻi State Archives, Survey Division, Land Management Division, and Bureau of Conveyances; the Bernice Pauahi Bishop Museum; the University of Hawaiʻi-Hilo Campus Hawaiian newspaper microfilm collection; and personal collections of the authors.

### Findings and Recommendations

The archival-historical documentary research provides readers with insights into the traditional (generally pre-1800) history of the Maunaloa study area, and customs and practices of the people who lived on the land. Additionally, nineteenth century and early twentieth century narratives cited in the study provide further documentation on the history and nature of the land, and document changes in land tenure, residency, and land use.

Perhaps of greatest cultural significance, some of the traditional and early historic accounts, associate several features of the natural landscape with events in which Hawaiian gods and deity participated. Some of the place names which remain in use today call to mind those times when the gods walked the land with the people. Additionally, accounts cited in this study reference resource collection and access practices as recorded up until ca. 1950. Thus, this study provides planners and interested readers with narratives that will be of use in interpreting the history of the land. To better understand the significance of the natural and cultural landscapes of lands in and neighboring the park, and determine the best methods of long-term management and interpretation of resources, the City and County of Honolulu and a "friends of the park" organization could develop an oral history and consultation program to record histories of knowledgeable residents and practitioners.

## ACKNOWLEDGMENTS

In preparing this report, the authors wish to acknowledge the collections and resource staff of — the Hawaiʻi State Archives, Survey Division, Land Management Division, and Bureau of Conveyances; the University of Hawaiʻi-Hilo Campus, Moʻokini Library; Jon Giffin of the Department of Land and Natural Resources-Divisions of Forestry and Wildlife (for making the volumes Hawaiian Forester and Agriculturist available); Lurline Naone-Salvador (Kamehameha Schools/Bishop Estate); John Griffith of The City and County of Honolulu; and Mrs. Margery Hastert (for sharing with us, her personal copy of "Our Hawaiʻi Kai - A History of Hawaiʻi Kai and Maunaloa"). To all of you —

— *Mahalo nui nō, ke aloha o ke Akua pū me ʻoukou a pau!*

In reading this collection of archival and historical documentation, we humbly ask you — "O *ka mea maikaʻi mālama, o ka mea maikaʻi ʻole, kāpae ʻia*" (Keep that which is good and set that which is not good aside). We have not recorded all that could have, or perhaps should have been said about Kawailoa-Kuamoʻokāne, Koholepelepe, and the neighboring lands of Maunaloa, or the study matter. But, we have made a sincere effort to present readers with an overview of the rich and varied history of the area, and to provide readers with access to the original documentation.

*māua nō me ka haʻahaʻa —  
Kepā Maly  
&*

*Helen Wong Smith*

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## INTRODUCTION

### BACKGROUND

At the request of Mr. George Atta, AICP, of Group 70 International, Kepā Maly and Helen Wong Smith (*Kumu Pono Associates*), conducted archival and historical documentary research and prepared the following report in conjunction with the preparation of an Environmental Impact Statement (EIS) for the Koko Head Regional Park and Nature Preserve (hereinafter, the park). The study area is situated in the *ahupua'a* (native land division) of Maunaloa, in the district of Kona (now called Honolulu District), Island of O'ahu (TMK: 3-9-12; por. 1,2,4,6,8,9,10,12,13,14 & 16) (Figure 1). The park is approximately 1,265 acres in size, and includes portions of the shoreline, the summits of two volcanic cones (at elevations of 642 feet and 1208 feet above sea level), and *kūia* (flattlands) extending a short distance inland of the craters, on the arid, southeastern side of O'ahu. The park is fronted by approximately six miles of shoreline and bounds the three landward sides of Hanauma Bay.

### Archival Research

The archival historical documentary research reported in this study was primarily conducted between September 10<sup>th</sup> to October 13<sup>th</sup>, 1998, and includes archival resources from land documents, survey and cartographic records, historic literature and journals, native texts from Hawaiian language newspapers, and selected archaeological studies (cited in text). Resource materials were reviewed in the collections of the City and County of Honolulu; the Hawai'i State — Archives, Survey Division, Land Management Division, and Bureau of Conveyances; The Bernice Pauahi Bishop Museum; the University of Hawai'i-Hilo Campus Hawaiian newspaper microfilm collection; and personal collections of the authors.

It is noted here, that to-date only limited documentation for the traditional (pre-western contact) and early historic periods, regarding long-term residence patterns and traditional practices has been located for the *ahupua'a* of Maunaloa. There are a few studies which have been conducted in the past, that provide readers with several references to specific sites, and the broader traditions of the area. These studies include, but are not limited to — "The Archaeology of Oahu" (McAllister 1933); "Native Planters in Old Hawai'i" (Handy, Handy and Pukui 1972); and "Sites of Oahu" (Sterling and Summers 1978). Pertinent excerpts from original sources and the studies identified above, are included below.

<sup>1</sup> It is noted here, that there is some apparent confusion in historic records about the disposition of the land of Maunaloa. Though situated on the *kona* (seaward) side of O'ahu some historic land records identify Maunaloa as an *'ili* (parcel of land attached to another *ahupua'a*), rather than an independent *ahupua'a*. The "Indices of Awards, Lands of Aliis and Chiefs" (1929-4) identifies Maunaloa as a land of Kona, O'ahu, awarded to Victoria Kanihōkū (L.C.A.W. 7713:10). The *Buke Mahale* (book of the Māhale between the King, Chiefs and Government) identifies Maunaloa as an *'ili* (land parcel) belonging to Waimānalo (1849). Yet another section of the (Board of Commissioners...Oahu; 1929-412) lists Maunaloa as an *ahupua'a* in Waimānalo, district of Kō'olau Pōko. Coullier (1935) notes that by 1859, Maunaloa was considered to be a part of the Honolulu (Kona) District (Coullier 1935:223).

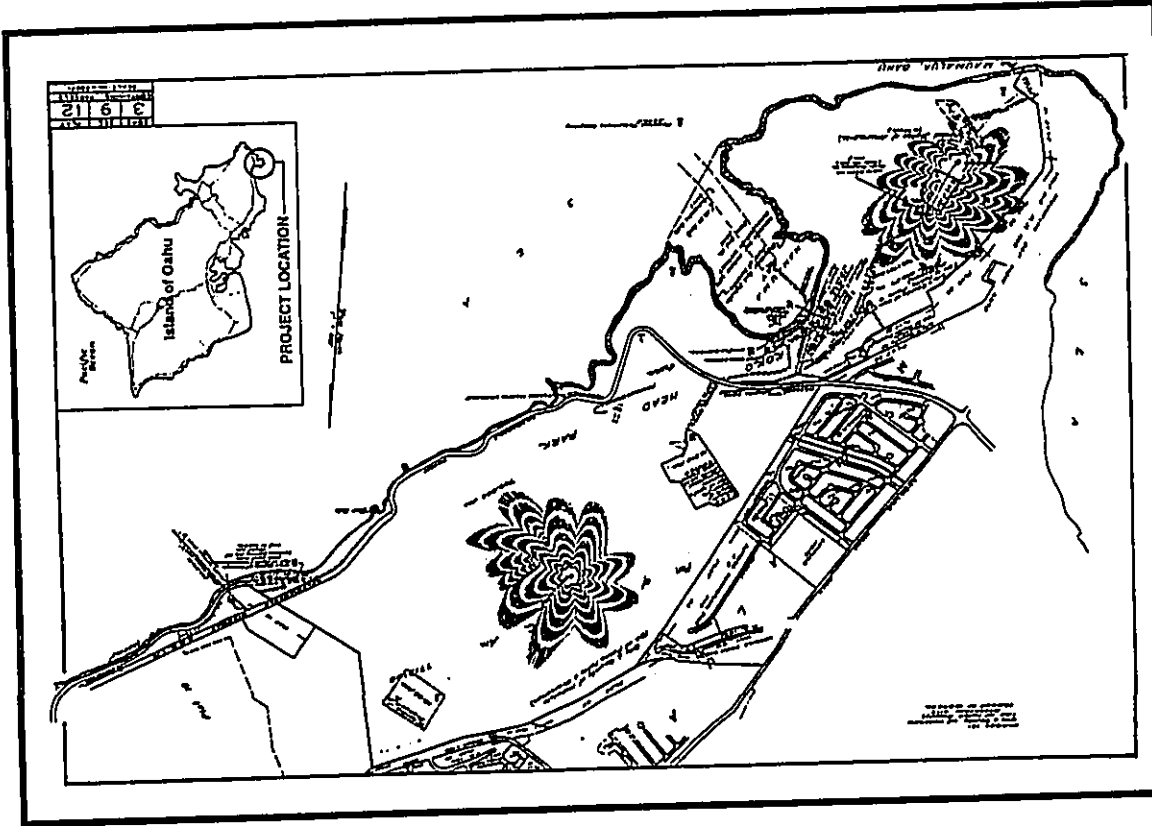


Figure 1. Study Area — Koko Head Regional Park and Nature Preserve, Maunaloa, Island of O'ahu (TMK Map 3-6-12; prepared by Group 70 International)

### Historical Overview:

#### Lands of the Koko Head Regional Park and Nature Preserve

In discussing the Koko Head Regional Park and Nature Preserve it will be helpful to first look at the park lands in the larger context of the land of Maunaloa. The natural resources (both coastal and inland) of Maunaloa have been of interest to the growing population of O'ahu for the greater part of the 1900s. By the middle 1800s, the lands of Maunaloa were consolidated under the ownership of Chiefess Victoria Kāmāmalu, who's estate was eventually inherited by Chiefess Pauahi Bishop. In the 1800s, Hawaiian residency practices, land use, fishpond and fisheries management, and access to resources were radically changed. The changes of that period also altered the natural landscape of Maunaloa.

Shortly after the turn of the century, the Board of Commissioners of Agriculture and Forestry and the Trustees of the Bishop Estate, began working on plans to protect and restore the upland forests of Maunaloa. As a result of their cooperation and efforts, the Maunaloa Forest Reserve was established in 1921 (Judd 1921). Three years later, portions of the *kūla* (flat lands) and *kāhakai* (coastal zone) were leased (Bishop Estate Lease No. 3348<sup>2</sup>) to the City and County of Honolulu, and initial planning for the Koko Head Park (in which the Koko Head Regional Park and Nature Preserve is situated) were undertaken. Subsequently the Estate decided to the land to the County in 1928 (Land Office Deed 3486). In regards to park development, a stipulation of the land deed specified:

(b) ...they shall use the conveyed premises for purposes of public parks and/or rights of way, and for no other purposes... (Bureau of Conveyances Lib. 986:257-265; December 29, 1928).

In the following years, further land acquisition occurred, and facility planning and development was under taken. In 1945, the Planning Division, of the Park Board of the City and County of Honolulu, prepared "A Proposed Plan for the Development of the Koko Head Park Area." The plan formalized County efforts at Koko Head, which shaped the park as we see it today, and provide the impetus for the present master plan project. The authors of the 1945 report provided readers with an orientation to the park's—then past and present—importance in the County system. The park vision at that time was made up of several interest areas, and were described as:

One of the most valuable assets in the park system of the City and County of Honolulu is the 1,285 acre park property at Koko Head. No serious attempt has previously been made for its development, although it has long been a favorite picnic and swimming spot for the public... Certain precepts have been used in working out the ideas which are embodied in the plan. First of all, every effort has been made to retain as much of the rugged natural scenery of the park as is possible. Secondly, because of the size and physical features of Koko Head Park, certain recreational facilities are especially adaptable to this area... (City and County of Honolulu 1945:1)

In 1945, a number of park facilities, projects, and activities were also proposed, among them were:

<sup>2</sup> An overview of Bishop Estate's tenure is provided in a later section of this study.

- Improvements to the undeveloped Kuli'ou'ou Beach Park;
- Dredging of a portion of Maunaloa Bay for enhanced swimming and anchorage activities;
- A polo and racing facility in Ka'alakei Valley;
- An eighteen-hole municipal golf course in Hahaione Valley;
- Dredging of Kuapa Pond for boating purposes, fishpond development, a bird life sanctuary and game preserve;
- Field sports facilities;
- Development of riding academies and eighteen miles of bridle paths;
- Dredging of Hanauma Bay and development of public facilities;
- Development of an amphitheater in Kahaouloa;
- Development of camp grounds in other areas;
- As a part of the post-war conversion of the Army facilities on Koko Crater, develop rides on the cable railroad, up the ridge of Koko Crater;
- Development of twenty-four miles of hiking trails;
- Recessed in one corner of the park could be suitable ranges for pistol, rifle, trap and skeet shooting;
- Preservation of points of interest such as the Blow Hole areas of geologic interest; and
- A considerable amount of planting and reforestation... (City and County of Honolulu 1945:2-8)

We see that over the last 50 years, several aspects of the park plan have been accomplished, while others were abandoned. Today, there are a number of natural areas that are of particular interest to the public within the park. The park has several prominent natural features—Koholepelepe (Koko Crater) and Kuamo'o-Kāne—Kawaihoa (Koko Head), Hanauma Bay (beach and marine life conservation district), and the rugged shoreline. While much of the park lands remain undeveloped, the natural resources, existing recreational facilities, and the Koko Crater Botanical Garden offer park users many opportunities to enjoy the park complex.

#### Place Names of the Maunaloa-Koko Head Vicinity

There are a number of place names that have been recorded within and adjacent to the park lands. The occurrence of place names demonstrates the broad relationship of the natural landscape to the culture, practices and beliefs of the Hawaiian people. In "A Gazetteer of the Territory of Hawaii," Coulter (1935) observed that Hawaiians had place names for all manner of feature, ranging from "outstanding cliffs" to what he described as "trivial land marks" (Coulter 1935:10). In 1902, W.D. Alexander, former Surveyor General of the Kingdom (and later Government) of Hawai'i, wrote an account of "Hawaiian Geographic Names" (1902). Under the heading "Meaning of Hawaiian Geographic Names" he observed:

It is very difficult, if not impossible, to translate most of these names, on account of their great antiquity and the changes of which many of them have evidently undergone. It often happens that a word may be translated in different ways by dividing it differently. Many names of places in these islands are common to other groups of islands in the South Pacific, and were probably brought here with the earliest colonists. They have been used for centuries without any thought of their original meaning... (Alexander 1902:395)

History tells us that named locations were significant in past times, and it has been observed that "Names would not have been given to [or remembered if they were] mere worthless pieces of topography" (Handy and Handy with Pukui, 1972:412). In ancient times, named localities served a variety of functions, including — (1) triangulation points such as *ko'a* (markers for fishing grounds); (2) residences; (3) areas of planting; (4) water sources; (5) trails and trail side resting places (*o'io'ina*), such as a rock shelter or tree shaded spot; (6) *heiau* or other features of ceremonial importance; (7) may have been the source of a particular natural resource or any number of other features; or (8) the names may have recorded a particular event that occurred in a given area (cf. Lyons 1875, Alexander 1902, and Coulier 1935). Thus, we see that the place names of the Koko Head Regional Park and Nature Preserve are of cultural and historical significance and remind us of the history of the land and its ancient residents.

Below, is a list of selected place names that have been recorded for sites and features in and/or neighboring the preserve lands. The source of the place name meaning is indicated, as well as whether or not the interpretation is literal or interpretive.

**Hawaiian Place Names in the Vicinity of the Koko Head Regional Park and Nature Preserve**

| Place name                           | Meaning  | Literal (Lit) Interpretive (Int) | Reference                          |
|--------------------------------------|--|----------------------------------|------------------------------------|
| Avāwa-malu                           | Shady-valley (now known as Wāwā-malu)  | Lit.                             | Pukui et al. 1974:15, 229          |
| Hāhona                               | Peering place  | Lit.                             | Pukui et al. 1974:39               |
| Hana-uma                             | Curved-bar or Hand-wrestling-boy   | Int.                             | Pukui et al. 1974:41               |
| "In'iti-lu-āka                       | Wide-leaved-fern (named for a goddess)   | Lit.                             | Pukui et al. 1974:55               |
| Ka-hau-ka                            | The-tall-ka-tree   | Lit.                             | Pukui et al. 1974:63               |
| Ka-hu-o-ka-pua'a                     | The-sprout-of-the-pig  | Lit.                             | Pukui et al. 1974:68               |
| Ka-hwi                               | The-bone   | Lit.                             | Pukui et al. 1974:71               |
| Ka-lama                              | The-corch, or the-Lama-tree  | Int.                             | Author                             |
| Ka-milo-ki                           | Ka-milo may be literally translated as "The-milo tree" - ki means the little land section, while milo means the larger land section.             | Int.                             | Author                             |
| Ka-milo-nui                          | The-roxy-red-rain (descriptive of a rain fall seen through sun lighting or that stir up the red soil of the mountain slope; named for a goddess) | Int.                             | Author (cf. Pukui et al. 1974:166) |
| Ka-ua-nono-ūa (also written Nono'ūa) | The-companion's-writer   | Lit.                             | Pukui et al. 1974:98               |
| Ka-wal-hoa                           | Vagina-labia minor (descriptive of the natural shape of the inland side of the crater; named for a goddess)                                      | Lit.                             | Pukui et al. 1974:115              |

**Hawaiian Place Names in the Vicinity of the Koko Head Regional Park and Nature Preserve**

| Place name                                       | Meaning                                  | Literal (Lit) Interpretive (Int) | Reference             |
|--|--|----------------------------------|-----------------------|
| Koko   | Blood (for the red earth of the area)    | Int.                             | Pukui et al. 1974:115 |
| Kuamo'o-Kāne (also written 'Ho'okua-o-Kāne'āpua) | Kāne-backbone                            | Lit.                             | Pukui et al. 1974:119 |
| Ka-shu-pua-o-Maunaha                             | The-shrine-of-the-baby-mullet-of-Maunaha | Lit.                             | Handy et al. 1972:483 |
| Maunaha  | Two-mountains                            | Lit.                             | Pukui et al. 1974:149 |
| Pāka   | Brushed aside                            | Lit.                             | Pukui et al. 1974:176 |
| Pāka-āka   | Ocherous earth-cliff                     | Int.                             | Author                |
| Pu'u-māi   | Genitalia-fall (see Kahe-lepelepe above) | Lit.                             | Author                |

**CULTURAL-HISTORICAL CONTEXT:  
KA HO'ONOHO ANA-KA MOKU PUNI O O'AHU  
(SETTLEMENT: THE ISLAND OF O'AHU)**

In speaking about land divisions, settlement, land use, and native customs in Maunaloa, it is helpful to first look at Maunaloa's place on the Island of O'ahu. The narratives below, provide readers with a general overview of some of the history of Hawaiian settlement and land tenure practices on O'ahu. The archaeological study (D. Borthwick et al., 1998) conducted in conjunction with the development of the EIS for the Koko Head Regional Park and Nature Preserve should be referenced for detailed documentation of settlement and cultural remains in the study area and larger *ahupua'a*.

The island of O'ahu is the third largest island in the Hawaiian Archipelago, and includes a land area of approximately 598 square miles. O'ahu was formed by two primary volcanic mountains, which are now known as the Waianai and Ko'olau mountain ranges. Initial Polynesian settlement voyages between the Hawaiian Island and the Marquesas and Society Islands (*Kahiki*) appear to have occurred in two major periods, AD 300 to 600 and AD 1100 to 1250 (Emory IN Tatar 1982:16-18); though it should be noted that it is likely that intermittent voyages continued throughout much of Hawaiian history.

Anthropologist, Sir Peter Te Rangi Hiroa Buck posited that "some push from behind" must have sent early Polynesian seafarers on their first journeys to unknown islands (Buck 1965:27). It is assumed that there must have been substantial pressures, either social or environmental, that encouraged men and women to set off on voyages to the unknown. Buck also observed:

From such evidence as we have, it seems that the early people had a simpler form of social organization in which the blood kinship of all members was stressed. They had an open religious meeting place in which spaced upright stones formed the main feature... [1965:27-28]

The second period of migrations is remembered in numerous legendary accounts, and like the earlier period, social and environmental conditions seem to have been a part of the reason for undertaking the long and dangerous voyages. The legends also record that there was great sense of adventure in many of the voyages. Buck commented the voyagers were:

...brave men who feared neither adverse elements nor hostile forces. If they weathered the storm and emerged to a fair haven, all was well. If they were engulfed in the waters of the great ocean, they went down as men... [1965:28]

Regarding settlement, and the subsequent arrival of new seafarers, Buck further posited that:

Where people of the early period were in occupation, conflict sooner or later occurred but in the end the *alii* chiefs of the later wave acquired dominance and rule... [1965:28]

*Kahiki* - is a general Hawaiian term which identifies the ancestral homeland of the Hawaiian gods and people.

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In their discussion on Hawaiian settlement—based on native traditions, and land use customs, Handy, Handy and Pukui (1972) reported that when the first settlers reached the Hawaiian islands, they found a flora that was much like that of their homeland, but the topography of the islands was notably different (Handy et al. 1972:12). The broad watered flatlands of Kaula'i, O'ahu, and Maui, and the expansive cultivable mountain slopes of Kona and Ka'u, on Hawai'i, permitted the development of a systematic and elaborate planting system that reached a higher level in Hawai'i than in other Polynesian islands (Handy et al. 1972:16).

Generally, ethnographic and archaeological information suggests that for generations following initial settlement of the Hawaiian Islands, the population clustered along the better watered windward shores, small bays, and watered valleys where fresh water was available. They sought out areas where agricultural production could become established, and fishing was good (ibid. 1972:287). Thus the tropical *ko'olau*, or windward shores of O'ahu, with sheltered bays and canoe landings, numerous springs and rivers, and natural pond features that could easily be modified for use as fishponds and taro ponds where the likely locations of early settlement. Also, certain areas along the *kona*, or leeward shores of O'ahu—the Awa-lau-o-Pu'u'oua (Pearl Harbor) section of Ewa, the Waikiki flatlands, and possibly Maunaloa with its natural inlet, which could be easily modified into a *loko kuapā* (walled fishpond)—where many of the similar natural resources existed, also appear to have been ideal locations for early settlements.

It is suggested that only after the best areas became populated, and perhaps crowded (ca. 1100 to 1400 AD), that the Hawaiians begin major efforts at settling more remote, and possibly less desirable areas (cf. Hommon 1976, Green 1980). Native traditions record that by the c. 14th century, Waikiki had become the ruling seat of O'ahu when the *alii'i nui* Mailikukahi assumed control of the government (Handy et al. 1972:480). Beckwith (1970) provides the following description of this period:

Land reforms and other means of strengthening the power of the ruling chief and stabilizing control over a growing population were carried out on Oahu...by Mailikukahi, successor on the Moikeha line of the last ruling chief of the elder Kumuhonua line, who was forced to retire because of his unpopularity. The names of Mailikukahi, his son Kalona-iki, and his granddaughter Kukamiloko are handed down in tradition as wise and just rulers. He [Mailikukahi] carried out strict laws, marked out land boundaries, and took the firstborn son of each [ali'i] family to be educated in his own household. He honored the priests, built heiaus, and discountenanced human sacrifice... (Beckwith 1970:383).

One of the ancient Hawaiian terms used to identify an island was "*moku puni*," which can be interpretively translated as land surrounded by water. With formalization of the O'ahu chiefdom and land management practices, the island of O'ahu was divided into six primary districts. Among these districts, called *moku-o-loko* (interior islands), we find the district of Kona, in which at least a portion of Maunaloa was situated in ancient times. A Hawaiian proverb describes the boundaries of the Kona District:

*Kona, mai ko pu'u o Kapukohi a ka pu'u o Kawailhoa.*  
*Kona, from Kapikahi to Kawailhoa.*  
*The extent of the Kona district on O'ahu is from Kapikahi*  
*(now Red Hill) to Kawailhoa (now Koko Head). (Pukui 1983:199 No. 1845)*

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### Hawaiian Land and Resource Management Practices

In order to further facilitate management of the *moku o Iolo*, or larger districts of O'ahu, they were further subdivided into smaller divisions of land. Perhaps the most important of these land divisions was the *ahupua'a*. These were subdivisions of land that were usually marked by an altar with an image or representation of a pig placed upon it (thus the name *ahue-pua'a* or pig-altar). *Ahupua'a* may be compared to pie-shaped wedges of land that in most cases, extended from the mountain peaks to the ocean fisheries fronting the land unit. Their boundaries were generally defined by cycles and patterns of natural resources occurring within the lands (cf. Lyons, 1875). Like the larger district, the *ahupua'a* were also divided into smaller, manageable parcels in which cultivated resources could be grown and natural resources harvested. As long as sufficient tribute was offered to the *ali'i*, *kapu* (restrictions) were observed, and responsibility for the care and use of the resources was exercised, the common people, who lived in a given *ahupua'a* had access to most of the resources from mountain slopes to the ocean.

Entire *ahupua'a*, or portions of the land were generally under the jurisdiction of appointed *konoiki* or lesser chief-landlords, who answered to an *ali'i-ai-ahupua'a* (chief who controlled the *ahupua'a* resources). The *ali'i-ai-ahupua'a* in turn answered to an *ali'i 'ai moku* (chief who claimed the abundance of the entire district). Thus, *ahupua'a* resources supported not only the *maka 'ainana* and *'ohana* who lived on the land, but also contributed to the support of the royal community of regional and/or island kingdoms. This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resources management planning. It is within this native system of land and resources management that we find the basis of traditions and early historic accounts for the *ahupua'a* of the study area.

## MAUNALUA MA KE KAHA KONA, O'AHU (MAUNALUA ON LEeward SHORE OF O'AHU)

Situated along the southern shore of O'ahu, the *ahupua'a* of Maunaloa may be divided into two distinct land divisions or traditional use regions. These regions are defined by the natural resources of the land.

### 1. Southwestern Maunaloa

The southwestern portion of Maunaloa is fronted by an extensive reef system and backed by the Ko'olau mountain range. Because of its geographic location, the land is not frequented by the tradewinds or the rains they bear. Though seasonally, Maunaloa does experience the rains born by the *kona*, or southerly storms and those rains that carry over from the Ko'olau region. While the *kona* storms can bear strong winds and high surf, southwestern Maunaloa is sheltered by the Kawaihoa-Kuamo'okāne bluff (Koko Head). Even though the land does not have significant above surface sources of fresh water, over tens of thousands of years, a watershed forest formed in the uplands. The rains that fell on the mountains settled into a water table that watered the *kūila* (flat lands) of Maunaloa.

A portion of the southwestern shore line of Maunaloa is also indented and submerged, and forms a shallow bay fed by fresh water springs and ocean tides. This indentation was developed by ancient Hawaiians into a rich fishpond system, known as *Ke-ahu-pua-o-Maunaloa* or *Loko Kuapā*. The fishpond, the reef flats and ocean fishery, and arable *kūila* made southwestern Maunaloa a comfortable land for early Hawaiian residents. It was in this region of Maunaloa, sheltered by Kawaihoa-Kuamo'okāne (Koko Head), and with easy access to the fishpond and inland agricultural fields that most of the ancient residents of Maunaloa lived year round.

### 2. Southeastern Maunaloa

On the southeastern (Makapu'u) side of Kawaihoa-Kuamo'okāne (Koko Head), the land of Maunaloa is generally arid. The land is subjected to *kona* (southerly) storms—strong winds that carry salt spray to the inland slopes, and quickly dry out the land. The *kona* storms can also generate high surfs along the coast, and access to the near shore fishery is often dangerous. There is a Hawaiian proverb that speaks of the nature of the ocean of Maunaloa:

*Kai pōki o Maunaloa*  
*The spraying sea of Maunaloa.*  
(Puhā: 1983:199 No. 1413)

Even in this arid environment, one finds evidence of residency (both long-term and temporary) and agricultural field systems in sheltered valleys and on the *kūila* (flat lands). Also, along the southeastern shore of Maunaloa, protected from the rough ocean, is Hanauma which has been a sheltered haven for canoes for generations. In both ancient and modern times, Hanauma is praised as one of the famous natural features of O'ahu. In this region of Maunaloa, there are several traditions and place names associated with various topographic features and Hawaiian deity that provide us with insight into the significance of the landscape of the lands which are now a part of the Koko Head Regional Park and Nature Preserve.

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below Kamiloiki and Kealahipapa [the narrow pass that ascends to the present-day Makapu'u overlook] was known as Ke-Kula-o-Kamauwai. This was the famous potato-planting place from which came the potatoes traded to ships that anchored off Hahaione in whaling days. The village at this place, traces of which may still be seen, was called Wawamalu (Handy 1940:155).

**Maunaloa: An Overview of Residency and Land Use**  
Handy, Handy and Pukui (1972) provide readers with several important narratives of Maunaloa. The documentation was gleaned from earlier historic visitors and work done with native informants and residents as early as the 1930s. Handy et al., wrote:

Maunaloa, the land area at the southeastern most tip of Oahu, marked by the two great barren mountain masses, Koko Head jutting seaward and Koko Crater... Maunaloa (Two-Mountains) was notable for its great fishpond (*loko luapa*) covering 523 acres. Actually this great pond, named Ke-ahu-pua-o-Maunaloa (The-shrine-of-the-baby-mullet-of-Maunaloa) was a broad shallow bay, walled off at its seaward side, with an inlet and a gate which was opened to let fish in as the tide came in and was closed when the tide began to run out. Chamberlain (1957, p. 29) crossed the causeway in 1828. There was evidently a sizable village in the vicinity because there was a school in which he addressed thirty people, although most of the men were away cutting sandalwood. Before that, and since the time of the chiefess Mahoe for whom the *Menehune* built the *kuapa*, Maunaloa valley was said to have been amply inhabited, and in the hinterland of Maunaloa and beyond [to the southeast] there are many evidences of former sweet potato culture.

...[His headland (Koko Head)...whose real name is Mo'o-kua-o-Kane'apua (Backbone-of-Kane'apua) [most often written as "Kuamo'o Kane"], forms the eastern rim of Maunaloa Bay. Kane'apua was a younger brother of Kane. It is said (*Ka Nuipepe Ku'olo'a*, March 4, 1921) that Kane and Kamaloa came here and opened a spring, which later dried up. The area is now bare and arid... (Handy et al. 1972:483-484).

In 1940, Handy reported on sweet potato cultivation across Maunaloa:

Sweet potatoes were cultivated on Oahu on the coastal plain and in sandy soil... The *kula* lands below the cliffs of Waimanalo also supported sweet potato plantations... On the south side of the ridge at this end of the island, Maunaloa and Hahaione districts were famous for their sweet potatoes. In this section there are various enclosures and walls which were thrown up around the old plantations before Hawaiians abandoned the land and it was utilized for ranching. The following observations were made by McAllister...

From the Lighthouse road to the small old crater in Kaiama [sic - Kalama] Valley are to be found traces of old Hawaiian sweet potato patches. Located on the crest of the old (red) lava flow are small piles of rocks, a foot or more high and a few feet apart, with comparatively clear spaces between them. It is said that sweet potatoes were planted between these rock piles in the rich red soil that covers this region. The distance from the road to the crater is about 800 feet, and the top of the flow, which was used for cultivation is between 250 and 350 feet wide... Throughout this 5.5 acres tract are a number of irregular walls from a few feet to 50 or 100 feet in length. There is nothing in the location of these walls to indicate a 'pattern'... For many years this site was used as a cattle range (McAllister 1933:64 IN Handy 1940:155).

Handy continued his own description of the area from field work and interviews, noting that:

According to the last surviving *Kamaaina* of Maunaloa, sweet potatoes were grown in the small valleys, such as Kamilonui, as well as on the coastal plain. The plain

## MO'OLELO 'ĀINA (TRADITIONS OF THE LAND)

This section of the study includes several narratives written by early Hawaiian historians. Writing in Hawaiian language newspapers in the middle nineteenth century, Hawaiian historians John Papa I'i and Samuel Mānaitakani Kamakau documented accounts about sites and events which occurred within Maunaloa. By the turn of the century, native writers and other interested historians were also collecting and writing traditional accounts. Through their narratives, readers today, are able to view and experience the landscape in a personal and at times, animated manner. To the early writers, each part of the natural landscape and environment represented living nature-forms and documented the history of their elders. It will be seen that several of the narratives provide readers with specific documentation of cultural-historical sites in and neighboring the park lands.

### Native Accounts Recorded in the Nineteenth and Early Twentieth Centuries

Kamakau (1991) recorded that the gods Kāne and Kanaloa were perhaps the first to come to Hawai'i from Kahiki (the ancestral homelands). When they arrived, they landed first at Kanaloa (now called Kāho'olawe), and from there, they went to Kahikinui, Maui. At each place they stopped, they did wondrous things to enhance the land and benefit the people. At many places, they caused water to flow, where there had been none previously. On O'ahu one of the places at which Kāne and Kanaloa made water to flow, was at Kawailoa-Kuamo'okāne, Maunaloa (Kamakau 1991:112).

During one of the periods of great voyages between Hawai'i and Kahiki, the chief La'a-mai-Kahiki came to Hawai'i, and settled on O'ahu. The fame of O'ahu had spread throughout Kahiki, as "being the most fertile" of the islands, and of what "industrious farmers the people were and how they raised fish in ponds..." (Kamakau 1991:108). When La'a-mai-Kahiki (La'a) and his followers came to Hawai'i, they approached O'ahu from the south, passing Moloka'i. La'a also brought with him on this journey, a *pahu* (hollowed log drum with a shark skin head—not previously heard in the Hawaiian Islands), and in passing Motokā'i the drum was played and chants sung. Kamakau records the tradition that:

A man named Ha'ikamalama who lived at Hanuama on O'ahu heard this sounding at sea and was puzzled. What was this strange thing? There was a voice within [accompanying] the sound of the *pahu*—a voice chanting within the drumming... Ha'ikamalama thrust out his chest and tapped quickly and lightly on it — "E Ka'i-e — Ka'i-ku-po-lā. E Kupa-e, Kupa-e; e La'a, e la'oiheikei'ana i ka moana." Ha'ikamalama learned all of the *mela*... The sound was coming from the windward, so Ha'ikamalama ran to Makapu'u to see who was sailing by. Then he went *mauka*... (Kamakau 1991:109)

Kamakau continued the account, documenting the landing of La'a at Kāne'ohie, and how Ha'ikamalama learned to make a *pahu* for himself.

In his narratives about deified sharks, Kamakau (1968) also mentioned Hanuama when writing about the relationship shared between humans and the *manō* (sharks). He noted that there were families who relied upon the assistance of their shark deities when they traveled the ocean. Those people who traveled the ocean, and were without shark-formed guardians,

and whose canoes were overturned or destroyed, would die at sea — "If their canoe broke to pieces, their dead bodies would be cast up on Lanai or at Hanuama" (Kamakau 1968:76).

In another account about gods and deity, Kamakau referenced the *loko kuapā* (walled fishpond) of Maunaloa, noting that it and other ponds were home to "*Akua mo'o*" (lizard-formed water gods). In ponds like that at Maunaloa, these gods were believed to ensure the "health and welfare of the people, and to bring them fish" (Kamakau 1968:82). Kamakau noted that these *mo'o* gods were not like the house or rock lizards, but had "extremely long and terrifying bodies, and they were often seen in the ancient days at such places as Maunaloa..." (Kamakau 1968:83). At Maunaloa, Laukupu was the goddess, and when people cared for, and remembered her, "The ponds would fill with fish, and the fish would be fat" (Kamakau 1968:84). Similar accounts (cited later in this study) pertaining to beneficial deity causing ponds to be well stocked, were told to McAllister during his archaeological survey in 1930 (McAllister 1933).

At a later time in Hawaiian history, Kamakau recorded that in ca. 1737, Alapa'i, king of Hawai'i attempted to take O'ahu in war, from the king, Peleioholani. During the expedition, Alapa'i and his forces attempted landings at several locations, among them were the landings of Koko and Hanuama in the *ohupua'a* of Maunaloa. These attempts were thwarted, and eventually, the two kings met, acknowledged their genealogical connections, and agreed to end their disagreements (Kamakau 1961:71).

Referencing the Maunaloa fishpond, Kamakau noted that in the early 1800s, at the time that Kamehameha I resided on O'ahu, Kamehameha participated in the restoration of the Maunaloa fishpond. Kamehameha:

...encouraged the chiefs and commoners to raise food and he went fishing and would work himself at carrying rock or timber...He worked at the fishponds at Ka-wai-nui, Ka-ele-pulu, Uko'a, Mauna-lua, and all about O'ahu... (Kamakau 1961:192)

During that time, the chief Ku'ihelani (one of Kamehameha's stewards) had been given control over the lands of Maunaloa (Kamakau 1961:389).

John Papa I'i was raised as an attendant and companion of Liholiho (Kamehameha II), and served the royal family until his death in 1870. In his narratives, I'i (1959) are found accounts of the trails traveled around O'ahu in the early 1800s. Referencing travel through Maunaloa, I'i wrote that there were two *ala loa*, or main trails which passed inland of Leahi (now called Diamond Head), and then met at the shore of Wai'alae. One trail was situated between the craters of Kaimuki and Leahi, and the other trail was further *mauka*, above Kaimuki. I'i's description tells readers that the *mauka* trail passed the "upper side of, the taro patches and pools of Wai'alae," and that it then joined "the other trails at the sand and go along Keshia and on to Maunaloa, to the sea of Koko, and to Makapu'u" (I'i 1959:94).

While I'i's description doesn't tell us whether or not the *ala loa* crossed between Kawaihoa-Kuamo'okāne and Koholepelepe (Koko Head and Koko Crater), other narratives written by him (below), do place trails along the summit of "Kuamo'okāne," and by reference to the importance of Hanuama, tell us that early trails passed through various areas within the park. Historic maps of the later nineteenth century (Figure 2), show that the *Alanui Aupuni* (Government Road) through Maunaloa to Makapu'u and Waimānalo (via Ke ala kīpapa — the paved trail, now a part of the road to, and overlook at Makapu'u) went inland of

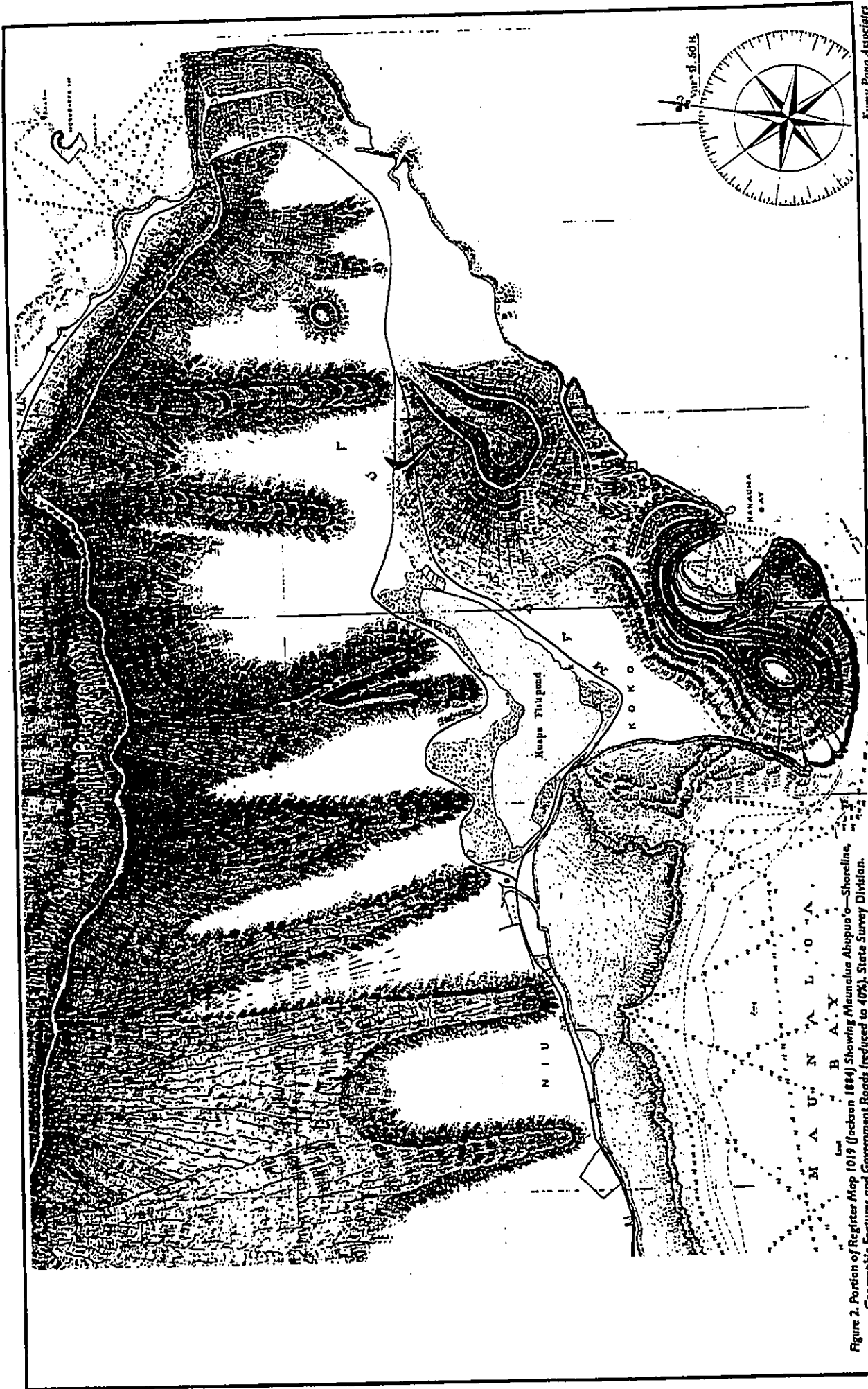


Figure 2. Portion of Register Map 1019 (Jacobson 1884) Showing Maunaloa Ahupua'a—Shoreline, Geographic Features and Government Roads (reduced to 40%). State Survey Division.

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 OaMaui-25a (101998)

Koholepelepe, thus avoiding the cliffs and rocky coastal region of the *ahupua'a*. A later map prepared by the Territorial Survey Division (Dunn 1906), depicts a road going from Koko inland on the slope of Kawaihoa-Kuamo'okāne to Hanauama (Figure 3).

Additional references to lands in and neighboring the park, are found in I'i's writings about his childhood travels with the royal family, and the return of Kamehameha I and the royal household to Hawai'i from O'ahu (in ca. 1811). The narratives for the Koko-Kawaihoa-Hanauama region, are significant, in that they reference several place names, describe travel in the area, and they tell us that navigators of the time found the promontories important observation points for determining the best time of sailing. I'i wrote:

After leaving Honolulu, they landed at Hanauama Bay, which was a good place to wait until the wind was better for sailing to Molokai. The wind observers climbed up to Kuamookane and to Ihihilitaukae, which is located at the front o Kuamookane, on the west side of the bay. Hanauama faces the southeast and is well sheltered and rather shallow on the upper, sandy side. As it is surrounded by cliffs except for the entrance, it is an inland bay.

After two or three days of waiting for the wind to lessen, it was seized with a longing for his mother. He was standing with Mamua at the edge of the cliff looking toward Leahi and Kaimuki, which lay in full view, when they longing came to him... (Ii 1959:104)

I'i also described Maunaloa Bay as a safe harbor for foreign ships that were accompanying the royal family at the time. He noted:

As these ships had no boats or canoes, the passengers had to swim to shore and back when the ship was at anchor... (Ii 1959:108)

"He Mo'olelo Ke'ao no Hi'iaka-i-ka-poli-o-Pele"  
In the early twentieth century, Hawaiian writers continued to record traditional narratives in Hawaiian newspapers. One source for narratives of the area between Maunaloa and Makapu'u, is found in the epic account of the journey of Hi'iaka-i-ka-poli-o-Pele (Hi'iaka) the youngest sister of the goddess Pele to Kāua'i. Excerpts of one version of the legend "*He Mo'olelo Ke'ao no Hi'iaka-i-ka-poli-o-Pele*" (A Legendary Tale of Hi'iaka who is Held in the Bosom of Pele) was published in the Hawaiian newspaper, *Ka Hōkū o Hawai'i* between September 18, 1924 to July 17, 1928 (translated by Maly).

While this version of the story follows the basic format of Nathaniel Emerson's 1915 popularized rendition of the story of "*Pele and Hi'iaka*," it contains an added wealth of alternate island-wide place name accounts, narratives about the famous deity which gave their names to sites between Maunaloa and Makapu'u. The following English translations are a synopsis of the Hawaiian texts, with emphasis upon the main events of the narratives.

Entering the story, we find that the goddess Hi'iaka is on a journey from the island of Hawai'i to Kāua'i, where she was to fetch the chief Lohi'au-ipo (Lohi'au) from Hā'eua and return with him to Pele's domain at Kilauea, Hawai'i. Having stopped on Maui, Hi'iaka and her companions made preparations to travel to O'ahu.

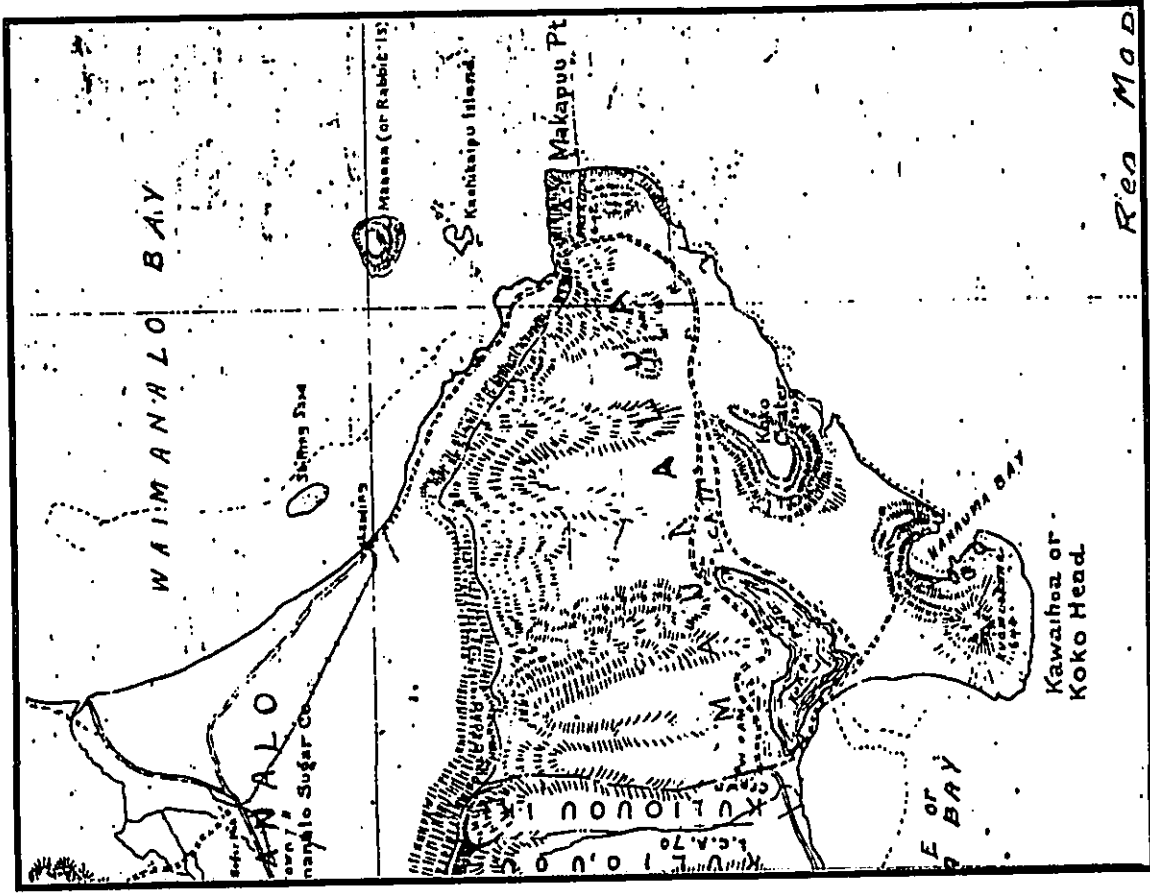


Figure 3. Portion of Register Map 2374 (Dunn 1906) Showing Government Roads of Maunaloa, including a Road to Hanauama (State Survey Division).

...On the shores of Kā'anapali, Hi'iaka, Waiine'ōma'o, and Pū'ūpale'e, met with two men who were preparing their canoe for a journey to O'ahu. The canoe men told Hi'iaka that their journey would take them to the Ko'olau (windward) side of O'ahu, where they would probably land on the shore of Waimānalo, below Makapu'u...

Boarding the canoe, they passed the point of Kalā'au, Molokai (the southwestern point of Molokai), they reached the area between Molokai and O'ahu. It was here that Hi'iaka saw the large fleet of canoes at rest outside of Makapu'u. The task of the fishermen of this canoe fleet, was fishing for the famous fish of Makapu'u, "ka uhu ka'i o Makapu'u" (the parrot fish cliff of Makapu'u)...

...Drawing closer to O'ahu, Hi'iaka turned and saw the expanse of 'Ihi'ihiilaukaea with the water of Kanono'ula, the plain of Ka'ea and the place called Kuamo'o-a-Kāne. Hi'iaka then chanted calling to the deity of those names:

A Kuamo'o-a-Kāne  
A 'Ihi'ihiilaukaea  
A ka wai a Kanono'ula  
Ke kula o Ka'ea nei la  
Hōmai ana ho'i ua 'ai—ea

Kuamo'o-a-Kāne  
'Ihi'ihiilaukaea  
The water of Kanono'ula  
The plain of Ka'ea  
Bring forth something to eat!

They then heard the rumbling of voices come from that land reaching to them:

E Hi'iaka-i-ka-poli-o-Pele, a'oke a mākou 'ai, 'oia waiho waiho no o ke kula 'oia ma'ane no a 'Ihi'ihi-ia-i-hi'i, a o ka lana no a ka wai, a'ōhe 'ai la. (O Hi'iaka-in-the-bosom-of-Pele, we have no food, all that is left on the plain are the strands of the small leafed 'Ihi'ihi, and the water is only that which is left in puddles, there is no food.)

Hi'iaka responded to the women:

Ua oia a'e la no mākou i ka poe ana mai o ka leo o ke aloha. Aloha no 'oukou! (We have found relief in the answer of your voice of aloha.)

As they continued their journey, they drew near to Makapu'u. Hi'iaka then saw the woman which dwelt along that shoreward point.... (November 17, 1925)

...While drawing nearer to O'ahu, a strong wind began to blow, and also the current from the Kona (leeward) side of O'ahu began pulling at the canoe of these two men. Though they tried with all their strength to paddle, they couldn't, and the current took them around the cliffs of Makapu'u. So great was the fear of these men for the many-eyed woman [Makapu'u], that when they saw a small, calm landing on the Kona side of O'ahu, they paddled quickly to it and landed their canoe. The moment the crunching sound of the canoe landing on the shore was heard, the two men leapt from the canoe with their possessions and fled from the place of that fearful woman which they had seen. They fled across the plain of Ka'ea and the canoe remains at the place where they left it.... (November 24, 1925).

Having reached Kāua'i, Hi'iaka found Lohi'au and began her journey back to Hawaii. During this journey, they traveled through the Kona District (leeward side) of O'ahu. The narratives, which provide readers with documentation of an ancient trail to the summit residence of the goddesses 'Ihi'ihiilaukaea and Kanono'ula, are cited below:

...Departing from Kauli'ilehua-o-Pāloa, Hi'iaka mā traveled to Kaimuki. Hi'iaka turned and looked towards Hawaii and the burning fires of her elder sister descending to the shores of Puna at Kūki'i... Hi'iaka turned and looked towards Wai'alea where she saw the canoe of Kaulaakalā sailing by. They then left Kaimuki and passed Wai'alea and Wailupe and arrived at Maunaloa. Upon reaching Niu at Kū'i-ou'ou, they looked around and saw some women fishing for pūpa'i (crabs) and gathering 'ōhune (seaweed). Going to the shore, Hi'iaka asked the two ladies if she might have a small amount of what they had collected in order that her companions might have something to eat.

The women sarcastically answered, "What a question!! You have not put your nose down into the water and grasped for the things to be caught. Perhaps if you wouldn't haughtily stand there asking shamelessly, you would have some food to eat!" Because of the words which these women spoke to Hi'iaka, she chanted:

He makani holo 'ūhā  
Ko Kā'e'elezi o Paukū  
Pau waiho ho'i ke alo  
i ke noi ana  
O ka la ho'i e

A chilling wind brushes across the thighs  
It is the Kā'e'elezi of Paukū  
The breath [patience] is expended  
in asking  
The day is here

When she finished her chant, they then departed, and shortly thereafter, those women were killed. Hi'iaka mā then arrived at Koko where they ascended to the heights of Kuamo'o-a-Kāne. It was there that 'Ihi'ihiilaukaea and Kanono'ula dwelt. Arriving at their house, the two women affectionately greeted Hi'iaka mā, welcoming them into their home. Thus, the residents of this community (ka'iāiāi) welcomed the travelers from the island of Hawaii. When the greetings had been exchanged, Hi'iaka mā stood to leave, and Hi'iaka looked to the ocean where she saw the canoe of Kaulana-a-ka-iā entering the landing of this place. They then traveled down to the shore and departed from that place expressing their aloha to the natives of those shores, and then sailed to Molokai.... (May 3, 1927).

#### Kohe-lepelepe

Another account of Pele and her sisters, provides readers with a native tradition of how the crater, Kohe-lepelepe (vagina labia minor), was named. One of Pele's sister, Kapo-kohi-lele (Kapo-with-the-traveling-vagina), also called Kapo-ma'i-lele Kapo-with-the-flying genital), was able to separate her ma'i (sexual organ) from her body. At one point in antiquity, Kapo did this to protect Pele from the ravages of Kama-pua'a (the pig-man deity). Beckwith (1971) recorded:

When Kama-pua'a attacked Pele near Kalapana, Kapo sent this *kohe* as a lure and he left Pele and followed the *kohe lele* as far as Koko Head [i.e., Koko Crater] on Oahu, where it rested upon the hill, leaving an impression to this day on the Makapu'u side. Then she withdrew it and hid it in Kalihi. When the Hawaiians dream of a woman without a vagina it is Kapo.... (Beckwith 1971:186-187)

At Koko Crater, another name, Pu'u ma'i (Genital hill) near the summit of Kohe-lepelepe also commemorates this event.

**Hano-uma and Hāloa Vicinity**  
Citing Hawaiian accounts translated and/or collected by Mary Kawena Pukui, Sterling and Summers (1978) provide readers with a few other historical accounts for sites or features in the study area. The following accounts are excerpted from their collection:

**Ōlu'u** -- On the Makapuu side of Hāloa is a healing stone in the ocean. One has to swim over it. The sea is also called Ōlu'u. Co-author Pukui tells: "I went with an old lady out past the Blow Hole, right where the sandy stretch of beach begins. Out there is a stone where Hawaiians used to go. The name of the stone was 'Ōlu'u' which means 'crouch'. The old lady headed out there and sat beside 'Ōlu'u, and had her ceremonial bath before we went on. She said that's where her people always went, with prayer. 'Ōlu'u was the healing stone... So named because people crouched beside it while taking the *lepu kani*. Healing stones were found near the shoreline of each island. Each stone was given a name. (Sterling and Summers 1978:265)

Hanauma Bay was a favorite royal fishing resort...

Queen Kaahumanu came by canoe and went to Hanauma, where Pahi (father of Bernice Pauahi Bishop) was the *konohiki* over the realms of the (legendary) chiefesses, Ihihilaauka and Kaunonoula. These were the *hula* dancers, Mrs. Alapai, Mr. Hewahewa, and Mr. Ahukai who gathered for the love of and to entertain royalty. The men place the games of Umu. One man gripped the hand of the other and pushed to get it down. Women joined in and a whole month was spent there. That was why the place was called Hana-uma, a noted place. (Sterling and Summers 1978:267)

The authors also provide an account of a stone named Nā-maka-o-Kaha'i (The-eyes-of-Kaha'i; an elder ocean-formed sister of Pele):

This stone is located at Hanauma Bay. Mrs. Pukui thinks on the north side a way up the slope. It was left by Namaka o kaha'i when she came to fight Pele.

It is a dark stone which glows in the night provided it has *awa*. The dregs of the *awa* were left at the stone. (Sterling and Summers 1978:267)

**Ke-wai-hoa (Koko Head Crater and Vicinity)**

...The chiefesses Ihihilaauka and Kaunonoula were beautiful women and kind to the people of Makapuu... These chiefesses like going to the beach with the people to fish, a customary occupation of the natives of this land...

...Hiika turned aside to address in words of consolation and compliment the forlorn mythical creatures whom she recognized as Kindred. They were creations of Pele, Ihihi-lau-akea, manifest to us today as a lifeless cinder-cone... and Nono-ula, as a clear spring of water welling out of the mountain...

**Mookua-o-Kaneapua**

...that hill yonder, forming the point is Kaneapua's hill. There is an 'awa container there but it is all broken up. That was where Kane and Kanaloa drank 'awa.

There was a pool near the point that was very strange. One day it vanished. Kane and Kanaloa sent their younger brother, Kaneapua, to bring some water down from the top of the hill. At the top of [Kohē] Lepelepe was a spring, Waikaaia. As the boy

went after it, he was told that he must not urinate on the way. He carried the container in his hand and he was warned lest the urine enter the water. The boy was seized with a great desire to urinate so he set aside the warning and relieved himself. Strangely, the container became filled when he lifted it up and the spring dried up.

The brothers were waiting and when they saw that he had not obeyed, Kane told Kanaloa, "Thrust your cane down so that we may have water for our 'awa." Kanaloa thrust his cane and water gushed out. They had what they wanted and the water remained there. It is gone now.

It is said that menstruating women made it dry up and vanish. They (Kane and Kanaloa) made ready to go back to their home because their brother did not heed their warning. They went off and when their brother who was on his way back saw them he called and called but no attention was paid to him. He knew that he was in the wrong for not obeying and so he turned into the hill called Mookua-o-Kaneapua (The ridge of Kane 'apua). The hill begins where the telegraph poles of Koko Head stand and runs in a straight line till it dips into the sea. This is the hill mentioned. (Sterling and Summers 1978:268)

**Maunaloa and Vicinity in Journals and Logs of**

**Nineteenth and Early Twentieth Century Visitors and Residents**

Perhaps the earliest description of the Maunaloa area, was recorded by Captains Portlock and Dixon, commanding the *King George* and *Queen Charlotte*. On June 2, 1786, the two and members of their crew, rowed to the shore of Maunaloa, in search of fresh water. They were directed by natives to a bubbling spring at the mouth of Kūi'ou'ou. Captain Portlock gave the name King George to what is now called Maunaloa Bay (Scott 1968:691). Portlock also named Koko Head "Point Dick," in honor of one of his patrons, Sir John Dick (Scott 1968:696). Subsequently, the Koko landing of Maunaloa was named for Captain Portlock, who is believed to be the first Caucasian to have named sites along the Maunaloa coast line (Scott 1968:695).

In 1822, Gilbert F. Mathison, who visited Hawai'i, walked from Waimānalo to Maunaloa, on a tour around O'ahu (Mathison 1825 IN McAllister 1933). By his description, it would appear that the main trail around southeastern O'ahu actually passed behind Kohetelepepe, as indicated on *Figures 2 and 3*. After crossing the ridge from Waimānalo, Mathison wrote:

We descended through a valley thickly wooded [Kamiloiki-Kalama], which sloped gradually downwards to the plain, and after infinite fatigue, found ourselves once more on the sea-shore, at the southeastern side of the island. We reposed for two hours in an untenanted hut... then pursued our journey. We soon passed a village mostly inhabited by fishermen, and containing perhaps one hundred huts. Here was a large salt-water lake, similar to those I have seen on the coast of Birzil. It was divided from the sea by a large embankment of sand, which on extraordinary occasions is probably overflowed by the tide.... [Mathison IN McAllister 1933:69]

## MAUNALUA-LAND TENURE

In ancient Hawai'i a system of land tenure and management evolved that mirrored the natural landscape of the islands. This management system was so integral to the well-being of the native population, that nature itself was personified and deified. The islands—every facet of the ecosystem—were believed to be alive and the elder relatives of the Hawaiian people.

In pre-western contact Hawai'i, all land and natural resources were held in trust by the high chiefs (*ali'i 'ai ahupua'a* or *ali'i 'ai moku*). W.D. Alexander, Surveyor General of the Hawaiian Kingdom wrote:

...It is admitted that under the ancient feudal system, the allodium of all land belonged to the King, not, however, as an individual, but "as the head of the nation or in his corporate right..." (Alexander; Survey Letter Book No. 9, September 30, 1891:107. Hawaii State Archives)

The use of lands and resources were given to the *ho'a 'aina* (native tenants), at the prerogative of the *ali'i* and their representatives or land agents (*konohiki*), who were generally lesser chiefs as well. In 1848, the Hawaiian system of land tenure was radically altered by the *Māhele 'Āina* (Division of Land). The *Māhele* defined the land interests of Kamehameha III (the King), the high-ranking chiefs, and the *konohiki*. As a result of the *Māhele*, all land in the Kingdom of Hawai'i came to be placed in one of three categories: (1) Crown Lands (for the occupant of the throne); (2) Government Lands; and (3) *Konohiki* Lands (Chinen 1958:vi and Chinen 1961:13).

Laws in the period of the *Māhele* record that ownership rights to all lands in the kingdom were "subject to the rights of the native tenants;" those individuals who lived on the land and worked it for their subsistence and the welfare of the chiefs (*Kanawai Hoopai Karaima... [Penal Code] 1850:22*). The 1850 resolutions in "*Kanawai Hoopai Karaima no ka Hawaii Pae Aina*," authorized the newly formed Land Commission to award fee-simple title to all native tenants who occupied and improved any portion of Crown, Government, or *Konohiki* lands. These awards were to be free of commutation except for house lots located in the districts of Honolulu, Lāhainā, and Hilo (cf. Penal Code, 1850:123-124; and Chinen 1958:29).

In order to receive their awards from the Land Commission, the *ho'a 'aina* were required to prove that they cultivated the land for a living. They were not permitted to acquire "wastelands" (e.g. fishponds) or lands which they cultivated "with the seeming intention of enlarging their lots." Once a claim was confirmed, a survey was required before the Land Commission was authorized to issue any award (ibid.). The lands awarded to the *ho'a 'aina* became known as "*Kuleana* Lands." All of the claims and awards were numbered (Land Commission Awards or LCA), and the LCA numbers remain in use today to identify the original owners of lands in Hawai'i.

By the time of its closure on March 31, 1855, the Land Commission issued only 8,421 *kuleana* claims, with a land area of only 28,658 acres to the native tenants (Kame'eleihewa 1992:295). It appears that no native tenants were awarded *kuleana*-house lots or agricultural

plots—in the *ahupua'a* of Maunaloa (Board of Commissioners 1929). The entire land<sup>4</sup> was awarded to Chiefess Victoria Kāmāmalu, a granddaughter of Kamehameha I, in LCA 7713:10 (Board of Commissioners 1929).

Looking further into the history of land tenure at Maunaloa, S.M. Kamakau (1961) tells readers that in the late 1790s and early 1800s, the land of Maunaloa was entrusted to Kūihelani (a chiefly steward who served Kamehameha I). For a time, was also the governor of O'ahu. Kūihelani fell out of favor, and his land was redistributed (Kamakau 1961:173, 389). The chief Ke'eumoku took up residency at Maunaloa, where in 1804, he died at a place in Koko called Kapopo (Kamakau 1968:189). Ke'eumoku, daughter of Ke'eumoku and Nanihāna retained Maunaloa, and she subsequently bequeathed the land to Chiefess Kina'u, a daughter of Kamehameha I, and mother of Victoria Kāmāmalu. As noted above, Kāmāmalu retained the Maunaloa during the *māhele 'āina* (land division) (cf. Barrère 1994). When Kāmāmalu died in 1866, her father Kekūāiō'a inherited her estate, and upon his death in 1868, Lot Kamehameha V (son of Kekūāiō'a), inherited the land. When Lot Kamehameha died intestate, his estate was settled in court and Chiefess Ke'elikōlani (half sister of Kāmāmalu and Kamehameha V) inherited the estate lands. Ke'elikōlani died in 1883, and Chiefess Bernice Pauahi Bishop inherited her lands, including Maunaloa. Following the death of Pauahi Bishop, the *ahupua'a* of Maunaloa, District of Kona, O'ahu, was decided to the Bishop Estate (Kamehameha Schools/Bishop Estate) on February 25, 1890 (cf. Kame'eleihewa 1992:244-245; and Bishop Estate Trustees, 1957:40).

## Overview of Nineteenth Century

### Government Land Records

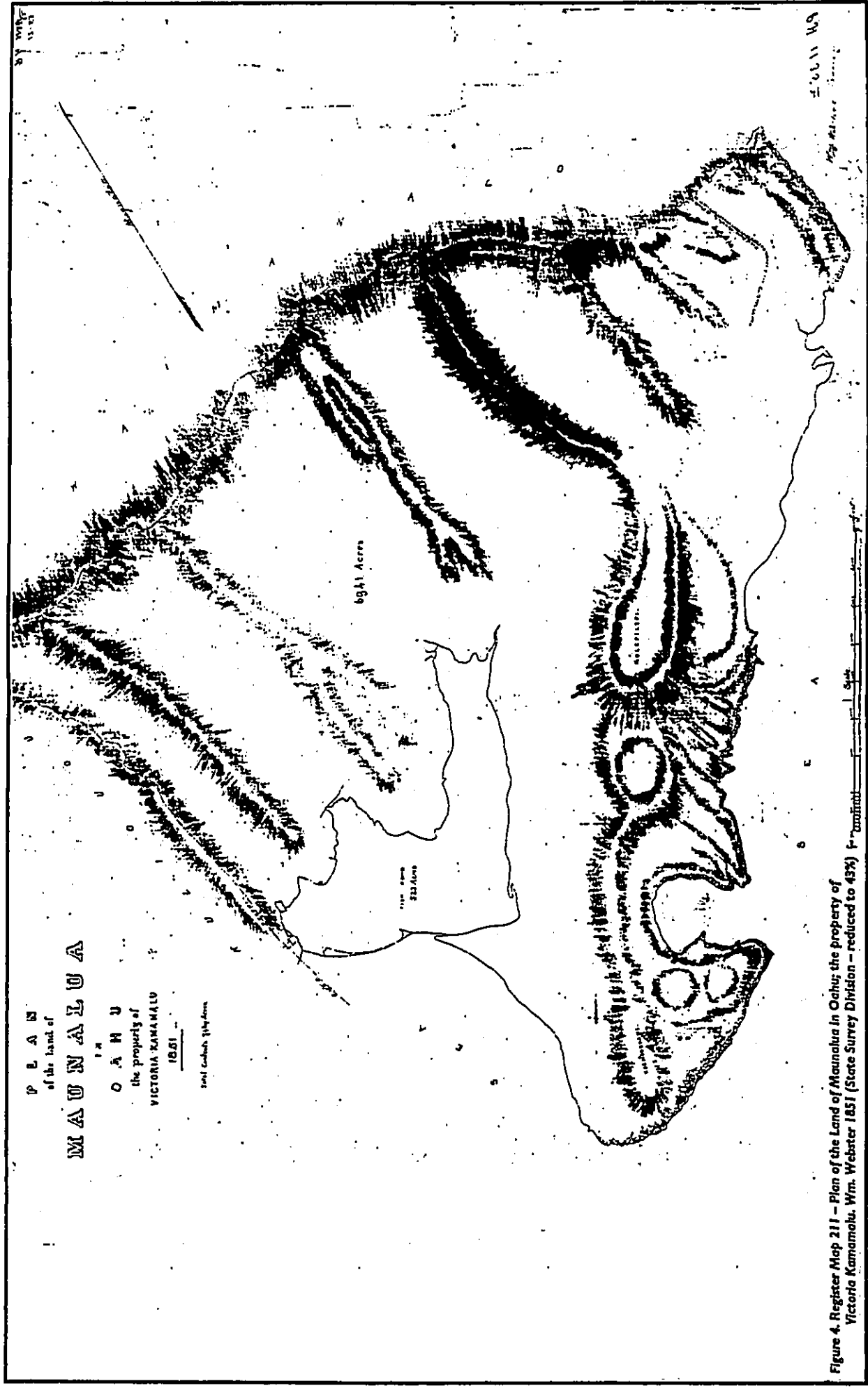
Following the *Māhele*, records of land use in Maunaloa began to be recorded in a more formal system, though available documentation is still fragmented<sup>5</sup>. Most of the Maunaloa records housed in State collections reference the Maunaloa Valley and *kūla* lands, and fishpond, with almost no references to the Kawaihoa-Hanauma Headlands until the early twentieth century. The land was generally used for ranching, and the large pond of Ke-ahupua-o-Maunaloa (now the Hawai'i Kai Marina) was leased for fish cultivation. The documentation below, is an overview of selected references to Maunaloa:

In 1851, William Webster surveyed the land of Maunaloa for Chiefess Victoria Kāmāmalu. Register Map 211 (Figure 4), records the alignment of the Kuāpa fishpond, a few prominent place names, and the Kealākipapa Trail passing over Makapu'u into Waimānalo. The map identified a land area of 6,491 acres and fishpond area of 523 acres, making a total area of 7,464 acres.

On August 12<sup>th</sup>, 1852, in compliance with the law (1850) requiring *Konohiki* to declare the *i'a ho'omalu* (restricted fish) of their lands, Kekūāiō'a, on behalf of V. Kāmāmalu noted that *ʻanae* (mullet) was the restricted fish of Maunaloa (Interior Department Letters; State Archives).

<sup>4</sup> Interior Department Document 382 (nd.), a list of Lands of V. Kāmāmalu and record of her payment for those lands, identified Maunaloa as "*ʻili Koolaupeke*" (State Archives).  
<sup>5</sup> Based on Malby's past review of Bishop Estate Lease records (in association with other lands), it is likely that a fuller understanding of land use, residency, and site development can be found in Bishop Estate's private files. Such records have been proven in the past to be a great help in understanding the history of the land.





**P L A N**  
 of the Land of  
**M A U N A L O A**  
 O A H U  
 the property of  
 VICTORIA KAMAHALE  
 1851  
 First Edition, 1949

Figure 4. Register Map 211 - Plan of the Land of Maunaloa in Oahu; the property of  
 Victoria Kamahele. Wm. Webster 1851 (State Survey Division - reduced to 43%)

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## ARCHAEOLOGY OF OAHU (McALLISTER 1933)<sup>6</sup>

In 1930, J. Gilbert McAllister conducted the first detailed survey to document information about archaeological sites of O'ahu. McAllister (1933) had the benefit of working with knowledgeable Hawaiian informants while he recorded various features around O'ahu. Thus, he also collected stories about a number of those sites, including some of those in Maunaloa. McAllister did lament that for the lands on the Makapu'u side of Koko Head-Koko Crater, "There are no old Hawaiians in the region, and it is not possible to obtain information..." on sites he'd located (McAllister 1933:57). It will be seen below, that at the time of McAllister's survey, he recorded only a few sites on the slopes of Koko Head, with additional sites on the slopes of Koko Crater and beyond. But in the larger land of Maunaloa, McAllister documented approximately 50 sites. Many of the sites he recorded were either in the southern section of Maunaloa (the Wawamalu-Kaloko area), or in the remote valleys above the *Aula*. This can probably be attributed to the fact that by 1930, development was already occurring in the Maunaloa Valley-Kuapa vicinity (thus sites which would have existed were already destroyed). On the other hand, there was only limited interest in residency or land use in the arid salt spray covered southern lands of Maunaloa, thus more sites survived.

Sites recorded by McAllister included habitation features (both long-term and temporary), ceremonial sites, burials, agricultural features, petroglyphs, and trails. The following texts are excerpted from McAllister's writings; with emphasis on sites in and/or neighboring the Koko Head Regional Park and Nature Preserve. The documentation below also includes selected sites of Maunaloa for which detailed historical documentation was recorded—thus adding to the historical context for interpreting the history of Maunaloa.

### Sites of Maunaloa

(see Figure 5 - for approximate locations of identified sites)

#### Site 3. Kealakipapa valley road.

Running from a point slightly mountainwards of the lighthouse road up Kealakipapa Valley, down the Waimanalo gap, and through the village site in Waimanalo, are the remains of an old road. It has not been definitely determined if it is of old Hawaiian origin or of post-European construction. As the road appeared when I saw it, before the opening of the new government highway, it did not seem to be old Hawaiian.

The name of the valley, Kealakipapa [The paved path, trail, or road], indicates that a trail at least has been here for many years... This path may have existed in 1822, when Mahison passed from Waimanalo to Maunaloa, but it was not known to him... From the lighthouse road to the gap, about 1,250 feet, the roadway lies in a straight line and is fairly distinct. From the top of the gap it zigzags down to the sea, making four bends in the descent. In places the natural outcroppings of rocks have been used as steps, but where stones have been laid and a terraced wall built up to support the paving, this paving has been constructed with large stones laid at an angle sometimes as great as 45 degrees. From the foot of the gap the road ran into the village site on the Waimanalo side (Site 384). Near the top of the gap, on the Maunaloa side, is a small walled enclosure which, according to Stokes, is said to have been made at the time of the rebellion in 1895. From the top of the gap down

<sup>6</sup> Readers should review the archaeological study (Borthwick et al., 1998) prepared as a part of the present EIS for further information on current archaeological studies and site descriptions.

Interior Department Book 15:107 (1878) recorded that the land of Maunaloa had "sea coast frontage along the reef of 11.76 miles" (State Archives).

On January 1, 1856, M. Kekūanā'ōa and John I'i, guardians of Victoria Kāmāmalu leased all the land of Maunaloa to William Webster. Specific of the lease include:

Land of Maunaloa in the district of Kona, Island of Oahu, an area of 5,680 acres at a yearly rental rate of \$300.00... All rights excepting only the Konoiki's legal fishing rights in the sea for a term of 30 years... The said lessee will build or cause to be built within one year from the date of these presents, a sufficient permanent fence to stop cattle on the boundary line... (Bureau of Conveyances Lib. 7:525-526).

By the early 1870s, the land of Maunaloa and the fishpond were leased to various individuals, among whom were J. Kānepu'u, M. Pico. In March 1873, D. Kalākaua (who less than a year later would become King of Hawai'i), applied to the Estate of Lot Kamehameha for a lease of Maunaloa. On May 12<sup>th</sup>, 1873, R. Ke'elikōiani chose to retain Maunaloa as her personal property, rather than lease it out (State Archives Interior Department Land Files - Maunaloa).

By the late 1880s, the Maunaloa Fishpond was under lease to Chinese pond keepers (Interior Department Land Files - Maunaloa, Nov. 7, 1889).

Ranching and fisheries activities were continued at Maunaloa through the first decades of the 20<sup>th</sup> century (cf. Takemoto, Joerger, Mitchell and Bateig 1975:20-22). C.S. Judd (1921) noted that the cattle of Maunaloa Ranch had nearly destroyed the native forest of Maunaloa. Judd also reported that goals were no longer a problem by 1921, as they had nearly been exterminated (Judd 1921:151). By that time, the population in Honolulu was growing, and the attraction of Hanauma Bay and other natural features of the Maunaloa region had begun drawing more and more visitors.

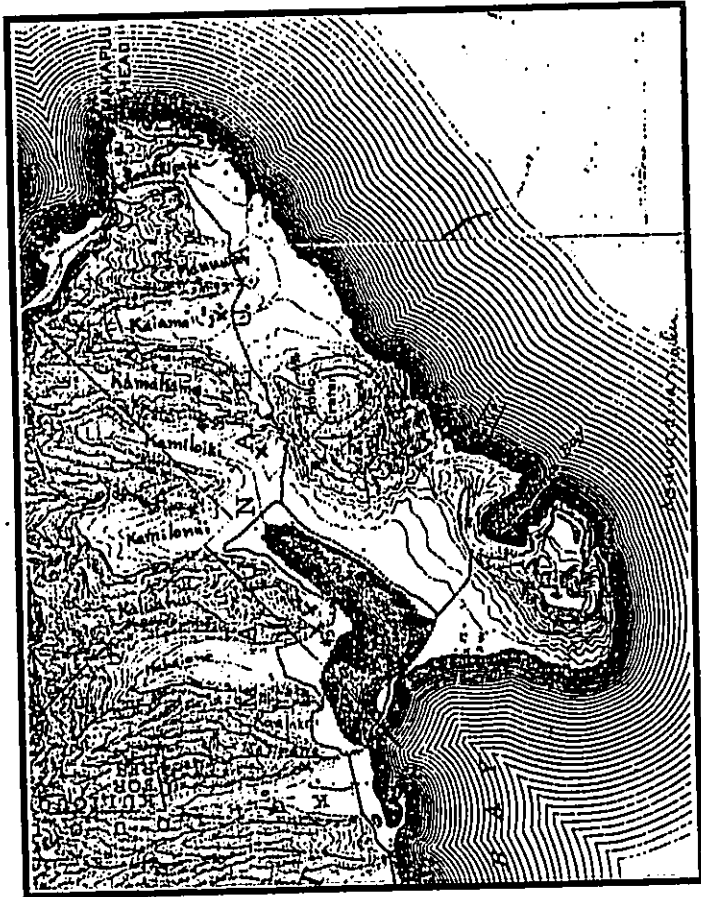


Figure 5. McAllister's Sites of Maunaloa and Vicinity (Numbered on a 1909-1913 Survey Map of the Island of Oahu Bishop Museum MS SC McAllister Box 2.2)

Kealakipapa Valley for about 600 feet the road is in fairly good condition and can be followed with ease. The central part is paved with flat stones 1 to 2 feet in width with smaller stones heaped about a foot in height on either side.

Along this distance the road averages between 15 and 16 feet in width. Further into the valley the road runs into a heavy growth of *Mane*. Here it is generally without the side rock-walls, about 11 feet wide, and of arched or curved surface. Throughout the lower part of the valley the road is in a poor state of preservation. On the immediate mountain side of the lighthouse road it cannot be found. Seaward of the lighthouse road it appears again and seems to end some 140 feet from the present road, for on the sea side of this point it cannot be found... [McAllister 1933:59]

Site 14. Fishing shrine (*ka'o*), Maunaloa. Built on a lava outcrop which is about 10 feet higher than the surrounding area is a small platform 19 by 16.5 feet in extent, with the northwest and southwest corners rounded. On the southwest corner there may have been a small additional elevation, for the stones are piled 3 feet higher. Except for this corner and the slight indication of a 1-foot wall at the northeast end, the surface is comparatively level, paved with

coral and small lava rocks, embedded in which was a small bottle of distilled spirits, with the top slightly protruding. The platform is 4 to 8 feet higher than the outcrop, depending on the slope. To the west of the platform are two walls approximating 2 feet in height and 1.5 in width, which are only visible for a short distance. While I was taking measurements on this site, a Hawaiian who was fishing came up and offered the following information:

There were once two brothers and a sister living on this beach. While the men were talking together, the sister was out fishing. The older brother wanted a drink, but the younger told him to wait until their sister returned. Then the younger brother quenched his thirst, but immediately he was turned into the stones upon which this *koa* was built. The younger [older?] brother was also turned into stone, the rocks upon which another *koa* [Site 6] is built. The sister was turned into stone on the beach. The rock representing her is no different nor more outstanding than any of the surrounding rocks... [McAllister 1933:61]

Site 21. Cave habitation (?), Maunaloa. A cave which was probably used as a habitation, located about 20 feet from Site 20, is 20 feet long, 15 feet wide and 4 feet in maximum height. There is another small entrance which is now filled with trash. Douglas Damon said the old Hawaiians had told him that during times of war the women and children were hidden here and the mouth was closed by a large stone.

Site 22. Possible *heiau* site, Maunaloa. Two large inclosures now used for a yard around a few occupied houses and an adjoining cattle pen. The Mann map in the Bishop Estate office marks the region of this inclosure "Kaiwi" and a little to the west "Heiau Koaia." Mr. Mann's authority for these names was an old native woman now dead. If there ever was a *heiau* in this section, these apparently rebuilt walls would probably indicate the site... [McAllister 1933:62-63]

Site 36. House site on the low ridge of Koko Crater, Makapuu side. Only a few of the foundation stones of the house remain; they are insufficient to give any idea of the size. A low wall was formed about the site by placing large stones on end. It is approximately 85 feet wide and much longer. On the Makapuu side of the crater, south of and lower than the house, is a series of three terraces, in poor state of preservation, which were probably used for agricultural purposes. Though the site is old, it may be post-European.

Site 37. Terraces, northwest slope of Koko Crater, facing Kamiloiiki Valley. A series of terraces from 12 to 20 feet wide run across the slope of the land. The terraces are low and unfaced, not more than 1 foot above each other, with stones gathered in clearing places along the edges. Seventeen terraces were counted along one slope. One area which was mounded up had a considerable number of large stones scattered about and was probably a house site... [McAllister 1933:65]

Site 44. The "Koko Head petroglyphs" (fig. 24) have been reported by a number of writers.

The cave was discovered in January, 1899, and Mr. C.L. Beal, a member of the party, returned at a later date and made rubbings. These he inked in and photographed, and I am greatly indebted to him for a copy of the picture, from which my drawing has been made. Rubbings on file at Bishop Museum made in 1900 and in 1915 show that at some time between these dates the figure with the "spiked headdress" was

removed. The carvings in 1931 were in almost the same condition as in 1915. They are on the slanting floor of the cave, distinctly cut into the rough basalt surfacing. Judd (46) has published the following description:

The cave has a low ceiling and a sharply a dined roof of hard tufa. Photographing the carvings is not an easy task in consequence. The surf at high tide washes into the mouth of the cave and the lower carvings are much corroded. There is no evidence now that the cave was or was not walled up. The figures are in three sizes, respectively six, nine and fifteen inches in length. In some of the figures an attempt has been made to show the contour of the thigh and calf; the knee is small and in some figures the toes and heels are shown. All of the arms save in one figure point down. (There is another figure toward the center of the group in which both arms are turned up.) This one figure has its right arm raised and has a head dress of four spikes radiating from one side of the head. Some of the figures represent neither men nor women...

All the carvings are three-quarters to one-sixteenth of an inch deep. There is no evidence that the cutting had been made with an iron instrument. The bodies of several men are square, all the interior of the square being removed evenly... Storms have swept all through the cave and there are but few of the inscriptions left but they probably at one time covered the entire floor of the cave. The area covered by the carvings is about six and one half by eleven feet. Several figures may be of four-footed animals.

Site 45. Platform, side of Kohalepelepe, facing into Kahaulou (sic - Kahauloua) Crater. According to Miss Marie Neal, Botanist, Bernice P. Bishop Museum, there was a small platform of stones with a pathway in association located on the side of Kohalepelepe, facing into Kahaulou Crater. I have not been able to locate this site. It is apparent that several places within the small crater were used as house sites.

Site 46. Fishing shrine (*ho'a*) known as Paliasea, for mullet.

Merely a stone at the edge of the water, but it had a great attraction for mullet.

Site 47. Fishing shrine (*ho'a*) known as Huanui, for mullet.

The shrine is not far from the one described in Site 48 and is an exact duplicate, except that it is slightly larger.

Site 48. Fishing shrine (*ho'a*) on the beach, Honolulu side of Kuamookane, known as Hina and built for sead (*akule*) (pl. 6, B).

The shrine is roughly square in shape with the corners rounded, and measures 16.5 feet across. It is formed by coral walls 1 foot high and from 1 to 2 feet wide. Inside the walls is a paving of small bits of coral and sand which is about 6 inches higher than the outside. Facing the sea is an entrance 2.5 feet wide, just within the entrance are six sharp lava stones forming an oval about 1 foot wide and 1.5 feet long. It was here that the offering of fish was placed. A foot from the wall opposite the entrance are two flat coral stones embedded securely in the paving. They protrude about 6 inches.

Site 49. Keahupua-o-Maumalua fishpond, located in the land of Maunulua. On the maps the pond is designated as Kuapa, though among the Hawaiians and market people now it is known as Maunulua pond.

According to the Webster map of 1851, the pond covered 523 acres. In 1921 the water area was 301 acres with a swamp land of 125 acres. The water is brackish.

The old wall of the pond was approximately 5000 feet long. It appears to have been a sand embankment, faced on the top and seaward side with lava and some coral stones. These were probably added later. The sand embankment is now between 10 and 15 feet wide. The stone facing is only a few feet wide. It is interesting to note that on the Honolulu end the wall did not connect to the nearest land, but was built back to the brackish spring which is about 1400 feet from the beach. The wall is located on the seaward side of the spring, just inclosing it.

According to Makea Napahi my informant, the pond was built by Mahoe, her great-grandmother. When the pond had been only partially completed, the *mekehu* came and in one night finished the construction. Mr. Moe of the Kamehameha schools is of the opinion that a large fishing village originally existed in Habatone Valley at the head of the pond, which, according to him was not a pond, but an arm of the sea. The people from this village fished off Maunulua in their canoes, and when the pond was built it cut off their access to the sea and the village declined. There was a great number of ruins in and about the Kamehameha farm school. Mr. Moe also believes that the Honolulu end of the pond was so peculiarly indented in order that boats from ships might have ready access to the brackish spring, from which they might obtain water...

...Toward the center of the wall of the fishpond is a rather large stone standing upright. It is 4.5 feet high, 3 feet wide at the bottom, 2 feet wide at the top, and 5.5 inches thick. It is securely embedded diagonally across the wall, with one of its broad sides facing exactly north. This stone is said to be Waiaaka, named for a man who once lived in Maunulua. This man was married to a woman of whom he was apparently very fond. In keeping with Hawaiian customs of marital life, Waiaaka gave consent for his wife to stay with other men. However, when she was away he was greatly worried, and it preyed so consistently upon his mind that he became insane. One night when she was gone, he left the lonely hut and went to Hanaua Bay, where in great rage he tore up a large stone and carried it to the fishpond wall. This was a super-human feat, as one can see from the size of the stone. This stone he placed on the wall of the pond, naming it after himself, and it stands there today as a monument to his memory.

At times there was a dearth of fish, which Mahoe coped with in this manner. On the night of Kane, she took a baby pig as it came from the womb of the mother, and had her small grandson carry the squealing animal about the pond. There was a strict *tapu* until the next night, which was the night of Lono. No fishing was permitted, and no noise was allowed to disturb the praying *kahuna*. On the night of Lono, seaweed and *ilima* were gathered and placed on the shrine. After the night of Lono when this ceremony was apparently completed, there was plenty of fish.

The pond is said to connect by means of an underground tunnel with Kaelepu pond (Site 377) in Kailua. From time to time great schools of mullet disappear from the Maunulua pond and are to be found in the Kailua pond. At the same time the *awa* which were in the Kailua pond appear in the Maunulua pond. When the mullet reappear in the Maunulua pond the *awa* disappear. Kanae, the fish warden, tells me that this occurs even today, but cannot be explained by the Japanese who leases the pond. This same phenomenon occurs between the Kuaioa pond (Site 313) and the Kahana pond (Site 301)... [McAllister 1933:67-70]

## SUMMARY

This study provides planners and interested readers with narratives that will be of use in interpreting the history of the land, and in formulating long-term resource management guidelines. As noted earlier, some of the traditional and early historic accounts, associate several features of the natural landscape with events in which Hawaiian gods and deity participated. Some of the place names which remain in use today also call to mind those times when the gods walked the land with the people. Additionally, accounts cited in this study reference resource collection and access practices as recorded up until ca. 1950.

As noted earlier in this study, land acquisition and planning for Koko Head Park (now the Koko Head Regional Park and Nature Preserve) began in the 1920s. Hanauma Bay, a popular swimming and picnicking area was being developed and by ca. 1931 the Kalaianā'ole Highway provided paved access to upper Hanauma and a small road was made part of the way down to the bay. In early 1950, work was underway to extend the Hanauma Bay access road to the shore (Figure 6) and there were plans to excavate a portion of the reef to enlarge the swimming hole.



Figure 6. Hanauma Bay Road Half Finished (Honolulu Advertiser Photo; March 13, 1950)

In 1956, a joint project by the Hawaiian Telephone Company and A.T. & T. blasted out a portion of the reef to facilitate the laying of a transpacific telephone cable. Thus, a "greatly improved aquatic pool rewarded O'ahu's swimmers" (Scott 1968:698). Since that time, the popularity of the Koko Head Park/Nature Preserve, particularly Hanauma Bay has grown, and several efforts have been made at formulating a plan for long-term park development and management of the resources.

It is likely that the City and County of Honolulu and a "friends of the park" association could develop important preservation and interpretive plans through the conducting of an oral history study. Such a study would logically be conducted with individuals descended from families with genealogical attachments to traditional residents of the Maunaloa Ahupua'a, and others who have gained an intimate knowledge of the resources and landscape through decades of travel and resource use in the area. Such a study should document who interviewees were; how they were selected; describe the scope and methodology of interview process; present an overview and detailed documentation of the historical insights gained through the interviews; identify the presence of family and community sites, and significance of cultural and/or ceremonial sites; document areas of concerns to the interviewees; and elicit recommendations for long-term protection, preservation, interpretation, and management of the Koko Head Nature Preserve.

**REFERENCES CITED**

- Alexander, W.D.  
1902 Hawaiian Geographic Names. U.S. Coast and Geodetic Survey. Washington. Government Printing Office.
- Betzwith, M.  
1970 Hawaiian Mythology. New Haven: Yale Univ. Press. Reprint. Honolulu: Univ. Of Hawaii Press.
- Board of Commissioners  
1929 *Indices of Awards Made by the Board of Commissioners to Quiet Land Titles in the Hawaiian Islands*. Honolulu: Star Bulletin Publishing.
- Borthwick, D. B.A., J. Wineski, M.A., R. Chlogioji, B.A., H.H. Hammett, Ph.D.  
1998 Archaeological Inventory Survey of Eight Areas within the Koko Head Regional Park, Maunaloa Ahupuaa, Island of Oahu. Cultural Surveys Hawaii (Kailua, O'ahu). November 1998.
- Chinen, J.J.  
1958 *The Great Mahele: Hawaii's Land Division of 1848*. Honolulu: University of Hawaii Press.
- 1961 *Original Land Titles in Hawaii*. Honolulu: privately published.
- City and County of Honolulu  
1945 A Proposed Plan for the Future Development of the Koko Head Park Area. Prepared by the Planning Division, Park Board, City and County of Honolulu. Honolulu, Hawaii, March 1945. (in the collection of the State Land Management Office)
- Coulter, J.W.  
1935 A Gazetteer of the Territory of Hawaii. Honolulu.
- Emerson, N.B.  
1915 *Pele and Hiihala: A Myth From Hawaii*. Honolulu. (Reprint 1993, 'Ai Pōhaku Press. Honolulu).
- Green, R.C.  
1980 Makaha Before 1880 A.D.: Makaha Valley Historical Project—*Summary Report 5. Pacific Anthropological Records 31*. Department of Anthropology, B.P. Bishop Museum.
- Handy, E.S.C.  
1940 The Hawaiian Planter, Vol. 1. Bernice Pauahi Bishop Museum Bulletin 161. Honolulu: Bishop Museum Press.
- Handy, E.S.C., and E.G. Handy, with M.K. Pakul  
1972 Native Planters in Old Hawaii. Their Life, Lore, and Environment. *B.P. Bishop Museum Bulletin 233*. Bishop Museum Press, Honolulu.
- Hommon, R.J.  
1976 The Formation of Primitive States in Pre-contact Hawaii. Doctoral dissertation, Department of Anthropology, University of Arizona, Tucson.

*Historical Documentary Research*

*Koko Head Regional Park and Nature Preserve*

33

*Kuwa Pono Association*

*Oahu-25a (10/1998)*

Judd, C.S.

1921 Working Plan for Maunaloa Forest Reserve. Koolau-poko, Oahu. The Hawaiian Forester and Agriculturist. Vol. XVIII. Honolulu. June 1921.

Kamakau, S.M.

1961 Ruling Chiefs of Hawaii. Honolulu: The Kamehameha Schools Press.

1964 *Ka Po'e Kahiko: The People of Old*. Bishop Museum Special Pub. 51. Honolulu: Bishop Museum, Press.

1976 *Na Hana a ka Po'e Kahiko: The Works of the People of Old*. Bishop Museum Special Pub. 61. Honolulu: Bishop Museum, Press.

1991 Tales and Traditions of the People of Old, *Nā Mo'olelo a ka Po'e Kahiko*. Bishop Museum Press, Honolulu.

Kame'eleihewa, L.

1992 *Native Land, and Foreign Desires*. Honolulu: Bishop Museum Press.

Kingdom of Hawaii'

1850 *Kanawai Hoopai Karaima no ka Hawaii Pae Aina* [Penal Code].

Lynn, C.J.

1875 Land Matters in Hawaii. *Islander*, Honolulu.

McAllister, J.G.

1933 Archaeology of Oahu. B.P. Bishop Museum Bulletin 104. Honolulu: Bishop Museum Press.

Maly, K. (translator)

ms. *He Mo'olelo Ka'oo no Hi'iaka-i-ka-poli-o-Pele...* (The Traditional Tale of Hi'iaka-i-ka-poli-o-Pele...). A translation of the native tradition of Hi'iaka's journey from Hawaii'i to Kauai'i and back again. Published in the Hawaiian Newspaper: *Ka Hōkū o Hawai'i*; September 18, 1924 to July 17, 1928.

Pakul, M.K.

1983 *Olelo Noeau*. B.P. Bishop Museum Special Publication 71. Bishop Museum Press, Honolulu.

Pakul, M.K., S. Elbert, and E. Mookloj

1974 Place Names of Hawaii. University Press of Hawaii.

Scott

1968 The Saga of the Sandwich Islands. Volume 1. Sierra-Tahoe Publishing Co. Crystal Bay, Lake Tahoe, Nevada.

State of Hawaii'

Ms. Files cited in text from the collections of the:

Bureau of Conveyances

Division of Forestry and Wildlife (Hilo)

Hawaii'i State Archives

Land Management Division

State Survey Division

*Historical Documentary Research*

*Koko Head Regional Park and Nature Preserve*

34

*Kuwa Pono Association*

*Oahu-25a (10/1998)*

Sterling, E.P., and C.C. Summers  
1978 Sites of Oahu. Department of Anthropology and Education, B.P. Bishop Museum.

Takemoto, A.H., et al.  
1975 "Historical/Cultural Essay Report on the Kuapa Pond Area." Submitted to the United States Army Corp of Engineers. Honolulu (May 1975).

Tatar, E.  
1982 Nineteenth Century Hawaiian Chant. *Pacific Anthropological Record* No. 33, Department of Anthropology. B.P. Bishop Museum, Honolulu.

## **APPENDIX C**

**Archaeological Field Inspection Survey Koko Head Regional Park:**  
**Koko Head Regional Park Resource Plan Project**

**Paul H. Rosendahl, Ph.D., Inc.**

**November 1988**



PAUL H. ROSENDAHL, Ph.D., Inc.  
*Consulting Archaeologist*

Report 403-051786

**ARCHAEOLOGICAL FIELD INSPECTION SURVEY  
KOKO HEAD REGIONAL PARK**

**KOKO HEAD REGIONAL PARK RESOURCE PLAN PROJECT**

Land of Maunaloa, Honolulu District  
Island of Oahu

November 1988

305 Mohouli Street • Hilo, Hawaii 96720 • (808) 969-1763 or 966-8038

SUMMARY

At the request of Belt, Collins & Associates (BCA), acting for their client, the City and County of Honolulu (CCMO), Paul H. Rosendahl, Ph.D., Inc. (PHI) conducted an archaeological field inspection survey of the approximately 1,270 acre Koko Head Regional Park project area, situated in the Land of Maunaloa, Honolulu District, Island of Oahu. The primary objective of the field inspection survey was to make a general assessment, in conjunction with the preparation of a park master plan, concerning the presence or absence of any sites or features of possible archaeological significance within the limits of the project area.

KOKO HEAD REGIONAL PARK RESOURCE PLAN PROJECT

ARCHAEOLOGICAL FIELD INSPECTION SURVEY  
KOKO HEAD REGIONAL PARK

Land of Maunaloa, Honolulu District  
Island of Oahu (TK:1-3-9-12:1.2:Var.)

The archaeological field inspection of the Koko Head Regional Park project area was carried out on May 12, 14-15, 1988. Approximately 48 man-hours of labor were expended in conducting the field work. The project area was sampled by a series of unsystematic pedestrian sweeps, the routes of which were selected for the following reasons: (a) find and reevaluate previously identified sites; (b) identify and evaluate any new sites; (c) sample the project area in terms of both the overall geographic area and the range of terrain variation present; (d) physical access; and (e) current land use.

Of the five previously identified sites which apparently were situated within the Koko Head Regional Park project area, only one site--Site 1128, Koko Head Petroglyphs (McAllister's Site 44)--was relocated. Three other McAllister sites (Sites 25, 36, 37) were searched for, but were not found. A fourth McAllister site (Site 45) was not even searched for because of the current active use of the Mahauloa Crater area as a public firearms range. Site 1128--Koko Head Petroglyphs (McAllister's Site 44) was the only one of the previously identified sites that was relocated and inspected. While the present condition of the site does not appear to have changed substantially from the condition noted in 1976, it is obvious that the site has been extensively altered, by both natural causes (wave erosion) and collectors who cut out several of the figures, in the intervening years since McAllister recorded the site in 1931. Even so, the site was assessed as being valuable--i.e., significant as an example of petroglyph art, which is rare on the Island of Oahu--by DLNR when the site was inventoried in 1970. No new archaeological sites were identified during the field inspection survey.

by

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Principal Archeologist

Prepared for

City and County of Honolulu  
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November 1988

Evaluation of the archaeological field inspection survey findings indicates that several areas within the project area are considered likely to have archaeological remains present, and that a full-scale inventory-level survey (with variable intensity aerial and ground coverage) of the entire Koko Head Regional Park project area should be carried out as part of the subsequent planning and development of the park. The principal objectives of this survey would be four-fold: (a) to identify (find and locate) all sites and features present within the project area; (b) to evaluate the potential significance of all identified archaeological remains; (c) to determine the possible impacts of proposed park development upon the identified remains; and (d) to define the scope of any subsequent archaeological mitigation work that might be necessary or appropriate.

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INTRODUCTION

BACKGROUND

At the request of Bait, Collins & Associates (BCA), acting for their client, the City and County of Honolulu (CCHONO), Paul H. Rosendahl, Ph.D., Inc. (PHI) conducted an archaeological field inspection survey of the approximately 1,270 acre Koko Head Regional Park project area in Land of Maunaloa, Honolulu District, Island of Oahu. The primary objective of the field inspection survey was to make a general assessment, in conjunction with the preparation of a park master plan, concerning the presence or absence of any sites or features of possible archaeological significance within the limits of the project area.

Field inspection survey field work was carried out on May 12, 14-15, 1988. An oral preliminary report on survey findings was given to BCA Project Manager Lee W. Sichter on May 17, 1988. Survey findings and conclusions--including evaluations and recommendations, were subsequently discussed with Dr. Joyce Math, staff archaeologist for Oahu in the Hawaii State Department of Land and Natural Resources-Historic Sites Section (LNR-HSS). The present report constitutes the final report on the field inspection survey.

SCOPE OF WORK

The basic purpose of the archaeological field inspection survey was to identify sites or features of possible archaeological significance. Often formerly referred to as a reconnaissance survey, a field inspection survey is extensive rather than intensive in scope and is conducted to determine the presence or absence of archaeological resources within a specified project area. Generally covering only a sample of a project area, a field inspection survey indicates both the general nature and variety of archaeological remains present, and the general distribution and density of such remains. A field inspection survey permits a general significance assessment of archaeological resources present, and facilitates the formulation of realistic recommendations and estimates for such further work as might be necessary or appropriate. Such further archaeological work could include inventory-level survey--identification, recording, and evaluation of all sites present, and perhaps selected test excavations; and possibly subsequent mitigation--data collection and data recovery work, interpretive planning and development, and/or preservation of sites and features with significant research, interpretive, and/or cultural values.

Based on a preliminary review of available background literature and records, and based on discussions with several representatives of BCA and with Dr. Math of LNR-HSS, the following specific objectives were determined to constitute an appropriate scope of work for the archaeological field inspection survey of the Koko Head Regional Park project area:

1. To review readily available archaeological and historical literature relevant to the immediate project area;
2. To conduct a sample field inspection of the approximately 1,270 acre project area to determine the presence or absence of any potentially significant archaeological sites;
3. To determine the nature of the physical conditions of the project area that would influence the conduct of any subsequent archaeological field work, should such be necessary; and
4. Prepare an appropriate scope of work (including specific field work and other non-field tasks) for any subsequent archaeological work, such as a full-scale inventory-level survey, that might be necessary.

It was anticipated that should the field inspection survey suggest the presence of potentially significant archaeological remains within the project area, and/or the probability of subsurface archaeological deposits, a subsequent full-scale inventory-level survey of the project area, in connection with more detailed park planning and development, would most likely be necessary.

As defined by the scope provided to BCA by CCHONO, certain areas were to be excluded from the overall project area; these were the Koko Head District (Formerly Regional) Park adjacent to the Hawaii Job Corps Center, Hanalei Bay Park (beach and upper level areas), and Koko Crater Botanic Garden. The scope provided by CCHONO called for an archaeological report which would include the following items: (a) a review of any previous archaeological findings within the project area; (b) an assessment of surface archaeological resources within the project area; (c) a "culture and lore, historical account and a chronological overview" of the project area and immediate local region; (d) any pertinent maps or photographs; (e) other pertinent observations and recommendations; (f) a comprehensive reference list; and (g) a summary of facts, findings, and recommendations. Based on discussions between BCA and CCHONO, it was mutually agreed that the cultural and historical lore research would be conducted by BCA.

PROJECT AREA DESCRIPTION

Situated at the extreme southeastern corner of the Island of Oahu, the Koko Head Regional Park project area is located in the Land of Maunaloa, Honolulu (Kona) District (TK:1-3-912:1,2,Var.) (Figure 1, at end). Approximately 1,270 ac in extent, the project area is distinguished by such prominent natural features as Koko Head, Hanalei Bay, Koko Crater, and Sandy Beach. The project area is surrounded by coastal waters for the entire extent along the southeast side, while the residential areas of Fortlock and Hawaii Kai border the southwest end and northwest sides of

the project area, and the Hawaii Kai Golf Course and adjacent residential development border the northeast end.

With the exception of the flat sandy beach portion of the project area which extends northeastward of Kalamianole Highway--from the easternmost corner of the project area, the terrain is generally irregular in aspect, with precipitous lava cliffs and sun-washed lava shelves along the shoreline. The Koko Head portion of the project area is characterized by steep slopes, frequently barren and eroded. Prominent natural features are the summit of Koko Head (Kumokaa, elevation 642 ft), a fairly deep mangrove-filled gulch which opens east-southeastward toward the sea, the deeply indented Hanama Bay, and the two smaller craters (Daihalaukaa [Daihalaukaa] and Koonoula) situated between Koko Head and Hanama Bay. (See Pakini, Elbert, and Kookini [1974], and Sterling and Summers [1978] for information concerning these and other place names mentioned below.) The Koko Crater portion of the project area is characterized by very steep, generally barren and dissected slopes. Prominent natural features are the summit of Koko Crater (Puu Kai, elevation 1,208 ft), Koko Crater (Kohalepalepe), the smaller Kabsulua Crater, and Sandy Beach (Wawawai and Okun).

Vegetation cover within the project area varies from very dense in several of the gullies and gulches to scattered and open on more exposed and eroded slopes. For the most part, the present vegetation appears to be introduced exotics, with the dominants being *Leucaena glauca* (L.) [Numb. and Bonpl. ex Willd.] BHK., and *koa-haloa* (*Leucaena glauca* (L.) Benth.) trees, and a variety of low shrubs and grasses. The nature, distribution, and density of vegetation cover generally reflects the low annual rainfall (less than 30 in), the often steeply sloping and irregular dissected terrain, and the patchwork scatter of shallow soils.

#### PREVIOUS ARCHAEOLOGICAL WORK

Based on a review of published sources, site files, records, and manuscripts available at DLNR-HSS, it was apparent that several previously identified sites were known to exist at one time in or immediately adjacent to the project area; however, the maps and site files at DLNR-HSS indicated that during the Statewide Inventory of Historic Sites survey field work, conducted by DLNR in 1970, only two sites had been definitely found within the Koko Head Regional Park project area overall. These two sites were Site 50-80-15-1128--Koko Head Petroglyphs, which is situated within the project area covered by the present field inspection, and Site 50-80-15-3--Hanama Shelter, which is situated in the beach level area of Hanama Bay, an area excluded from coverage during the present field inspection (RHP 1970a, b) (Figure 1, at end.)

Site 1128--Koko Head Petroglyphs was recorded as Site 44 by McAllister (1933) in 1931 during his survey of Oahu sites for Bishop Museum. He pointed out that the site, which consisted of numerous figures pecked into a thin lava layer atop a natural sandstone or volcanic tuff shelf within a

small shoreline cave, had been reported and described previously by a number of writers since its discovery in 1899 (McAllister 1933:67-8). (Also see Cox and Szack 1970:96-7, and Sterling and Summers 1978:265-6.) Notes in the site file at DLNR-HSS indicate that the site has been extensively damaged in recent years both by natural causes and by collectors, who had cut away sections of the thin lava in which figures had been pecked, and removed panels with figures.

Site 3--Hanama Shelter was a natural overhang shelter that had served as a prehistoric temporary habitation site. The site was identified and excavated in 1952 by a field team from Bishop Museum and the University of Hawaii. The excavations and recovered artifacts are described in Emory and Sinton (1961), and the fishbones were subsequently incorporated into a more detailed analysis by Emory, Bonk, and Sinton (1968). Site file notes at DLNR-HSS indicate that very little of the site cultural deposit remained in 1970. The site apparently was not visited by Connolly (1980) during his survey of the Hanama Bay Beach Park, as the latter project area was limited to the upper area of the park.

Of the numerous sites recorded by McAllister (1933) at the southeast corner of Oahu in the general vicinity of Koko Head and Koko Crater, only five seemed to have been situated within the present project area limits (McAllister 1933:57-8, 63, 65, 67-8).

Site 25--Fishing shrine (Oaia). Apparently situated along the Sandy Beach area shoreline, this site was believed by Sterling and Summers (1978:263) to have been destroyed by the 1946 tidal wave.

Site 36--House site. This site was situated on a low ridge of Koko Crater, on the Makapu side, and apparently in the general vicinity to the southeast of the present Koko Crater Stables and to the northwest of the present sewage disposal facility.

Site 37--Terraces. This site was situated on the northwest slope of Koko Crater, facing Kamiloiki Valley, and apparently in the general vicinity to the northwest of the present Koko Head Stables.

Site 44--Koko Head Petroglyphs. Situated in a small cave along the shoreline roughly midway between Halona Point and Hanama Bay, this site was subsequently inventoried by DLNR in 1970 and designated Site 1128 (see above).

Site 45--Platform. This site was reported to McAllister as being situated on the side of Koko Crater, facing into Kabsulua Crater, but McAllister never located the site.

In addition, both McAllister (1933) and Sterling and Summers (1978) indicated the presence of numerous sites in the general Hawaii Kai area. Several of these sites were located in the Kaloko area, near the northeast

field work. Inspection survey field work was greatly facilitated by use of black-and-white aerial photographs (R.M. Towill Corp./USGS, 1977; scale 1"=400') and topographic maps (scale 1"=200', 40-ft contours) provided by RC&A.

The project area was sampled by a series of unystematic pedestrian sweeps, the approximate routes of which are shown on Figure 1 (at end). These routes were selected for several reasons, including the following:

1. Find and reevaluate previously identified sites;
2. Identify and evaluate any new sites;
3. Sample the project area in terms of both the overall geographic area and the range of terrain variation present;
4. Physical access--which excluded the precipitous sea cliffs, and the densely vegetated Monoula Crater and main gulch of the Koko Head portion of the project area, as well as most of the steep and deeply dissected slopes of Koko Crater; and
5. Current land use--active use of Kahaui Crater as a public firearms range, which prevented inspection of the crater area.

FINDINGS

Of the five previously identified sites which apparently were situated within the Koko Head Regional Park project area, only one site--Site 1128, Koko Head Petroglyphs (McAllister's Site 4A)--was relocated. Three other McAllister sites (Sites 25, 36, 37) were searched for, but were not found. As mentioned previously, Site 25--a fishing shrine situated along the shoreline in the Sandy Beach area, was believed to have been destroyed by the 1946 tidal wave. Two other sites said to be situated on the lower north slopes of Koko Crater, Site 36--a house site and Site 37, terraces--might easily have been destroyed by recent land modification activities noted in their apparent general vicinities. Alternatively, the sites might have gone unidentified in the dense vegetation covers also present in their apparent general vicinities. A fourth site, Site 45--a platform said to be situated on the side of Koko Crater and facing into Kahaui Crater, was not even searched for because of the current active use of the crater area as a public firearms range.

Site 1128--Koko Head Petroglyphs (McAllister's Site 4A) was the only previously identified site relocated and inspected. The present condition of the site, as indicated in Figure 2, does not appear to have changed substantially from the condition noted in 1976 and documented in the ILMR site file. However, it is obvious that the site has been extensively altered, by both natural causes (wave erosion) and collectors, who

end of the Sandy Beach portion of the project area, while others were located northeast of Koko Crater, in the general vicinity of the mouth of Kalama Valley, and still others were located to the west of the project area, along the shoreline at the base of Koko Head, around Kuapa Pond, and in the general vicinity of Kamiloihi Valley and Kamiloihi Valley.

In the Kaloa area--immediately adjacent to the northeast end of the Sandy Beach portion of the project area, McAllister listed noted approximately 20 sites, including enclosures, fishing shrines (Ko'a), house platforms, a habitation cave, a complex of walls and piles of stones, a possible balm, and a possible pig pen (McAllister 1933:58-63, Figure 20). (See also Kelly et al. 1984:6-9.) More recent survey work in the Kaloa area by Bishop Museum in 1984 as part of a park feasibility study for the Queen's Beach area between Sandy Beach and Makupuu Head identified several new sites, but failed to find any of McAllister's sites (Kelly et al. 1984:19-16, frontispiece map). This park feasibility study also included legendary and historical-documentary information relating to the construction of Kahaui Crater. Barrera (1986) conducted a surface survey of a construction borrow pit area situated just outside of the present project area, to the north of the present sewage disposal facility, and found only extensive recent disturbance. A surface and subsurface survey of a proposed residential development area along Kalaheo Highway, immediately inland of the Sandy Beach portion of the project area, was carried out by PHR in 1986 (Spear 1987); this survey failed to find any cultural remains.

Two other surveys have been conducted within the overall limits of the Koko Head Regional Park. The surface survey by Connolly (1980) of the upper area of Hanalei Bay Park has already been mentioned above. More recently, Kennedy (1987) monitored trenching of sewer lines at the Hawaii Job Corps Center; no cultural remains were encountered.

Other work in the land of Kahaui, generally to the west of the present project area, includes excavations done by Bishop Museum and the University of Hawaii in the early 1950s at three shelter caves (Emory and Simoco 1961; Emory, Book, and Sinoto 1968), as well as several small-scale surveys and limited excavations done at other sites in the general Hawaii Kai area (Byard 1969, n.d.; Wallace et al. 1969; McCoy 1971; and Bevequa 1972). Fabus Hala, situated at the base of the ridge separating Kamiloihi Valley and Kamiloihi Valley, has been the focus of a recent excavation and stabilization/partial restoration project (Davis 1984; 1983a, b). Finally, mention should be made of the historical-documentary study of the Kuapa Pond area done in 1975 by Takemoto et al. (1975).

FIELD METHODS AND PROCEDURES

The archaeological field inspection of the Koko Head Regional Park project area was carried out on May 12, 14-15, 1988 by Principal Archaeologist Dr. Paul H. Rosendahl and Supervisory Archaeologist Victoria K. Kai. Approximately 48 man-hours of labor were expended in conducting the

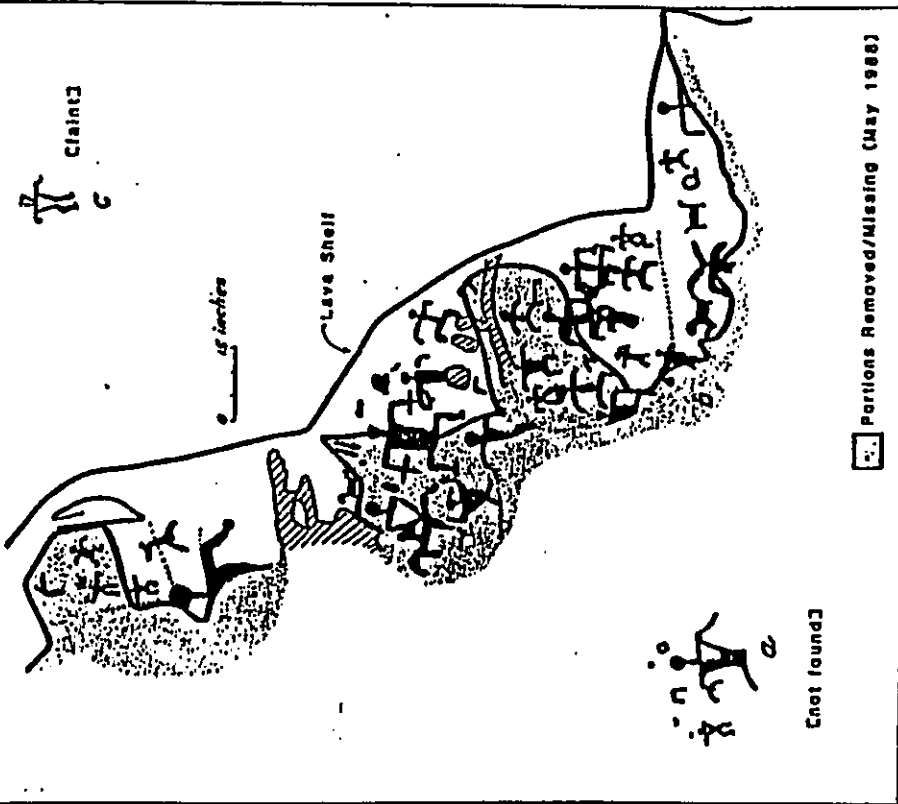


Figure 2. SITE 1128--KOKO HEAD PETROGLYPHS. Based on Figure 24 in McAllister (1933), and shaded to indicate portions noted as removed or missing as of May 1988.

cut out several of the figures, in the intervening years since McAllister recorded the site in 1931. Even so, the site was assessed as being valuable--i.e., significant as an example of petroglyph art, which is rare on the Island of Oahu--by DMNR when the site was inventoried in 1970.

No new archaeological sites of any kind were identified during the field inspection survey. A close inspection of the Sandy Beach portion of the project area failed to reveal any evidence of human burials, even though one occurrence of such a find was said to have been known from the general vicinity of the northeast end of the Sandy Beach area (W. Km. para. comm.).

One interesting non-cultural site, a series of eroding soil hummocks containing abundant birdbones, was found on a high ridge overlooking Pales Point, situated on the northeast side of Hanama Bay (Figure 1, at end). A sample of diagnostic bones was collected and submitted to Zoological Consultant Dr. Alan C. Ziegler for identification (Ziegler 1988). According to Ziegler, the bones represented two species of the family Procellariidae (Petrels and Shearwaters), the medium-sized *Puffinus pacificus* (Wedge-tailed Shearwater) and the smaller *Pterodroma hypoleuca* (Bonin Petrel). Based on known archaeological contexts, both species apparently were relatively rare on the Main Hawaiian Islands during early prehistoric period, becoming common during the late prehistoric period. While *Puffinus pacificus* has remained common on and around Oahu to the present, *Pterodroma hypoleuca* has now become extinct on the Main Islands and apparently disappeared from Oahu before European contact. While the materials examined by Ziegler indicated "...an interesting deposit although not a substantially significant one in a scientific sense," it does appear that the deposit should be explored in greater detail for the possible presence of additional species and other information that might help explain the nature and origin of the deposit.

CONCLUSION

DISCUSSION

In comparison to areas adjacent to the west, north, and east, the Koko Head Regional Park project area would appear to have a relative paucity of archaeological sites. The present field inspection survey, which sampled the project area, relocated only one of five previously identified sites which were apparently situated within the project area, and no new sites were identified. Perhaps this paucity of sites reflects to a large degree the relatively marginal nature of most of the project area, in terms of traditional habitation and exploitation activities, when compared to the areas adjacent to the west, north, and east. However, based on previous knowledge of the nature and distribution of sites within and adjacent to the project area, as well as more general knowledge of Hawaiian archaeological sites in general, it is considered likely that sites might well be present in several specific areas within the park project area.

403-031788

1. Historical documentary research, the specific purposes of which would be (a) to locate and summarize readily available documentary resources (e.g., books, maps, journals, archival recordings) relating to the Land of Kamaulua in general and to the project area specifically, (b) to integrate and synthesize the findings of this research in order to define prehistoric, early historic, and later historic period land use patterns, and (c) to assess the potential for any further research that might be appropriate in connection with any subsequent mitigation work needed for park development;

2. 100% coverage low-level (c.30-50 ft elevation) aerial survey by helicopter of the entire project area, with special emphasis upon those areas for which ground survey would be difficult (sea cliffs, steep slopes), in order (a) to identify sites and features, and (b) to define areas devoid of sites which would not require subsequent ground survey;

3. Partial to 100% coverage variable intensity (30 to 90-ft intervals) ground coverage of the project area, with (a) relatively higher intensity coverage being given to those areas identified during the aerial survey as either having good potential for the presence of sites, or as undetermined because of dense vegetation cover, and (b) relatively lower intensity coverage being given to those areas identified during the aerial survey as either devoid of sites or extensively modified in recent times;

4. Limited subsurface testing of selected sites and areas (a) to determine the presence or absence, and general nature, of any subsurface cultural deposits, and (b) to obtain sample materials for absolute age dating analysis;

5. Analysis of all historical documentary and field survey data; and

6. Preparation of appropriate reports.

The significance of all archaeological sites identified within the project area would be assessed in terms of the National Register criteria contained in the Code of Federal Regulations (36 CFR Part 60). DMR-HHS uses these criteria to evaluate eligibility for both the Hawaii State and National Register of Historic Places. To further facilitate management decisions regarding the subsequent treatment of resources, the general significance of all archaeological sites identified during the inventory level survey would be evaluated in terms of potential scientific research, interpretive, and/or cultural values. Scientific research value refers to the potential of archaeological resources for producing information useful in the understanding of culture history, past lifeways, and cultural processes at the local, regional, and interregional levels of organization. Interpretive value refers to the potential of archaeological

403-031788

While much of the Koko Head portion of the project area is exposed and barren and lacking in archaeological remains, several specific areas are considered likely to have sites. The areas include the following: (a) the sea cliffs and immediate shoreline, from Kamaulua Point to the vicinity of site 1128; (b) the densely vegetated interior, and immediately adjacent vicinity of Kamaulua Crater to the west and north; (c) the interior area of the major, fairly deep, lime-filled gulch which opens east-southeastward toward the sea; and (d) the area of eroding soil hummocks, some having deposits with birdbones, overlooking Palea Point and Banana Bay.

McAllister's 1931 survey identified several sites in the Koko Crater portion of the project area, and while the field inspection survey did not relocate most of them, the earlier report does suggest the likelihood of habitation sites, and possibly dryland agricultural sites, being present in several specific areas. The areas include the following: (a) unaltered interior areas of Kamaulua Crater, especially the lower slopes of Koko Crater, Crater facing southwest into Kamaulua Crater; (b) natural overhang shelter areas along the dissected, seaward-facing lower slopes of Koko Crater, especially above Kalaniana'ole Highway; (c) the interior of Koko Crater, especially immediately adjacent to the base of the steep slope; and (d) the two ridge areas, now covered with dense vegetation, that extend to the northeast on both sides of the gap into Koko Crater.

While the Sandy Beach portion of the project area has apparently been extensively cleared by the 1946 tidal wave, as well as more recent road construction and beach park development activities, there is still a good possibility that subsurface cultural deposits (or deposit remnants) and scattered human burials might be present in this portion of the project area. The presence of subsurface remains is considered especially likely, given the large number of sites recorded by McAllister in 1931, in immediately adjacent areas to the northwest and northeast.

#### RECOMMENDATIONS

Evaluation of the findings of the archaeological field inspection survey indicates that a full-scale inventory-level survey of the entire Koko Head Regional Park project area should be carried out as part of the subsequent planning and development of the park. The principal objectives of such an inventory-level survey would be four-fold: (a) to identify (find and locate) all sites and features present within the project area; (b) to evaluate the potential significance of all identified archaeological remains; (c) to determine the possible impacts of proposed park development upon the identified remains; and (d) to define the scope of any subsequent archaeological mitigation work that might be necessary or appropriate.

Based on discussion of the field inspection survey findings with Dr. Joyce Beth, DMR-HHS staff archaeologist for Oahu, the following specific tasks have been determined to constitute an adequate and appropriate scope of work for the recommended full-scale inventory-level survey:



resources for public education and recreation. Cultural value, within the framework for significance evaluation used here, refers to the potential of archaeological resources for the preservation and promotion of cultural and ethnic identity and values.

## REFERENCES CITED

- Barrera, W.  
1986 Hawaii Kai, Oahu: Archaeological Reconnaissance (TKK13-9-1011). Ms. report (June) prepared by Chinsigo, Inc. for Environmental Communications, Inc.
- Byard, D.T.  
1969 Limited Survey and Excavation at Site 0-16, Hawaii Kai, Maunaloa, Oahu. October 1966-July 1967. Ms. on file, State Historic Preservation Office (Honolulu).
- n.d. Unpublished draft report on excavation of Site 0-5. (Draft lost.) Dept. Anthro., B.P. Bishop Museum.
- Bevacqua, R.  
1972 A Burial Cave on Mauna-O-Ahi Ridge, Hawaii Kai. Ms. on file. Dept. Anthro., B.P. Bishop Museum.
- CFR (Code of Federal Regulations)  
36 CFR Part 60 National Register of Historic Places. Washington, D.C.: Dept. Interior, National Park Service.  
Connolly, R.D.  
1980 Archaeological Reconnaissance Survey at the Hanama Bay Beach Park Site (TKK13-9-12:2,6,12 portion), Hanama Bay, Island of Oahu. Archaeological Research Associates Report Ms.2-090180. Prepared for City and County of Honolulu-Dept. Parks and Recreation.
- Cox, J.H., with E. Scasack  
1970 Hawaiian Petroglyphs. B.P. Bishop Museum Special Publication 60. Honolulu: Bishop Museum Press.
- Devils, B.D.  
1984 A Research Design for Palms Heiau at Kamilo-nui in Maunaloa, Southeastern Oahu. Ms. on file, Dept. Anthro., B.P. Bishop Museum.

- 1983a Preliminary Report on the Excavations at Palms Heiau, Maunaloa (Hawaii Kai), Southeastern Oahu. Ms. on file, Dept. Anthro., B.P. Bishop Museum.
- Devils, B.D. (cont.)  
1985b A Report on the Stabilization and Partial Restoration of Palms Heiau, Maunaloa (Hawaii Kai), Oahu. Ms. on file, Dept. Anthro., B.P. Bishop Museum.
- Emory, K.P., W.J. Bonk, and Y.H. Sinoto  
1968 Hawaiian Archaeology: Fieldbooks. B.P. Bishop Museum Special Publication 47. Honolulu: Bishop Museum Press.
- Emory, K.P., and Y.H. Sinoto  
1961 Hawaiian Archaeology: Oahu Excavations. B.P. Bishop Museum Special Publication 49. Honolulu: Bishop Museum Press.
- HHP (Hawaii Register of Historic Places)  
1970a Inventory Form: Site 50-80-15-0003, Hanama Shelter. Site form on file, State Historic Preservation Office (Honolulu).  
1970b Inventory Form: Site 50-80-15-1128, Koko Head Petroglyphs. Site form on file, State Historic Preservation Office (Honolulu).
- Kelly, M., H. Kurashina, and A. Sinoto  
1984 Cultural Resources Overview for the Queen's Beach Park Feasibility Study, Maunaloa, Kona, O'ahu. Ms. on file, Dept. Anthro., B.P. Bishop Museum. Prepared for City and County of Honolulu-Dept. Parks and Recreation.
- Kennedy, J.  
1987 Archaeological Monitoring Report for Upgrading the Sewerage System at the Hawaii Kai Job Corps Center (TKK13-09-12: 1 & 10). Letter report (December 28, 1987) prepared by Archaeological Consultants of Hawaii for Kalkor Corp.
- McAllister, J.C.  
1933 Archaeology of Oahu. B.P. Bishop Museum Bulletin 104. Honolulu: Bishop Museum Press.
- McCoy, P.C.  
1971 Exploration of a Burial Rock-Shelter on Kaalakai Ridge, Oahu. Ms.080971 on file, Dept. Anthro., B.P. Bishop Museum.

Fukui, M.K., S.H. Elbert, and E.T. Mookini

1974 Place Names of Hawaii. Honolulu: University Press of Hawaii. (Revised and enlarged edition.)

Spear, E.L.

1967 Archaeological Reconnaissance Survey, Golf Course 5 and 6 Cluster Subdivision Sites, Hawaii Kai Community, Manalua, Honolulu, Island of Oahu (TMG:3-9-1018cr.1). FHR Report 261-121986. Prepared for Kaiser Development Company.

Steeling, E.P., and C.C. Summers (compilers)

1978 Sites of Oahu. Honolulu: Dept. Education and Dept. Anthro., B.P. Bishop Museum.

Takamoto, A.H., P. King Joergas, M.F. Jong Mitchell, and C.E. Barung

1975 Historical/Cultural Essay Report on the Kuapa Pond Area. Ms. report (May) prepared by Joergas-Takamoto Historical Research for US Army Corps of Engineers (Honolulu).

Wallace, W.J., E.T. Wallace, and V. Maeker

1969 Excavation of Coastal Dwelling Site (0-17) on the Island of Oahu. Ms. on file, Dept. Anthro., B.P. Bishop Museum.

Ziegler, A.C.

1988 Memorandum report (25 May 1988) on the identification of bones collected by FHR during the field inspection survey of the Koko Head Regional Park project area.

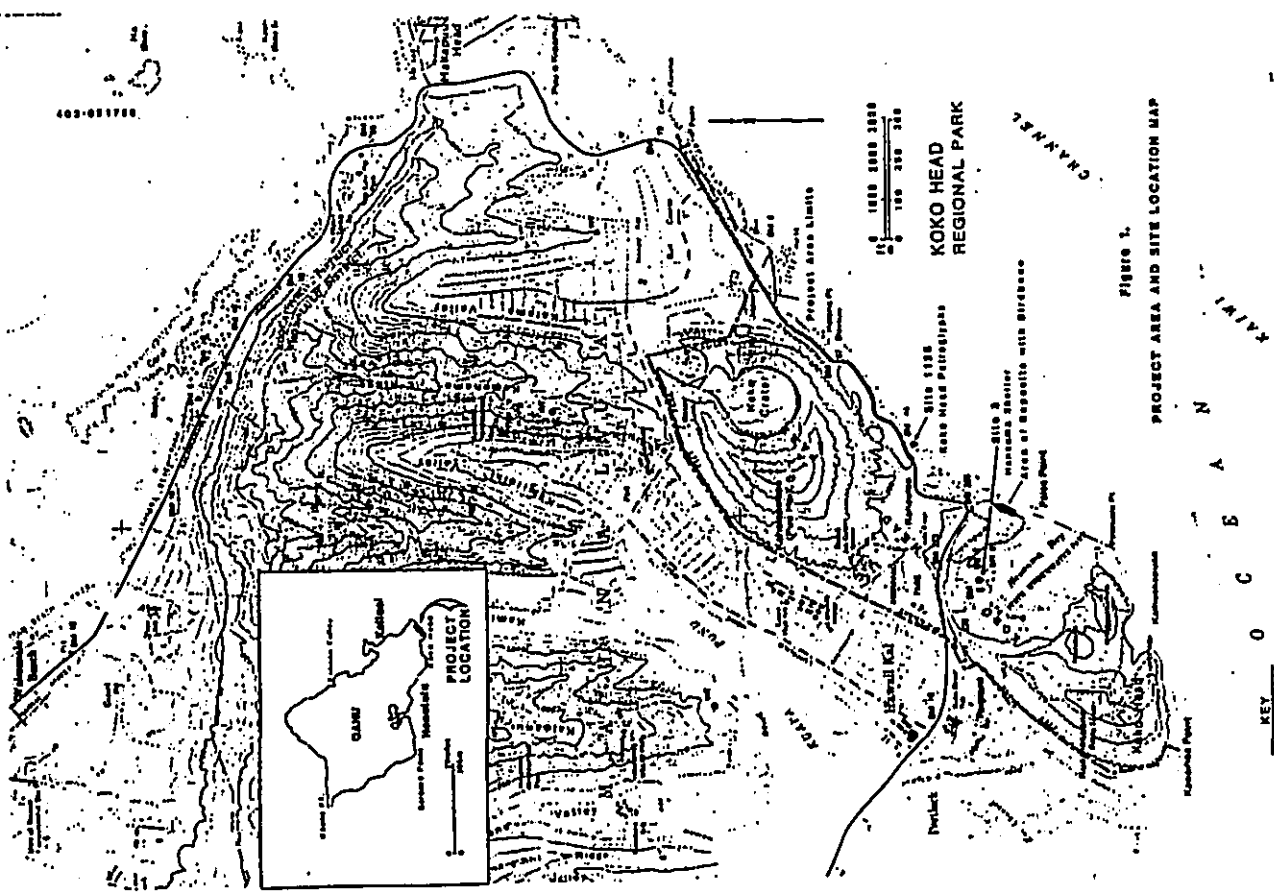


FIGURE 3.  
PROJECT AREA AND SITE LOCATION MAP

KEY  
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A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

**APPENDIX D**

**Koko Crater Slope Burials, State Site No. 80-15-4194**

**State Department of Land and Natural Resources  
File Memorandum**

**December 14, 1989**

JOHN WAINKE  
DIRECTOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

P. O. BOX 571  
HONOLULU, HAWAII 96809  
14 December 1989

WILLIAM W. PATY, CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES

CELVIES  
Keith W. Ahue  
MAHALEU TAGOMOHU  
RUSSELL N. FUKUNOHO  
ACQUACULTURE DEVELOPMENT  
PROGRAM  
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CONSERVATION AND  
ENVIRONMENTAL AFFAIRS  
CONSERVATION AND  
RESOURCES EMPLOYMENT  
COMMISSION  
FORESTRY AND WILDLIFE  
LAND MANAGEMENT  
STATE HISTORIC PRESERVATION  
PLANNING AND  
WATER AND LAND DEVELOPMENT

MEMORANDUM

TO: Files

FROM: Carol Kawachi and Holly McElDowney, Archaeologists,  
Historic Preservation Program

SUBJECT: Koko Crater Slope Burials, Koko Head Park, Maunaloa,  
O'ahu Island State site no. 80-15-4194  
TWK 3-9-12:01

Introduction

Kert D. Wilson, (47-671 Hui Kela St. #6, Kaneohe, O'ahu 96744), reported by telephone the discovery of possible human bones on the eastern slope of Koko Crater. He and his uncle had been hiking, trying to get into the crater when they discovered the scattered bones on a steep incline. Kert brought the following bones into our office on Wednesday, 13 December: a femur head, part of an acetabulum, and two cranium fragments.

On Saturday, 15 December at 7:00 a.m., we met with Kert at Sandy Beach so he could guide us to the exposed remains, record the site, assess its extent and the degree of disturbance. Kert's cousin, Chris, accompanied us on the hike while his aunt and uncle waited for us at the Sandy Beach parking lot.

Site Location and Condition

The skeletal remains found by Kert and his uncle were located in a section of Koko Crater's eastern slope where occasional slumping had left two major scars on the crater rim and upper slope (Figure 1). Slumping began near the crater rim, exposing the cemented tuff that forms the bluff along the rim and creating two talus lobes of rubble (loose silt, small to fine



Figure 1. View to northwest. Burial site, (bare spot at crater rim in top center) as seen from Sandy Beach Park.

pebbles and scattered fine cobbles). The lobes are still bare of vegetation and the surface of the exposed tuff appears unweathered, indicating that the slump must have occurred recently. This is supported by 1971 aerial photographs which show the area covered in vegetation (Figure 2). The steepness of the slope and the instability of the rubble made recording and assessing the site very precarious. The site was therefore recorded by photographs (Figures 3 & 4) and a sketch map (Figure 5).

The concentrations of skeletal remains (A and B) were found at the interface of the cemented tuff cliff and the sloping talus on the southern lobe of the two talus lobes. Concentration A consisted of what appeared to be parts of a mandible, some teeth, a clavicle and some long bones. The degree to which they were concentrated suggest that they were in-situ rather than a secondary deposit that fell from above when ground slumping occurred. This would, however, be difficult to determine without excavation. Concentration B contained a part of a pelvis on top of ribs in addition to a fair amount of scattered bone directly downslope and to the north of the pelvis. Again it was difficult to determine with certainty the original context or location of the bones. More scattered skeletal remains were found within a natural group of boulders (C) that divide the two talus lobes as well as mixed with the eroding debris of both the northern and southern lobes. The boulders were oriented linearly (upslope-downslope) and measured roughly 2m by 5m (Figure 5).

The more intact skeletal portions were wrapped in ti-leaf and covered with loose soil and small cobbles to delay further exposure. Obvious loose bones were collected from the slopes and within the boulders and also reburied. Both efforts were an attempt to reduce the visibility of the bones so that they would not attract the attention of future visitors to the area and be further vandalized.

About a third of the way down the slope on our hike out, Chris noted some long bones eroding from the floor of a narrow overhang. This in addition to the numerous small holes or cavities in the consolidated tuff along the crater rim may indicate that there are many more burials on the slopes and that the problem of human remains being disturbed will probably recur.

#### Vegetation

Immediately north of Kalaniana'ole Highway, Kert led us through 5' high thick grass, kiawe and skinny haole-koa trees on relatively flat ground. After climbing over large boulders at

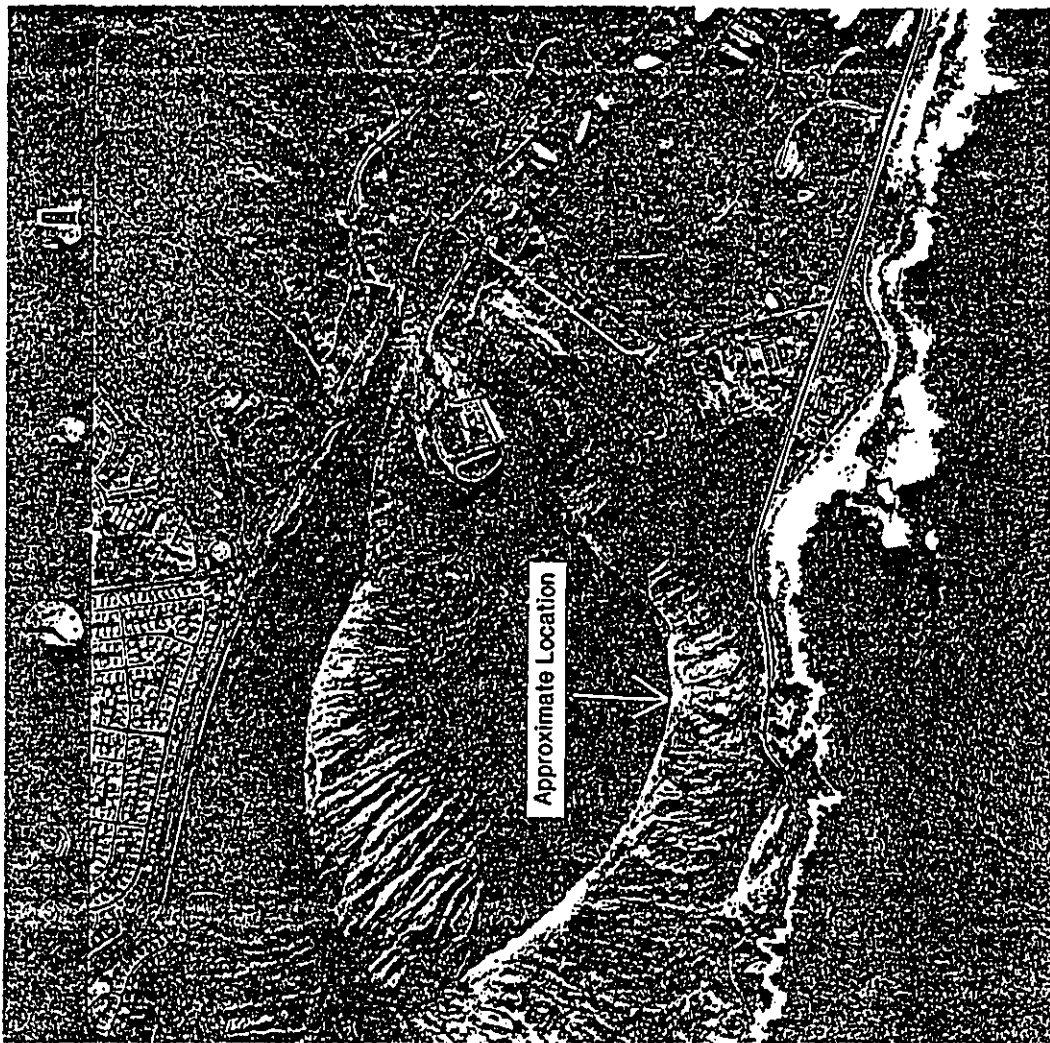


Figure 2. Aerial photo taken in 1971. No slump is seen in subject area.

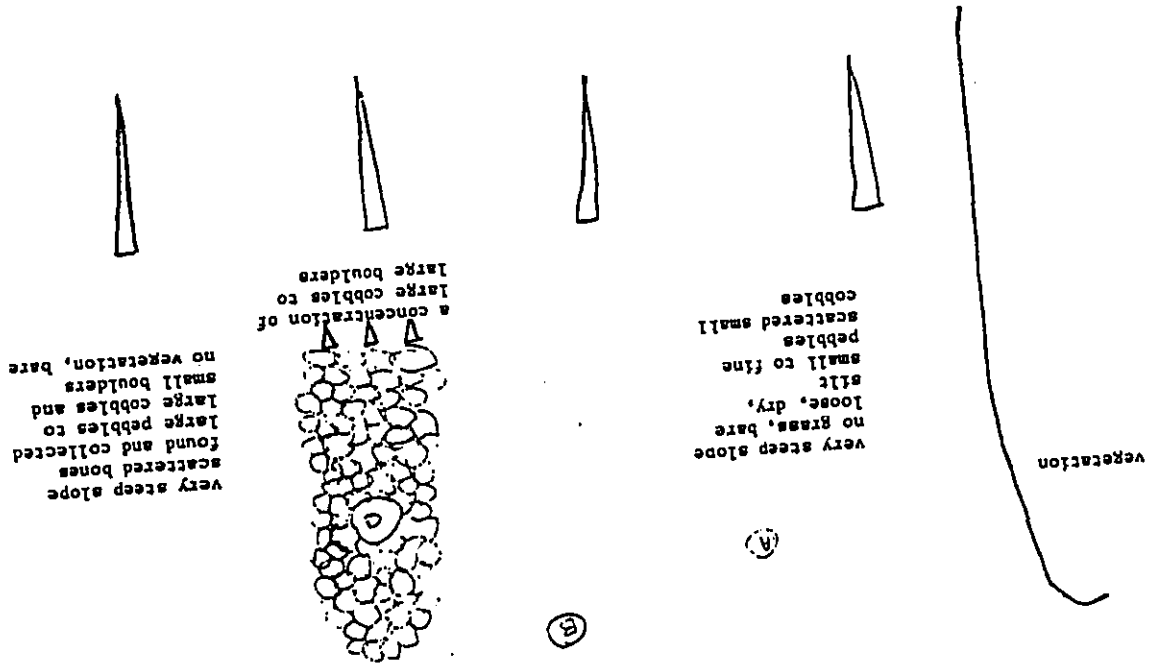
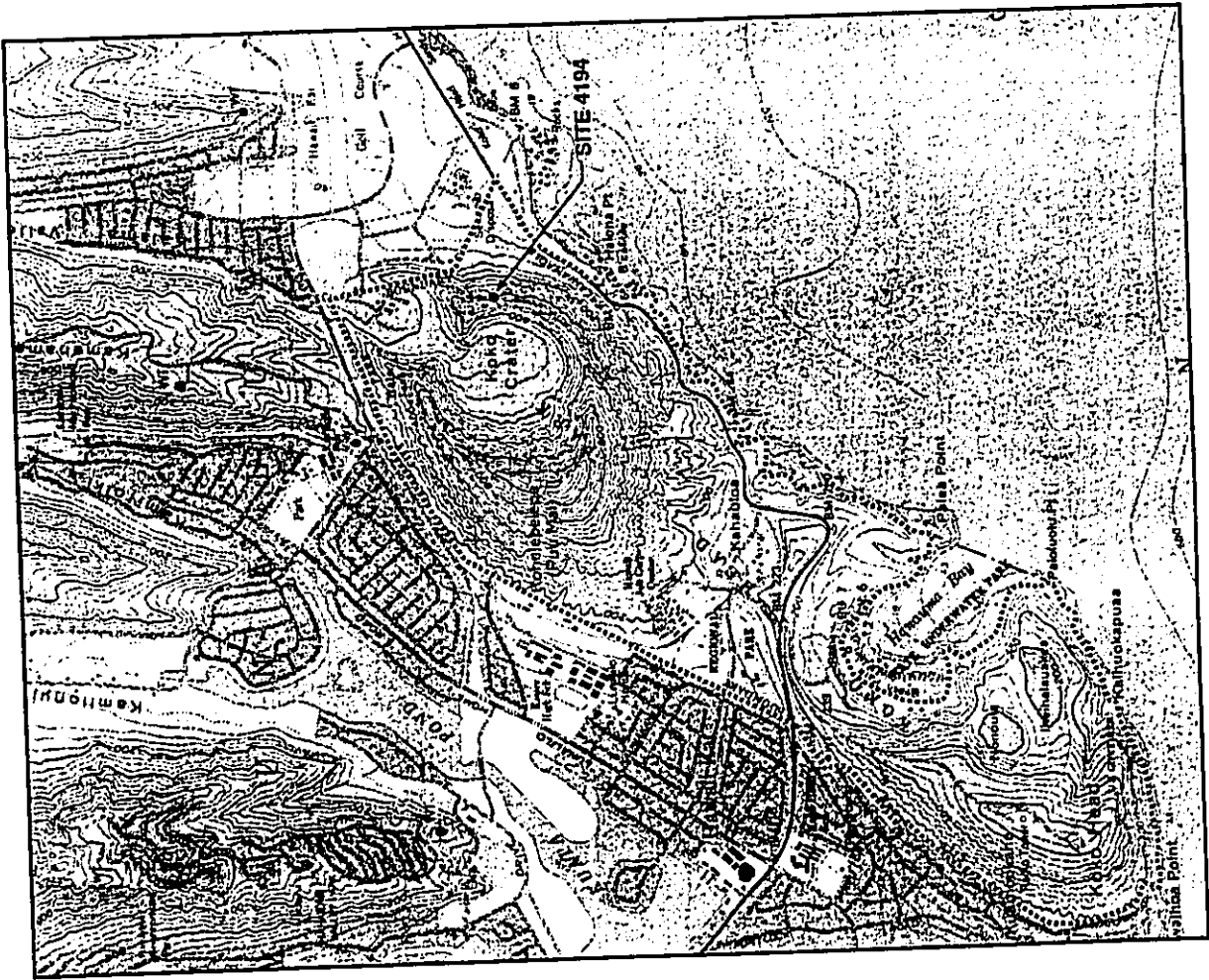


Figure 5

Rough sketch map of burial area. Not to scale.

the base of the ridge, the slope became steep and the fine silty soil of the talus made the going more difficult. Holly identified pill grass at the base of the slope. The haole-koa trees were not well anchored in the shallow soil and therefore were not much help as hand holds. Their slight condition is probably indicative of the poor, shallow soil.

#### Soil

According to the Soil Survey of the Island of Oahu, the soil on the eastern slopes of Koko Head Crater are classified as KsD: Koko silt loam, 12 to 25 percent slopes: rock land-stony steep land association: steep to precipitous, well-drained to excessively drained, rocky and stoney land. This association consists of stony and rocky, steep to precipitous slopes. The annual rainfall is 15 to 50 inches; the mean annual soil temperature is between 67 and 75 degrees Fahrenheit. Kiawa, buffelgrass, and finger-grasses grow in the drier areas. Rock land is 25 to 80 percent rock outcrop, occurring on steep mountainsides. The soil material is very shallow (1972:7, map 68, soil legend).

On the way out, we took a route more to the east. Part of the way, we followed a dry stream bed. We also crossed what appeared to have been an abandoned jeep road thoroughly overgrown.

## APPENDIX E

Archaeological Inventory Survey Of Eight Areas Within the Koko  
Head Regional Park, Maunaloa Ahupua'a, Island of Oahu (TMK  
3-9-12:1, 2, 4, 6, 8, 9, 10, 12, 13, 14 & 16)

Cultural Surveys Hawaii

November 1988



**ABSTRACT**

At the request of Group 70 International Inc., Cultural Surveys Hawaii has conducted an archaeological inventory survey of eight areas within the Koko Head Regional Park. The survey areas were specific localities at Koko Head, Koko Crater, and Hanauma Bay.

No traditional Hawaiian archaeological sites were observed within any of the study areas. However, two military sites were recorded. Background historical research indicated that both sites comprised structures constructed more than fifty years ago. Site 50-80-15-5698 are bunkers and an associated structure at the end of Koko Head which were constructed in the 1930s as an element of O'ahu's coastal defenses. Site 50-80-15-5699 is the remnants of the former Koko Crater radar installation which, besides the radar instruments at the summit, included a tramway and a base camp. The installation was first established in 1942.

It is Cultural Surveys Hawaii's recommendation that both sites be preserved if possible. It is additionally recommended that research (e.g. archival-quality photographs) be conducted with the aim to further document the architectural qualities of these sites. Additional research would be particularly appropriate if the sites or components of the sites could not be preserved.

**ARCHAEOLOGICAL INVENTORY SURVEY  
OF EIGHT AREAS WITHIN THE KOKO HEAD REGIONAL PARK,  
MAUNALUA AHUPUA'A,  
ISLAND OF O'AHU  
(TMK 3-9-12:1,2,4,6,8,9,10,12,13,14 & 16)**

by

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Prepared for

GROUP 70 INTERNATIONAL INC.

Cultural Surveys Hawaii  
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## I. INTRODUCTION

### A. Project Description

At the request of Group 70 International Inc., Cultural Surveys Hawaii has conducted an archaeological inventory survey of eight areas within the Koko Head Regional Park, located in Maunaloa *ahupua'a* on the island of O'ahu (TMK 3-9-12:1,2,4,6,8,9,10,12,13,14 & ) (Figure 1-3). Koko Head Regional Park comprises approximately 1,265 acres at the southeast tip of O'ahu and includes: the Hanauma Bay Nature Preserve, Koko Head District park, Halona Blow Hole, Koko Crater Botanical Garden, Koko Head Shooting Complex, and a portion of Sandy Beach Park.

The eight areas within the park - designated Study areas 1 to 8 throughout this report - which are the focus of the present inventory survey include:

- |               |   |
|---------------|---|
| Study Area 1: | Former Hawai'i Job Corps camp at the southwest base of Koko Crater  |
| Study Area 2: | Corridor of the former tramway on southwest slope of Koko Crater  |
| Study Area 3: | Summit of Koko Crater at the terminus of the tramway (site of former radar installation)  |
| Study Area 4: | Area at intersection of Kalaniana'ole Highway and the entrance road to Hanauma Bay  |
| Study Area 5: | Area of the present Hanauma Bay visitor center and parking lots   |
| Study Area 6: | Beach area of Hanauma Bay limited to the grounds surrounding the concession and comfort station at the base of the access road to the beach |
| Study Area 7: | Koko Crater Botanical Garden loop trail   |
| Study Area 8: | Koko Head communication facilities access road and area at summit   |

These areas are proposed for future park development projects.

### B. Scope of Work

The scope of the work for the archaeological inventory comprised:

1. Historic background research including study of historic maps, archival documents, previous archaeological and historical studies, and other sources for the purpose of identifying 20<sup>th</sup> century land use within the Koko Head Regional Park area and Maunaloa *ahupua'a*. Special concern focused on documentation of pre-1950 building activity - especially by the U.S. military - within the portions of the Koko Head Regional Park subject to the present inventory survey.

Note: Group 70 International Inc. has commissioned Kumu Pono Associates to prepare a separate report presenting archival-historical documentary research on the Koko Head Regional Park area and Maunaloa *ahupua'a*, focusing on the pre-contact traditions, but including 19<sup>th</sup> and early 20<sup>th</sup> documentation of land use.

2. Inventory survey fieldwork consisting of surface survey of the eight study areas for the purpose of locating and documenting any archaeological or historical sites. Documentation to include photographs and field notes.
3. Preparation of a report detailing the results of the historic research and fieldwork. The report includes significance assessments and recommendations for mitigation of impact to archaeological and historical sites.

### C. Methodology of Work Accomplished

Archaeological inventory survey of the eight areas within the Koko Head Park Nature Preserve was accomplished on October 28 & 29, and November 4, 1998. The survey field crew consisted of: Douglas Borthwick, supervising archaeologist; John Winiteski; and Rodney Chiogioji.

The inventory survey consisted of complete ground coverage by pedestrian sweeps. All of the study areas inspection Study areas 1, 2, 3, 4, 5, 6, 7 and 8 were surveyed by a team of two archaeologists. Study area 6 - the portion of the beach at Hanauma Bay - was surveyed by one archaeologist. Photographs of existing features and appropriate notes were taken at each study area. Visibility was excellent in all areas, since all have been developed; improvements in these areas include: roadways, a tramway, concrete foundations, concrete bunkers, a former Job Corps camp, and currently in-use visitor facilities at Hanauma Bay.

Background research included: a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; review of documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Research on former military activity within the Koko Head Nature Preserve was accomplished at the Army Museum at Ft. DeRussy and the History Office at Hickam Air Force Base.

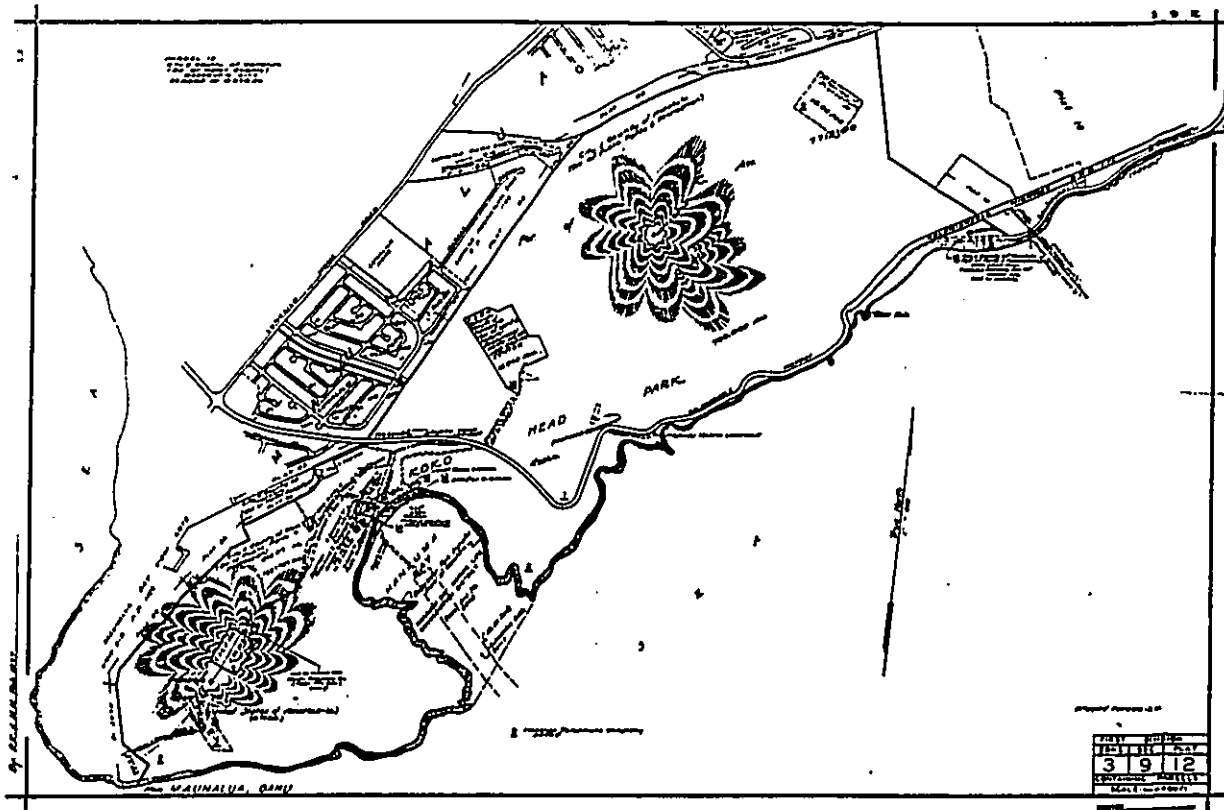


Figure 2 Tax map showing Koko Head Regional Park

4



Figure 1 Portion of USGS 7.5 Minute Series Topographical Map, Koko Head Quadrangle, showing Koko Head Regional Park

3

## II. NATURAL SETTING

The geology, topography, and coastline of Maunaloa *ahupua'a* are the result of the erosional history of the Koolau volcanic series and the more recent activity of the Honolulu Volcanic Series. The ridge of the Koolau mountains was created, during a two million year period, by the cutting of windward and leeward valleys into the Koolau shield volcano. Subsequently, at Maunaloa *ahupua'a*, the Honolulu volcanic series created the Koko Rift, an ensemble of cones, vents and other formations on top of the Koolau series. These formations include: Hanauma Bay, Koko Crater, Koko Head, and Makapu'u Head. A National Park Service report notes:

In its entirety, the Koko Rift contains examples of virtually all types of Honolulu volcanic series activity, including lava flows, tuff and ash cones, and cinder cones. Sea caves and at least two blowholes occur in the Koko Rift...

...the eastern flank of Koko Crater contains the only base surge deposits known on the islands, and the Koko Head-Hanauma Bay-Koko Crater complex contains one of the best examples of tuff cones in the islands...Hanauma Bay occupies the former principal crater of Koko Head and...provides a unique example of an old tuff cone that has been breached by wave erosion. Koko Crater is the largest, highest (at 1,208 feet elevation), and best preserved cone in the Koko Rift...(National Park Service 1992:14)

Vegetation within the Koko Head Nature Preserve includes *koa haole*, predominantly on the slopes of Koko Crater and Koko Head; *kiawe*, predominantly surrounding Hanauma Bay and on the floor of and the flatlands below Koko Crater; and various native shoreline plants.

Also to be noted are plantings within and surrounding the Koko Crater Botanical Garden, inside Koko Crater. As was recorded in the same National Park Service report cited above:

The floor of the crater is covered with dryland plants, including introduced *kiawe* and a large grove of native *wilwil*...Plant collections in the inner crater include climbing cacti, aloes, euphorbias, *sansevierias*; and palms. *Bougainvillea* and *plumeria* cultivars decorate the outer crater. (*Ibid.*:14)

6

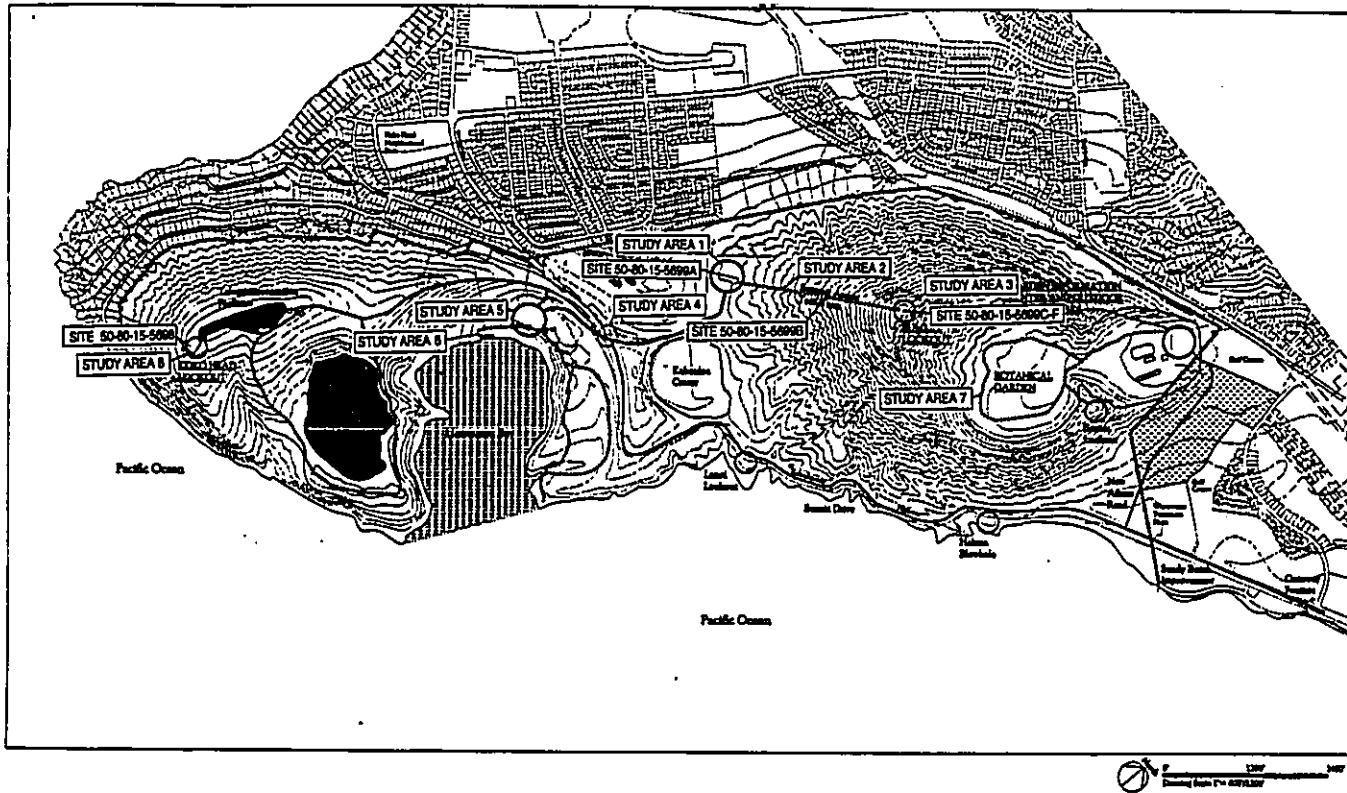


Figure 3 Eight survey areas in Koko Head Regional Park showing locations of archaeological sites recorded during present survey

### III. MAUNALUA AHUPUA'A AND THE KOKO HEAD REGIONAL PARK: MODERN HISTORICAL DOCUMENTATION

A discussion of pre-20th century land use, history and Hawaiian traditions of Maunaloa ahupua'a is provided in a separate report prepared by Kumu Pono Associates (Malay and Wong-Smith 1998).

This section of the present archaeological inventory survey report details developments within Maunaloa ahupua'a - with special focus on the Koko Head Regional Park lands - that have occurred since the beginning of the 20<sup>th</sup> century. The majority of the modifications to the eight areas under present study occurred during this modern period. Especially relevant for the purposes of the present survey study is documentation of building activities within the Koko Head Regional Park pre-dating 1950, since extant structures older than fifty years may be eligible for nomination to the Hawaii Register of Historic Places and/or the National Register of Historic Places.

#### A. 1900 to 1920s

By the beginning of the 20<sup>th</sup> century, Maunaloa ahupua'a had come under the ownership of the Bernice P. Bishop Estate. After having been awarded Maunaloa ahupua'a during the mid-19th century *Mahela*, Victoria Kamāmalu had mortgaged her lands in Maunaloa to Charles Bishop in order to pay off accumulated debts. When Kamāmalu died in 1866 it fell to her father, Kekuanoa, to pay off the debts and the mortgage in order to be awarded the title to Maunaloa (Jones 1986:22-23; Takemoto 1975:21). With the death of Kekuanoa, the land of Maunaloa passed to Lot Kamehameha V. When Lot died without a will, the probate court decided that his half sister, Ruth Ke'elikolani, would inherit his entire land holdings. When Ruth died in 1883, Maunaloa was inherited by Bernice Pauahi Bishop. Bernice Pauahi Bishop was the last surviving Kamehameha and as a result inherited all of the Kamehameha lands, becoming the largest land-holder in the Kingdom of Hawaii. When Bernice Pauahi Bishop died in 1884 her husband Charles Bishop followed her will and set up the Bishop Estate Trust, of which Maunaloa became a part (Takemoto 1975:21-23).

Since the mid-1850s Maunaloa ahupua'a had been leased for ranching purposes, first by William Webster, a government employee and land surveyor, and, after Webster's death in 1864, by Manuel Paiko, who had been leasing the adjacent lands at Kuliouou. Into the 20<sup>th</sup> century Maunaloa continued to be used as ranch land.

The fishing rights to Kuapa fishpond below Koko Crater and Maunaloa's offshore fishing grounds were important resources that had been leased out to various parties since the 1850s. Kuapa Fishpond was leased in 1856 at a considerable sum for the period. The offshore fishing rights were leased and sold to various individuals until 1900 when Territorial and United States legislatures reconsidered the legality of the traditional idea of ownership of offshore fishing rights. It is clear from the high lease rates for the time period that the fishing resources of Maunaloa were productive and highly valued (Takemoto 1975:21-27).

By 1900, the population of Maunaloa had risen after precipitous decreases throughout the second half of the 19<sup>th</sup> century. Tax records indicate 38 households with 98 people living in the ahupua'a in 1855. By 1870 there were only 6 households and population bottomed out in 1880 with only 4 households. The repopulation of Maunaloa at the turn of the 20<sup>th</sup> century

likely reflects the increased ranching and commercial fishing activities that had replaced the traditional settlement and land use patterns:

By 1900, Maunaloa Ranch and Yit Lee Company, who owned a big fishing complex, employed most of the inhabitants. Maunaloa Ranch had over 1500 head of cattle, ten oxen, sixty-four horses, thirteen mules and six pigs roaming throughout Maunaloa. Five Chinese families were working for the Damons [who held the lease for Maunaloa at the time], probably as ranch hands. Five other Chinese families worked for Yit Lee. The eight Hawaiian families on the land, including one blind man, were truck farmers of some sort since all but two owned carts used for bringing goods to Honolulu . . . Thus by the turn of the century most families in the *ifi* were ranch hands, fishermen, or truck farmers living a relatively quiet life in an area which would be considered the country. (*Ibid.*:25)

The "country" atmosphere of Maunaloa at the turn of the century is suggested by a contemporary photograph (ca. 1897-1901) of Hanauma Bay (Figure 4). During the first decades of the 20<sup>th</sup> century, visitors to Hanauma Bay, traveling from Honolulu, first had to drive over sand flats, at low tide, on the *makai* side of Kuapa fishpond. A dirt road then ascended the flank of Koko Head and a trail then curved down to the bay. An early 20<sup>th</sup> century map shows the unimproved route to Hanauma Bay (Figure 5). No roadway then continued along the coastline beyond Hanauma. As also shown on the map, access to Maunaloa lands east of Koko Crater was provided by a road that flanked the east side of Kuapa pond, passed Habaione, ran between Kamehame Ridge and Koko Crater, and stretched across the Wawamalu/Ke'ohobaihai area of Maunaloa.

Maunaloa became more closely tied to the modern world after 1900. In 1906 the luxury steamer *Manchuria* ran aground off Waimanalo. The result of the outcry that followed was the construction, in 1909, of the Makapu'u lighthouse which contains, until the present, the largest magnifying lens of all U. S. lighthouses (Dean 1991:Part 14). In 1914, the Marconi Wireless Telegraph Company of America built a receiving station on the slopes of Koko Head on land that was leased from the Bishop Estate for 50 years. The station was built to receive messages 24-hours a day from San Francisco and was billed as the most powerful wireless station in the world. The station linked the Hawaiian islands with the mainland and Asia on a 24-hour basis. Early in the 1920s the Marconi station was taken over by the Radio Corporation of America and was used for transmission (Takemoto 1975:28). A portion of the network of Marconi radio towers below Koko Crater is shown in a photograph of 1919 (Figure 6).

Agriculture, in the form of truck farming and an agricultural school, increased in Maunaloa after the turn of the century. The Kamehameha School for boys ran an agricultural farm in Hahaione Valley with 45 acres for vegetables and 200 acres for livestock (Jones 1996:27). Truck farmers increased in number in the area as well, providing hogs, flowers, lettuce and other vegetables for the growing population of Honolulu. Much of the area around Kuapa Fishpond was occupied by truck farmers by the end of the 1920s and this type of farming would expand (Kelly et al. 1984:47).

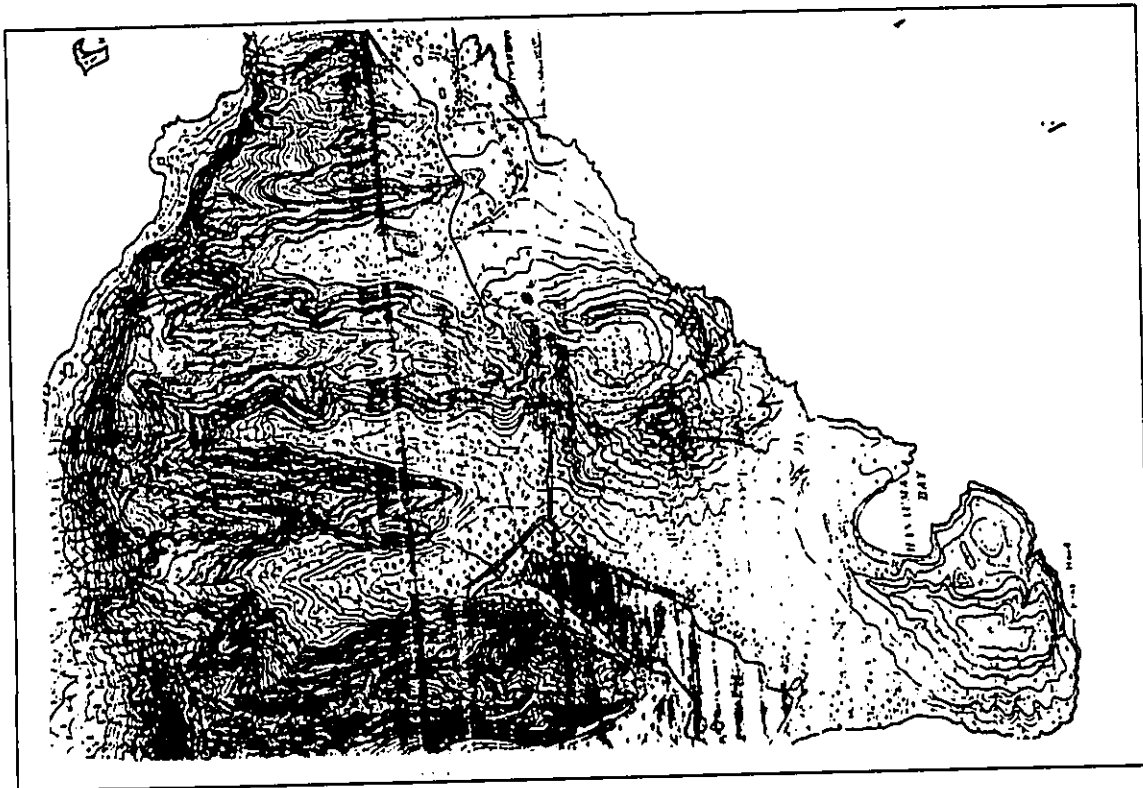


Figure 5 Portion of 1909-1913 military survey map of Oahu showing Hanauma Bay, Koko Crater and Kaloko Beach area of Maunaloa *chupua* a

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Figure 4 Hanauma Bay, west portion, ca. 1897-1901 (Photo by Frank Davey, Courtesy of Bishop Museum)



By the late 1920s, development plans for its lands at East O'ahu spurred the Bishop Estate to sell a portion of its Maunaloa lands to the City and County of Honolulu. Marion Kelly summarizes the transaction:

In 1928 the Bishop Estate Trustees sold to the City and County of Honolulu a large area of land in the *ahupua'a* of Maunaloa (1,325.10<sup>00</sup> acres in 5 parcels) for the amount of \$1.00. According to Geoffrey Podmore, retired Bishop Estate Land Division Superintendent, the real gain for the Estate was the assurance that the City and County would extend and maintain the City water system through Maunaloa. As Podmore recalled, the City water system went only as far as the boundary of Maunaloa, and the Trustees wished to develop the Portlock subdivision as well as other land in the area...

To protect its business interests, the Estate Trustees also restricted use of the conveyed land to "public parks and/or rights of way..." The City was further specifically restricted from using the conveyed land for any wireless telegraph or telephone stations "during the continuance of Bishop Estate Lease No. 1472a which will expire April 31, 1963." This was the 50-year lease originally to Marconi Wireless Telegraph Co. of America in 1913, and taken over by Radio Corporation of America in 1922, from which Bishop Estate received income... (Kelly *et al.* 1984:50)

The 1928 land sale created the present Koko Head Park, the boundaries of which are indicated on a 1928 U.S.G.S. map (Figure 7). The map also shows how access had developed in Maunaloa toward the end of the 1920s. Paved roads now extended to Hanauma Bay. The unpaved road to Hanauma Bay had been extended along the coastal trail, *maka'i* of Koko Crater, to the Sandy Beach area. The paved road to Hanauma Bay and the trail down to the bay itself are shown in a 1929 photograph (Figure 8), also shown in the photograph are the building facilities for the Radio Corporation of America adjacent to Kuapa Pond.

As shown on the 1928 U.S.G.S. map, the unimproved access to the Sandy Beach/Blow Hole area had an extension which ran parallel to the coast to a spot marked "Heiau" on the at Wawamalu. Wawamalu (the Maunaloa lands between Sandy Beach and Makapu'u Head) was a portion of Maunaloa Ranch. The ranch controlled most of the land of Maunaloa outside of Kuapa Pond. From its inception in 1909 until it closed in 1926 over 1500 cattle made up the ranch's stock (Jones 1996:23). In 1920 the Maunaloa Ranch sublet parcels to the Honolulu Honey Company, Ltd., which had eight apiaries. The ranch land also had charcoal makers harvesting *kaiaue* during this time (Kelly *et al.* 1984:47).



Figure 6 View of Koko Crater, 1919 (Photo by E.H. Dortmund, Courtesy of Bishop Museum)



Figure 8 Hanauma Bay, November 15, 1929 (Photo Courtesy of Bishop Museum)

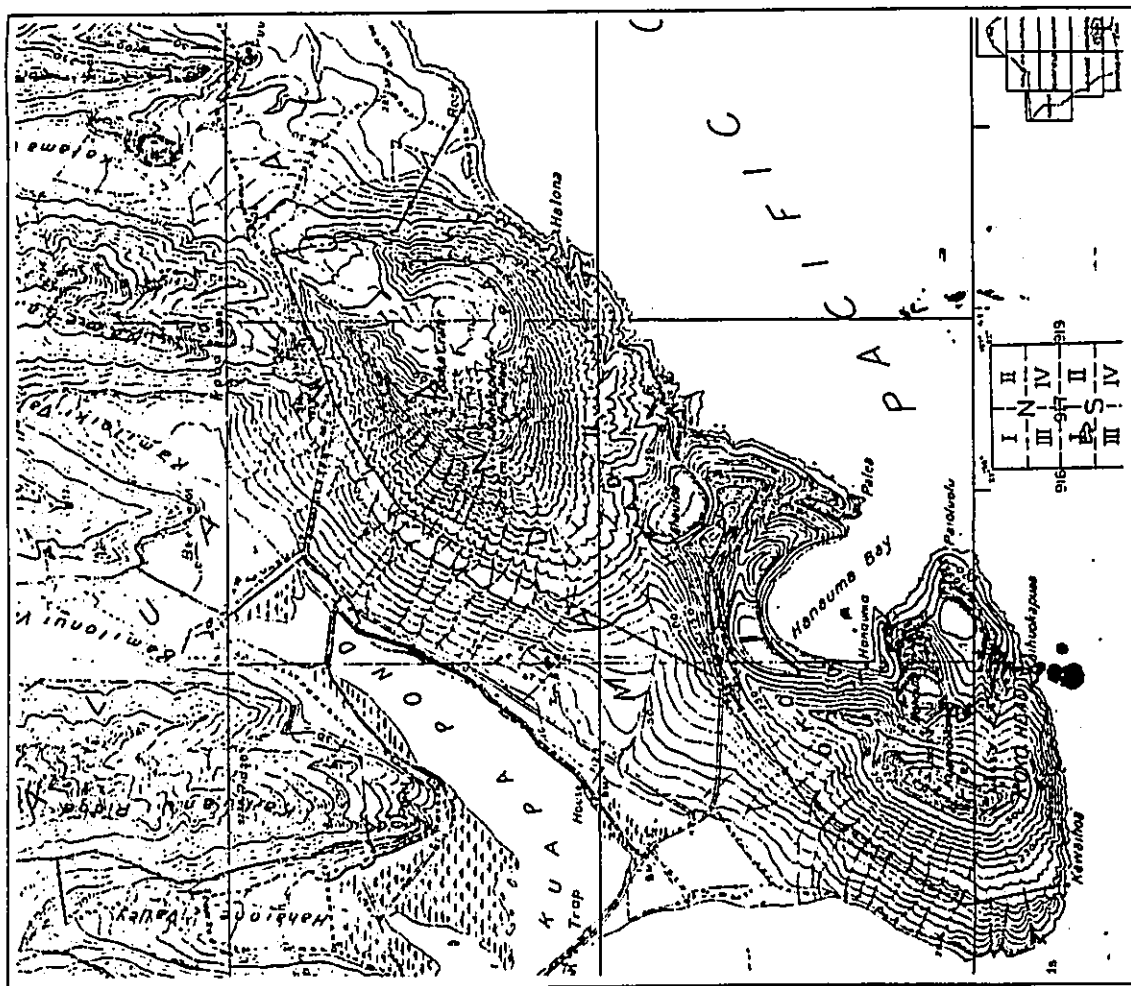


Figure 7 Portion of 1928 U.S.G.S. map showing boundaries of the newly-established Koko Head Park

**B. 1930 to 1950**

In the 1930s, the broadening U.S. military presence in the Hawaiian Islands would impinge upon the lands of Maunaloa and the Koko Head Park:

In 1933, the War Department approved a project for Hawaii that called for the addition of eighteen 8-inch guns to the secondary defenses. While 16 of these were to be railway guns, the other two were to be mounted at Black Point. Upon its completion in May 1935, the new [battery] was named in honor of Brigadier General Granger Adams... (Thompson [no date]:73)

Three fire control stations - look-out installations to direct fire for gun emplacements - were constructed to support Battery Granger Adams: at Diamond Head, Makapu'u Point, and Koko Head (*Ibid.*:74). An information sheet for one of the Koko Head fire control station units indicates that it was constructed in 1934, and consisted of a reinforced concrete bunker which was concealed by earth fill on its roof (Figure 9).

After the Maunaloa Ranch Co. had closed in 1926, their subletters were given direct leases from the land owner, Bishop Estate. Alan Davis and others were given a ranching lease in 1932. They started the Wawamalu Ranch. The Davis home and swimming pool were constructed near the shore at Ke'ilili, while various ranch infrastructure, such as corrals, wall, and water tanks was situated at Kaloko (Kelly et al. 1984:56).

The Alan Davis ranch house at Kaloko was the easternmost private residence on O'ahu during the 1930s and 1940s, until its destruction in the 1946 tsunami. Ranching didn't prove profitable enough, so the subleasing of Maunaloa land for truck and flower farms, chicken farms, and piggeries was expanded. Pig farmers and other were pushed out of the Hawaii Kai area and moved over the hill back of Koko Crater and into Kalama and Wawamalu Valleys. As farmers were evicted from other communities, such as when Wai'elae-Kamala, Wailupe, and Niu were urbanized, more of them moved to Maunaloa with short-term leases. (Kelly et al. 1984:56)

The construction of Kalamiana'ole Highway through Maunaloa was finally completed in 1932, when the last stretch of road from Waimanalo to Wawamalu was completed. The bridge at Wawamalu was constructed in 1931. At the Hanauma Bay end of the Maunaloa coastline, the unimproved road from the bay to Sandy Beach had been paved over to complete the southeastern portion of Kalamiana'ole Highway. This portion of the new highway is shown in two aerial photographs of the 1930s (Figures 10 & 11). The photographs indicate that little development of the park areas had taken place, but the improved access along the coast between Hanauma Bay and Sandy Beach would spur the installation of the rifle range in Kahaouka Crater later in this period.

World War II initiated significant developments within Maunaloa *ahupua'a* and the lands of Koko Head Park. The entire park area was taken over by the U.S. military and designated the Koko Head Training Center (Figure 12). Areas along the training center coastline were used for amphibious landing exercises throughout the war.

6608 (Simultaneous)

U. S. ENGINEERS OFFICE  
 DEC 10 1934

REPORT OF COMPLETED WORKS - SEACOAST FORTIFICATIONS

Form No. 2. Corrected to December 5, 1934.

HARBOR DEFENSES OF HONOLULU  
 Structure: Fire Control Station "B"  
 Koko Head for Battery GRANGER ADAMS  
 Fort Ruger, T. H.

|                                     |  |
|-------------------------------------|--|
| Location                            | C. & G. Survey Trig. Sta. Koko Head, Az. 354° 20' Dist. 0.11 |
| Date of transfer to date            | October 29, 1934.  |
| Cost of construction:               | \$2,047.21   |
| (a) Roof                            | Reinforced concrete  |
| (b) Remainder of building           | Earth fill on roof cut and cover top                         |
| How concealed                       | Not above  |
| How protected                       | "  |
| Height above concealment            | "  |
| Height above protection             | "  |
| Conspicuous at 500 yards?           | No   |
| Source of electric current          | Portable storage   |
| Kilowatts required                  | 0.1 KW   |
| Type of lighting fixtures           | Commercial   |
| How heated                          | Not required   |
| Connected to water mains            | No   |
| Type of latrine                     | None   |
| Connected to sewer                  | No   |
| Permanent or temporary installation | Permanent  |
| Present condition                   | Good   |
| Reference of site                   | 530.0' above m.  |
| " " " " instrumental axis           | 538.8' "   |
| Type of observing board             | D.P.F. instruments   |
| " " " " plotting board              | None   |
| " " " " data transmission           | Telephones by S  |

*Inclusion included on that base  
 Reported in Report of Operations for October  
 show on Fortification Index 1934  
 2002 200 (2000) 2001 125 Ind.*

Figure 9 1934 U.S. Army Engineers information sheet on fire control station unit at Koko Head (Courtesy of U.S. Army Museum of Hawai'i, Ft. DeRussy)



Figure 11 View from Koko Crater, O'ahu, 1937 (Ray Jerome Baker Collection, Bishop Museum)

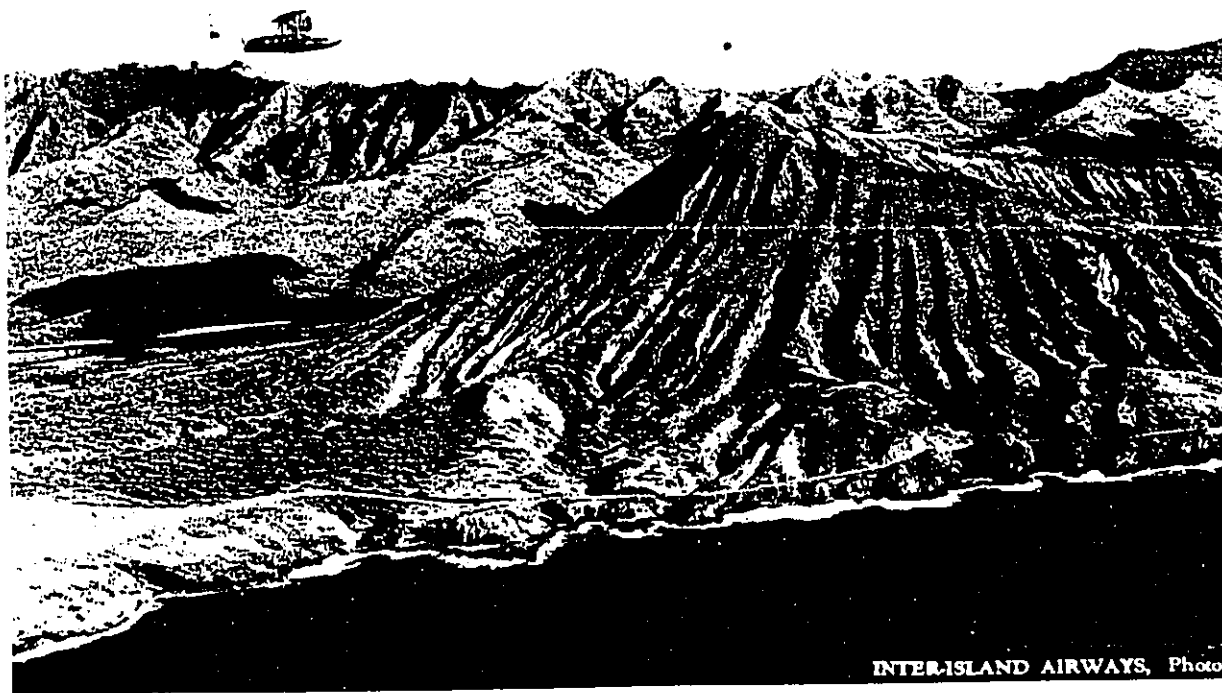


Figure 10 Aerial view of Koko Crater, O'ahu, ca. 1930 (Photo by Inter-Island Airways, Courtesy of Bishop Museum)

In 1942 a radar station was installed at the top of Koko Crater. The station was accessed by a tramway running from the base of Koko Crater, where a camp housing the radar personnel had been constructed. To grade the tramway corridor, a bulldozer had been brought to the top of Koko Crater via a less-slope. The bulldozer, secured by a winch line, cut the tramway grade from the top of the crater to the bottom.

Following the war the radar station continued in operation, manned by the U.S. Air Force. A series of military photographs taken in 1948 and 1949 shows the extent of the radar complex at the top and bottom of Koko Crater at mid-century (Figures 13-28). Comparisons among the photographs indicate considerable building activity between 1948 and 1949. (The photographs comprise valuable clues for the present inventory survey, helping to establish the ages and functions of any extant structures of the radar facility.)

**C. 1950s to Present**

The radar installation at Koko Crater continued in operation - first manned by the U.S. Air Force and then by the Hawaii Air National Guard - until it was closed in 1966. The camp at the base of the crater subsequently became the site of the Hawaii Job Corps center and of the Koko Head District Park.

In 1967, state law designated Hanauma Bay an underwater park and conservation area:

The present regulations state that it is "unlawful for any person to hook, spear, seine, capture, kill, destroy, alter, deface, possess or remove any fish, crustacea, mollusk, sea shells, coral or any other animal life, or any sand or any geologic features, from the Conservation District. Possession by any person of fishing gear, including, but not limited to hook and line, rods, reels, seines and spears, crowbar and noxious chemicals, with the Conservation District shall be deemed to be prima facie evidence of violation of this regulation." (Clark 1977:30)

Above Hanauma, Koko Head became a "prime location for telecommunications facilities. The summit has become the site of an aircraft navigational facility, radio receivers, antennas and radio relay stations, and most recently microwave receiver sites and cellular telephone facilities" (National Park Service 1992:19). At the northeast end of Koko Head Park, the botanical garden was established.

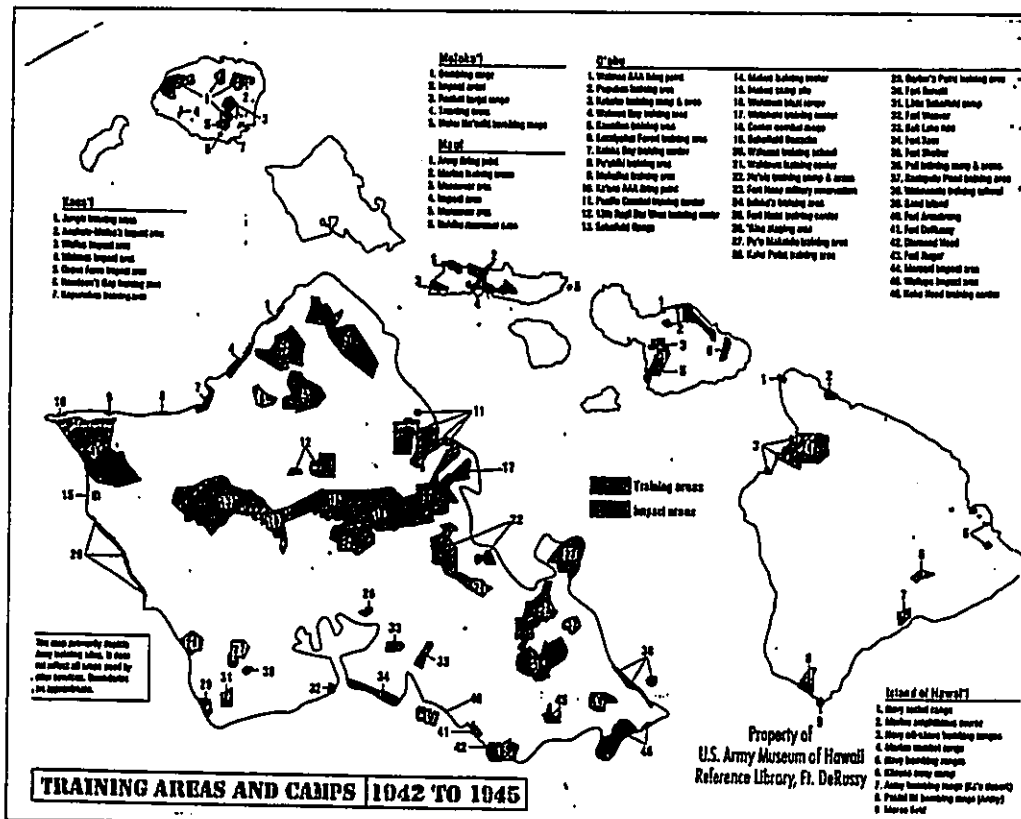
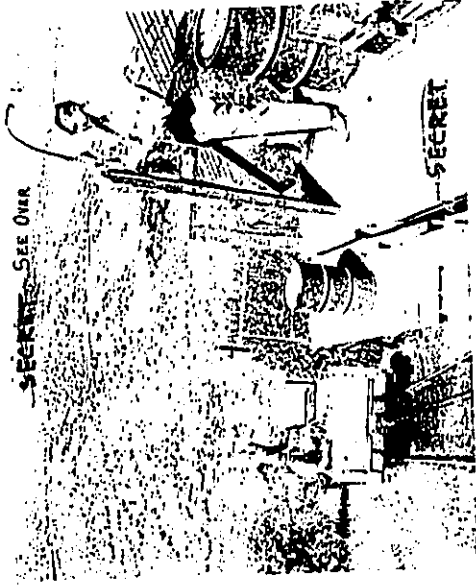


Figure 12 Map of U.S. Army training areas and camp in the Hawaiian Islands, 1942-1945 (Courtesy of U.S. Army Museum of Hawaii, Ft. DeRussy)



Figure 13 "Koko Head Radar Site", Oahu, May 26, 1948 (Courtesy of History Office, Hickam Air Force Base)



SECRET SEE OVER

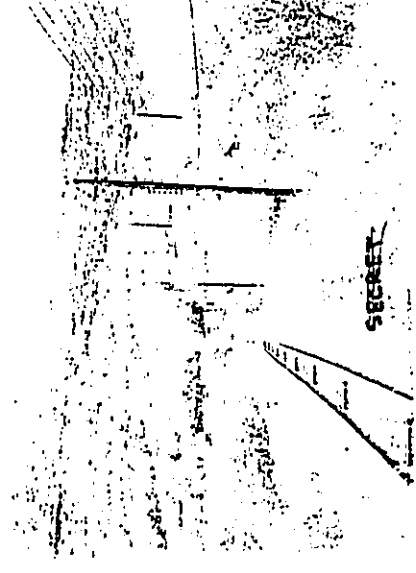


Figure 14 Views of Koko Crater tramway, Aug. 7, 1948 (Courtesy of History Office, Hickam Air Force Base)

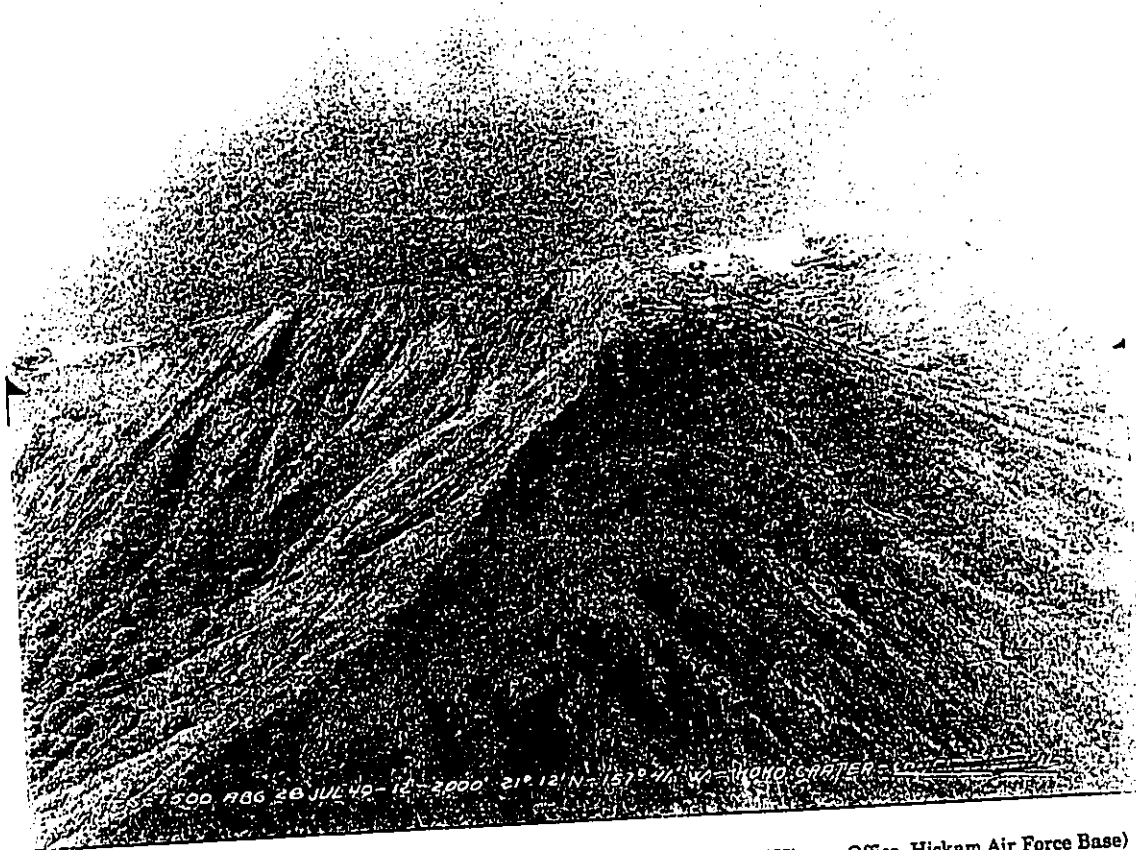


Figure 16 Radar installation at top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)



Figure 15 Water tank on slope of Koko Crater and concrete structure near top of crater (Courtesy of History Office, Hickam Air Force Base)



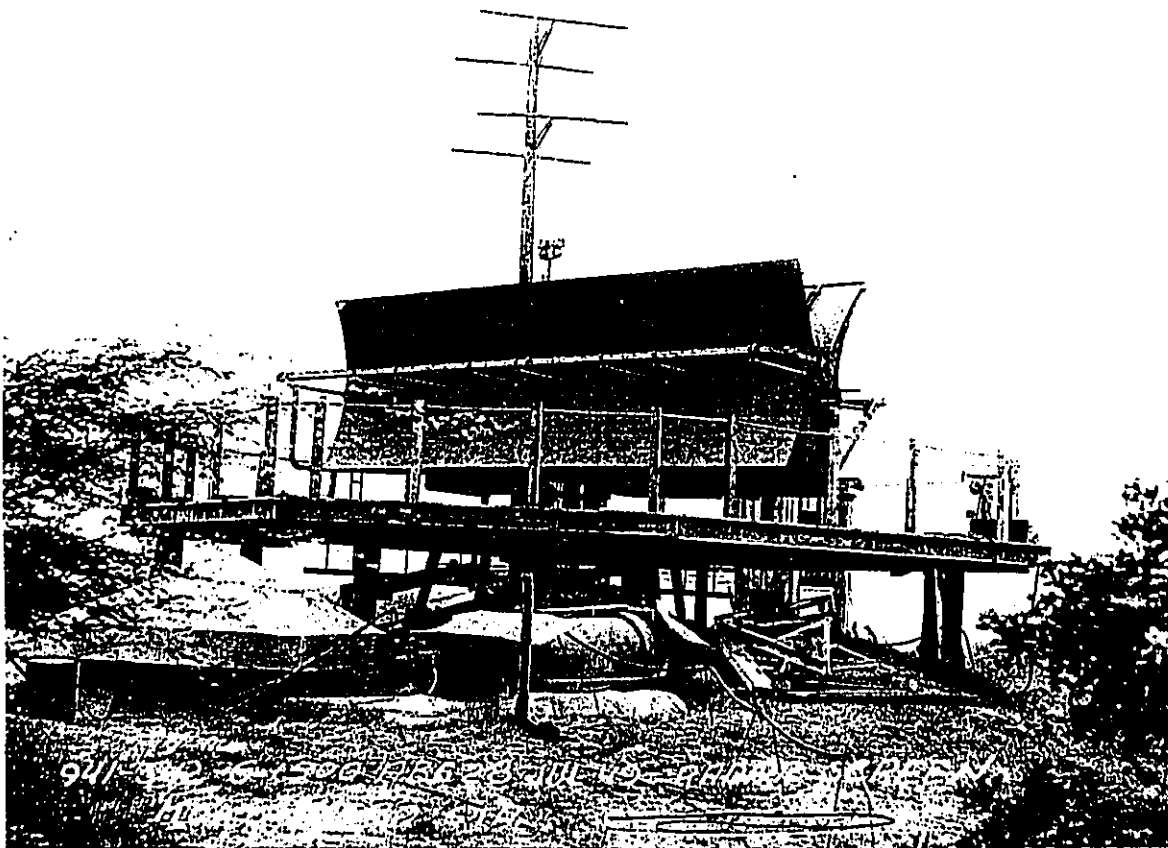


Figure 18 Radar screen at top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

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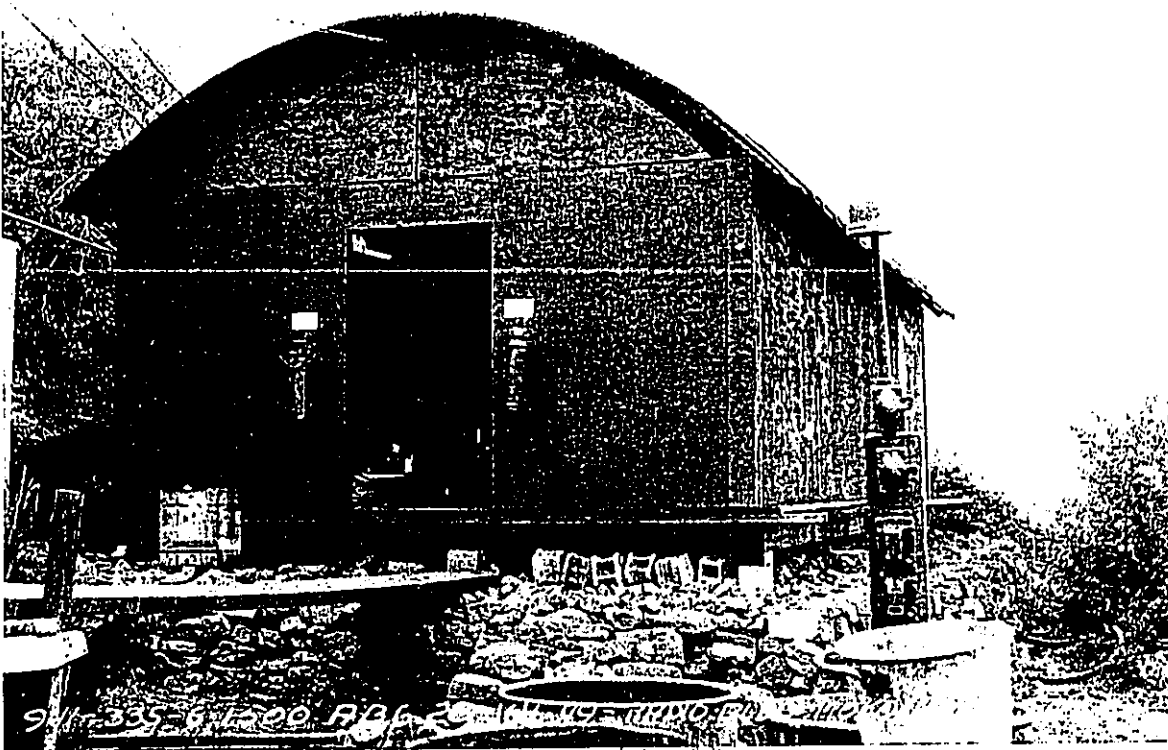


Figure 17 Radio building near top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

25



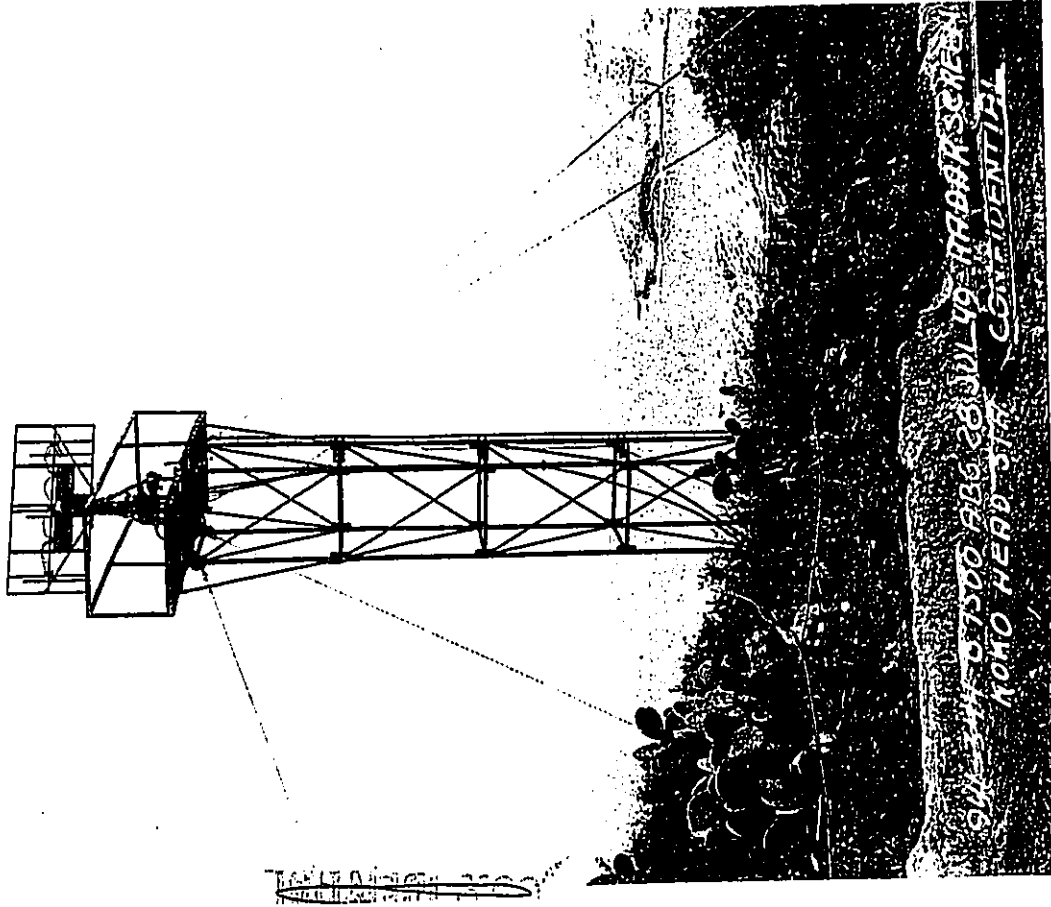


Figure 20 Radar screen at top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

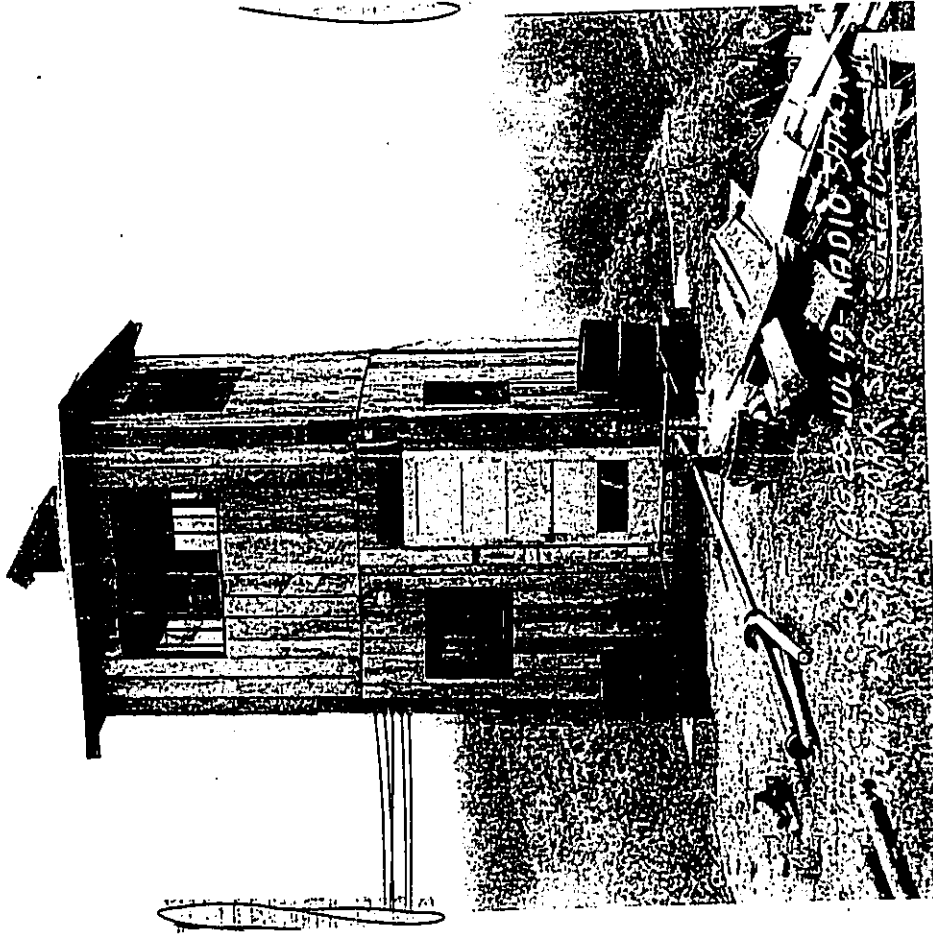


Figure 19 Radio shack at top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

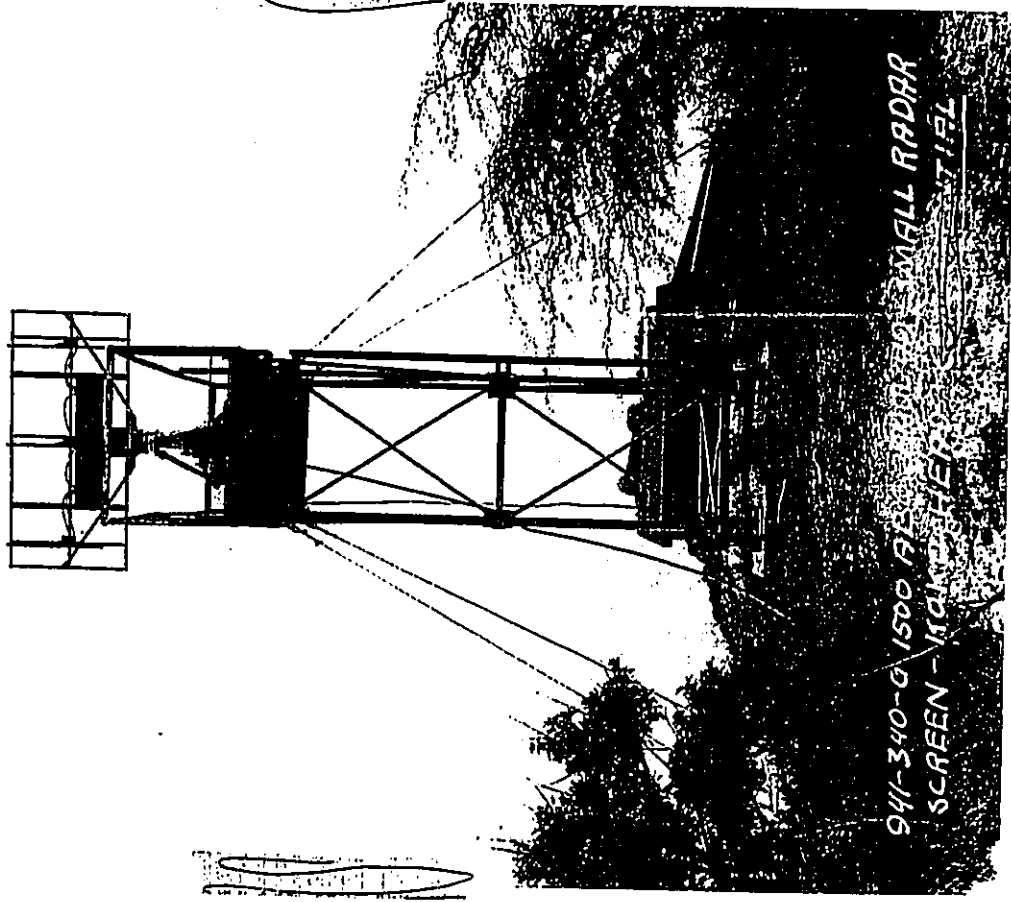


Figure 21 Small radar screen at top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

29

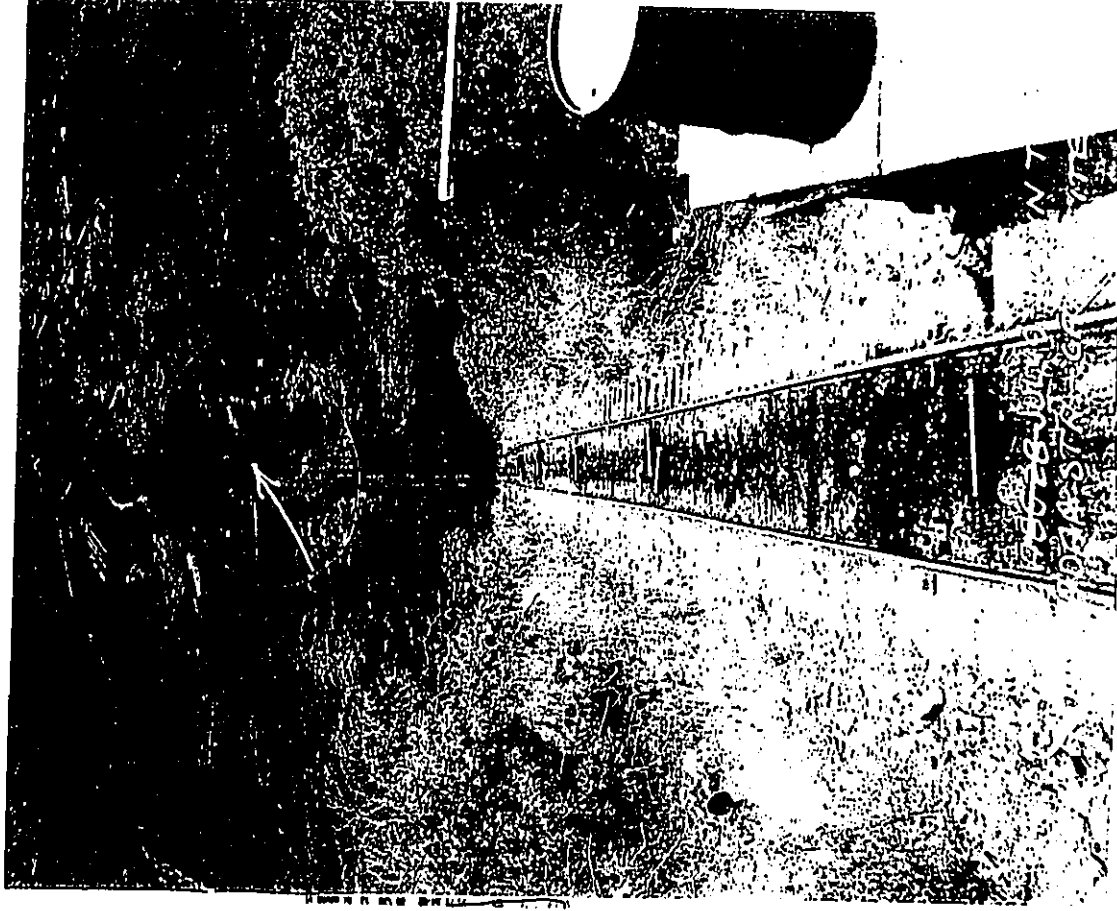


Figure 22 View down tramway from top of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

30

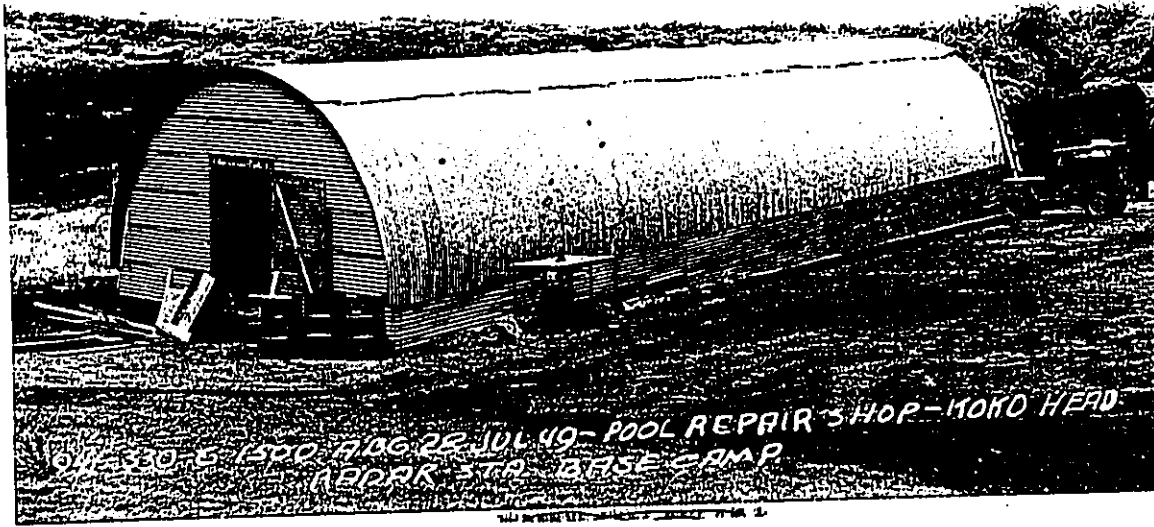


Figure 24 "Pool Repair Shop - Koko Head Radar Sta. Base Camp", July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

32

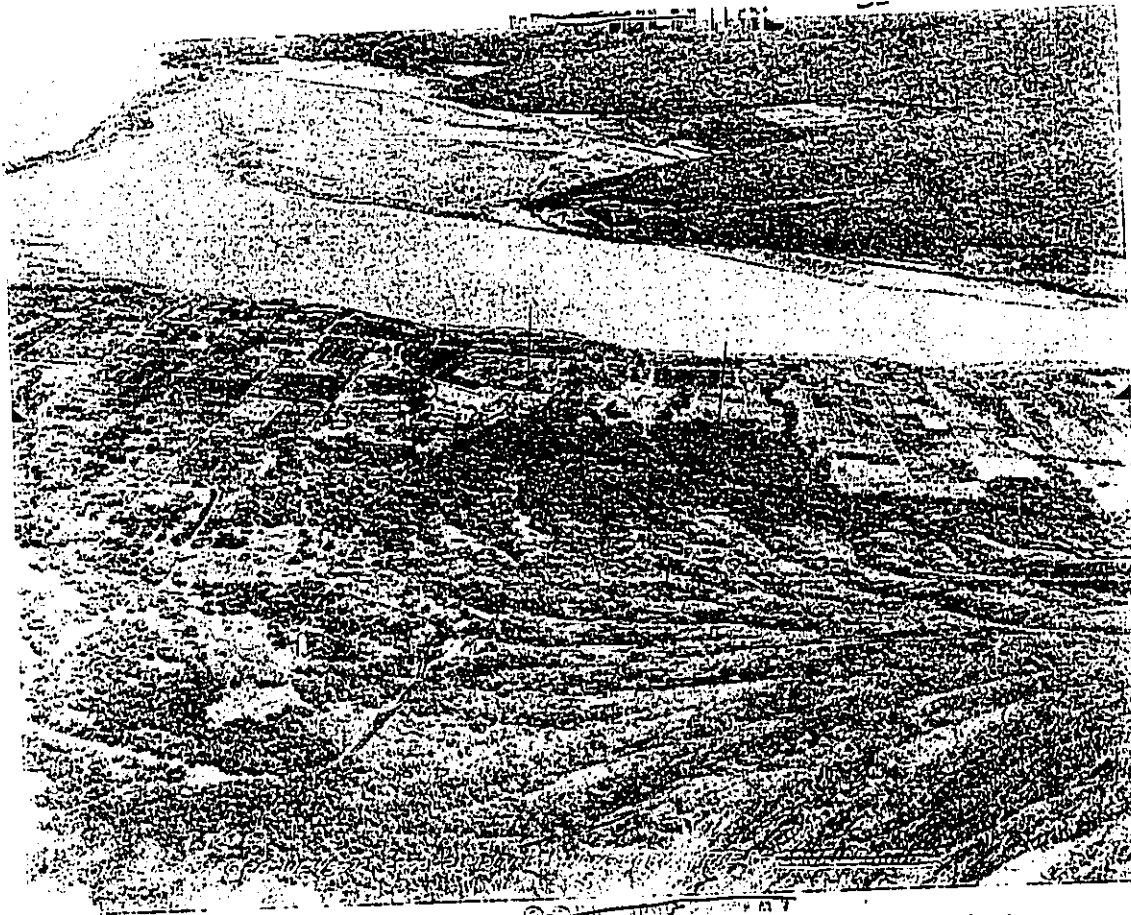


Figure 23 Camp at base of Koko Crater, July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

31

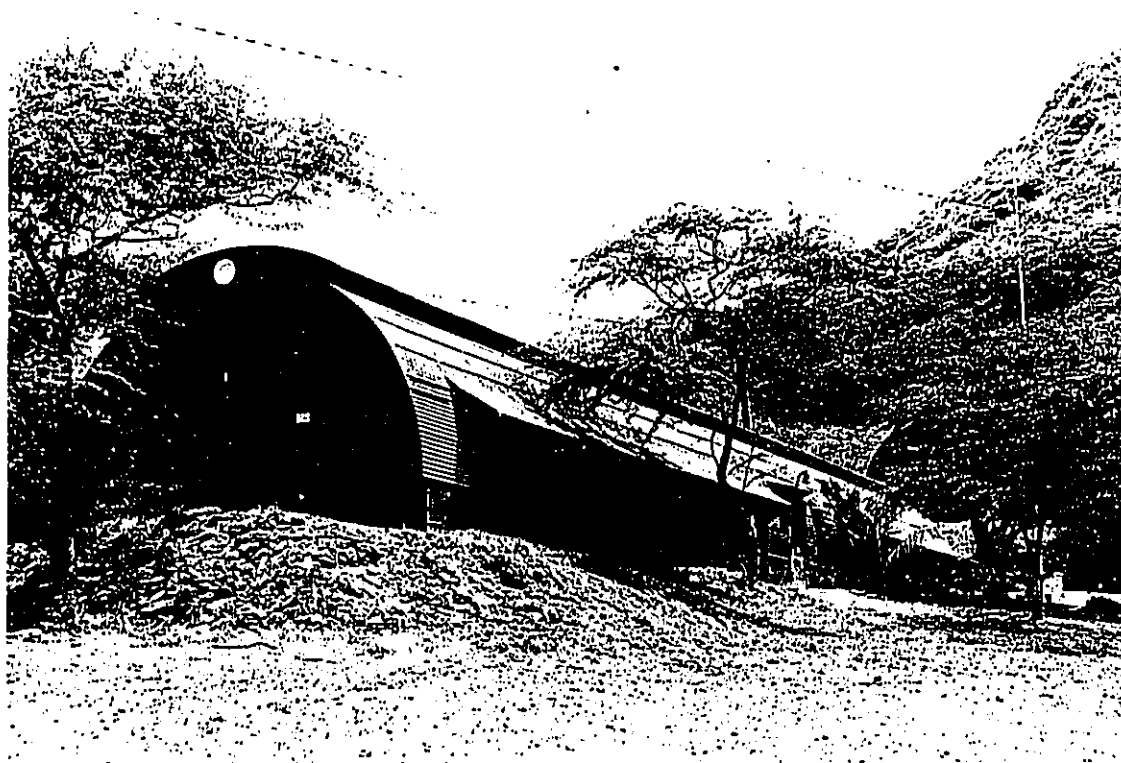


Figure 26 "Mess - Koko Hd. Rd. Sta.", July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

34

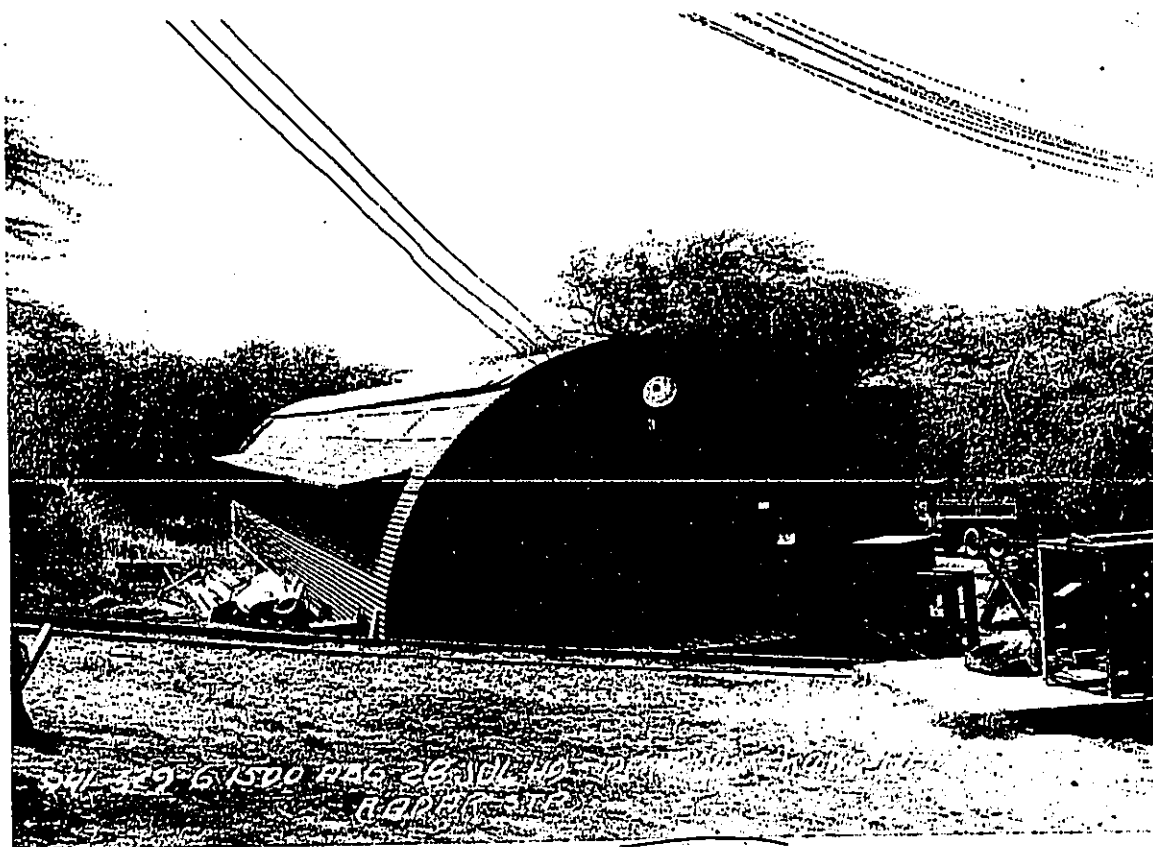


Figure 25 "Day Room Koko Head Radar Sta.", July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

33

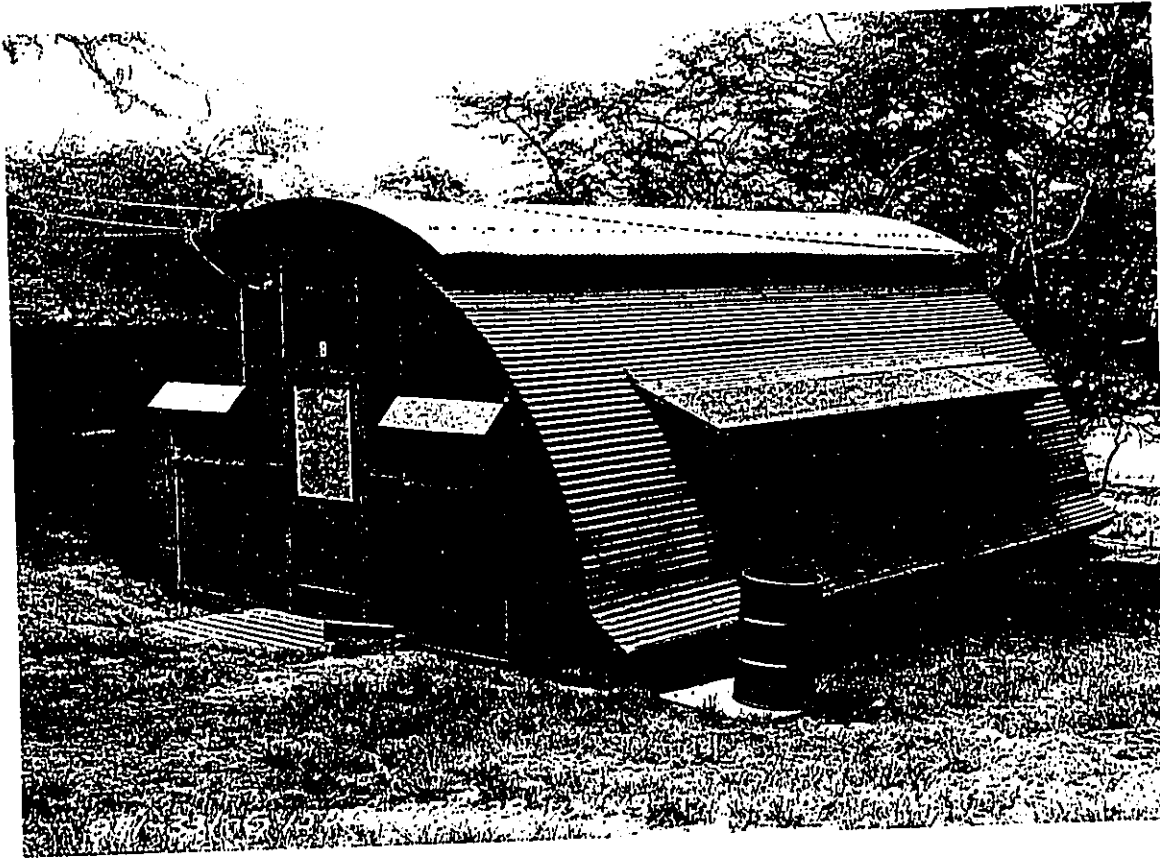


Figure 28 "Typ. Qtrs.- Koko Head R. Sta.", July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

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Figure 27 "Supply Rm. Koko Hd. Rad. Sta.", July 28, 1949 (Courtesy of History Office, Hickam Air Force Base)

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#### IV. PREVIOUS ARCHAEOLOGICAL RESEARCH IN MAUNALUA AHUPUA'A

The following summary is based on information presented in McAllister (1933), Kelly *et al.* (1984), Walker *et al.* (1996), and Jones (1996).

The first archaeological survey in Maunaloa was conducted by McAllister (1933) in 1930. As part of his 9-month, island-wide, archaeological survey of Oahu, McAllister located, mapped, and described 49 archaeological sites in the Maunaloa region. The sites McAllister located included traditional Hawaiian origin as well as historic sites related to activities such as ranching and road construction. Of these 49 sites, four were located within the present Koko Head Park. Three sites were located on the outer slopes of Koko Crater; McAllister (1933:65, 68) describes these sites as:

- Site 36: House site on the low ridge of Koko Crater, Makapuu side. [McAllister notes that "though the site is old, it may be post-European.]
- Site 37: Terraces, northwest slope of Koko Crater, facing Kamiloiki Valley. [McAllister notes that a probable house site was located amidst the terraces.]
- Site 45: Platform, side of Koholepelepe, facing into Kahauloa Crater. [McAllister notes that he had not been able to locate the site but it was "apparent that several places within the small crater (i.e. Kahauloa) were used as house sites.]

The fourth site was the "Koko Head petroglyphs" (Site 44) located in a low-ceilinged cave at the coastline near the present Lana'i look-out.

Also within the present Koko Head Park, Emory and Sinoto (1961) reported the results of University of Hawaii excavations in site 03, a natural rockshelter at the northeastern corner of the beach at Hanauma Bay (carried out in 1952). The majority of recovered artifacts were unsurprisingly related to fishing and the creation and maintenance of fishing gear. The midden consisted primarily of marine shell and fish bone, although a small amount of dog, pig, and bird bone were also recorded within the shelter. The remains of hearths were also recorded.

In 1966 students from the University of Hawaii excavated and conducted limited surface survey at the Kaloko point region (Wallace *et al.* 1966). This research was carried out in McAllister's high site density area around the Kaloko point area. Excavations uncovered no structural remains, with the exception of hearths. The artifact and midden deposits characterize the occupation as marine-oriented. Surface survey brought to light a few structural remnants—drastically reduced in number from those reported by McAllister. The work made clear that road construction and the 1946 tsunami had heavily impacted the archaeological deposits since they were reported by McAllister in 1930 (Wallace *et al.* 1966:6).

Further University of Hawaii excavations and survey were carried out at the western and southern margins of Kalaanui Ridge at the mouth of Hahaione Valley. Conducted over a period of three years, these investigations documented features from more than one related complex. Occupation of these features spanned from the late prehistoric to early 20th century

(Bayard 1969:1). Features included rock shelters, house platforms, stone "cairns", and a stone enclosure. Bayard also conducted excavations at site 50-80-15-2908, the Hawaii Kai rock shelter. Three dates ranging from AD 1330 to 1800 were obtained (Bayard 1965: 7-8, cited in Jones 1996:181).

Sponsored by the US Army Corps of Engineers, Anne Takemoto wrote a cultural and historical overview for the Kuapa fishpond area in western Maunaloa. This report included a literature and document search, an analysis of place names, oral traditions, and 19th century historic accounts, summaries of previous archaeological investigations, as well as recommendations on how the additional information might be obtained with further research (Takemoto 1975). The mythological and historical resources of the region are highlighted. Regarding the archaeology of the region Takemoto notes:

The quantity and quality of the archaeological sites discovered in the area does not significantly help unfold the history of the Kuapa Pond region. It can be assumed that the area was not extremely populous and that its importance compared to other *ahupua'a* was marginal. (Takemoto 1975:4).

Takemoto further states in her conclusions: "Maunaloa and Kuliouou today have only a few archaeological sites still in existence...The sites McAllister found in the 1930's have been destroyed" (Takemoto 1975:32).

During the development of the Kuapa fishpond area into the residential neighborhood of Hawaii Kai, Hawaiian burial sites were discovered on Kaaalakei Ridge and Maunaloa O Ahi Ridge (McCoy 1971 and Bevacqua 1972, respectively, cited in Jones 1996:12).

The area of Kalaanui received several archaeological investigations as the result of development plans. The land around Hawea *heiau* was systematically surveyed and, although previously bulldozed, 11 sites were recorded. The sites found included a historic habitation, caves, platforms, petroglyphs, and the possible remains of Hawea *heiau* (Price-Beggary and McNeill 1986). Further work was conducted by Rosendahl, Inc. (PHRI) as part of an inventory survey within a 21-acre portion of the same approximately 36-acre Kalaanui parcel investigated by Price-Beggary and McNeill. PHRI relocated sites and tested the "bedrock cavities" for cultural remains. Results were negative (Carlson and Rosendahl 1990).

Davis (1984) conducted excavations and reconstructions at the site of Pahua *heiau*. This work was carried out intermittently from the mid-1970s to 1985 by the Bishop Museum as part of a larger settlement pattern study of the region of southeast O'ahu.

Barrera (1986) conducted archaeological reconnaissance on 30 acres between the Hawaii Kai Golf Course and Koko Crater. McAllister had recorded a house site (site 36) and terraces (site 37) in this area. No sites of any kind were located during the field work, however. Barrera indicates this was due to modern ground disturbance.

Thirty-one acres of proposed golf course and subdivisions were surveyed by PHRI *mauka* of Sandy Beach (Spear 1987). No surface features were observed and shovel and auguring tests yielded no evidence of subsurface cultural deposits.

Shun (1988) carried out archaeological inventory survey on 26 acres on the southern portion of Kamehame ridge. No archaeological features were found, although numerous small caves and rock overhangs were observed within the project area. Also on Kamehame ridge, Cultural Surveys Hawaii conducted inventory survey for the relocation of an electrical transmission line. Due to the steepness of the slope, survey was generally limited to pole locations along the 8,400 foot transmission line. No archaeological sites were found (Borthwick and Hammatt 1991a). The archaeological survey for the proposed Kamehame Ridge Water Reservoir was also done by Cultural Surveys Hawaii. The reservoir site and the associated access roads contained no archaeological features (Borthwick and Hammatt 1991b).

Kawachi and McEldowney (1989) reported the discovery of multiple mound burials on the southeast slope of Koko Crater (above Sandy Beach) within Koko Head Park. A human burial in the area was subsequently given State site no. 50-80-15-4194.

Cultural Surveys Hawaii conducted survey and subsurface testing for the proposed Fiber Optic Cable Landing at Sandy Beach Park. Although located in the suspected area of Wawamalu village, no archaeological features or deposits were found. This was due to the disturbed beach sediments in the project area (Borthwick and Hammatt 1992).

In 1993 Cultural Surveys Hawaii surveyed a 5-acre parcel along Hawaii Kai Drive just south of Kaluanui ridge at the site of the proposed Kaluanui Park. Re-location and limited sub-surface testing of sites found by McAllister, Bayard, and Price-Beggary and McNeill was carried out. The field work documented limited prehistoric subsurface deposits at site 50-80-15-2900 (described by Price-Beggary and McNeill as a U-shape enclosure) and made several reinterpretations of previously described features. Excavations carried out by Cultural Surveys Hawaii at site 2900 yielded a radiocarbon date of 1800-1940. This supports the interpretation that the site was used in the historic period through Maunaloa's prominence in the "victualing trade" into the early 20th century (Folk et al. 1993).

The investigations at Kaluanui document archaeological resources which include habitations, burials, historic house-sites, petroglyphs, historic road-way remnants, and religious structures. The area was utilized from the prehistoric through the historic era. It is evident that modern development has greatly impacted the archaeological resources of the region.

In eastern Maunaloa, there have been a number of archaeological and cultural studies since the 1980s. A "Cultural Resources Overview for the Queen's Beach Park Feasibility Study" was prepared for the Department of Parks and Recreation by Kelly, Kurashina, and Sinoto (1984). This study consisted of: "a historical overview and assessment of the surface archaeological resources" for an area that included all of the current project area as well as the Kaloko peninsula and the coastline from Kapali o kamooa to Makapu'u Point (Kelly et al. 1984).

Kurashina and Sinoto wrote up the assessment of archaeological remains within the project area. In their field reconnaissance Kurashina and Sinoto could not relocate McAllister's sites 6-13 along the coast of the project area. They state that these sites were likely destroyed by the recent dredging, material stockpiling, and bulldozing from the Kaiser development plans--and by the devastating effects of the 1946 tsunami (Kelly et al. 1984:11). The only McAllister sites within the project area that were relocated consisted of sites 2 (a pile

of stones with coral), 3 (historic road way), and the cement foundation/emplacement of the Malei stone--all within Kealakapapa Valley. Kurashina and Sinoto failed to detect structural remains of site 2 but did note the presence of coral on the valley slopes in the general vicinity of site 2. They suggest the stones of the structure were removed for construction of the adjacent military pill-boxes on the Makapu'u cliff face (Kelly et al. 1984:9). Related to the McAllister's site 3 paved roadway, they report seeing 11 to 15-foot wide sections of the stone paved road between the Coast Guard road and Makapu'u Lookout (Ibid.).

Kurashina and Sinoto located previously unrecorded sites: T-1, T-2, T-3 and T-4. Site T-1 is a cave located on the coast between Kapali o Kamooa and Makapu'u Point. Site T-2 was the Davis Ranch swimming pool, at Ka Ii'i'i peninsula, T-3 is a midden site on the Kaloko peninsula, and T-4 is the Davis Ranch boundary wall at Wawamalu Beach--see Figure 5 for the locations of Kurashina and Sinoto's sites.

Archaeological Consultants of Hawaii conducted surface survey and subsurface testing for an extension to Sandy Beach Park at Wawamalu. No surface features were found and subsurface testing located no cultural deposits. Stratigraphy in the project area indicates that road construction (both the original and re-aligned Kalaniana'ole Highway) as well as the 1946 tsunami have removed "any traces of historic or prehistoric sites" (Kennedy and Denham 1992:1).

Not all archaeological coastal deposits were removed from this stretch of coastline between Sandy Beach Park and Makapu'u Head. In 1990 State Historic Preservation Division officials were called to the *naupaka*-covered coastal dunes just northwest of Wawamalu Beach and just northeast of the boundary wall between the beach park and the former Davis Ranch. Approximately 30 m northwest of the water-line, off-road recreational vehicles had disturbed an *in situ* prehistoric burial (Kawachi and Smith 1990). This burial was located in the general area of the midden deposit (site T-3) recorded by Kelly, Kurashina, and Sinoto. They noted a gray stained area of compacted sand containing a disturbed stone alignment, marine shell midden, and basalt flakes. They suggest this may represent a prehistoric occupation floor.

In 1992, as part of the feasibility study for the inclusion of the Makapu'u Head and Queen's Beach area within the State Parks System, Alan Carpenter did a field check of the Kealakapapa Road remnants (McAllister's site 3) (Carpenter 1992). Carpenter reports two sections of the road that could still be discerned. One section consisted of switchbacks (paved road surface with terraced road bed) extending down the steep cliff from Makapu'u Lookout towards Waimanalo. The second section is located in the same area described by Kelly, Kurashina, and Sinoto (1984) parallel to Kalaniana'ole Highway, just up slope of the light house access road. Carpenter describes this section as "straight . . . conspicuously clear of large rocks and . . . very level . . ." The sides of the road are roughly defined on the west by a border of stones and on the east by a rough boulder alignment modifying a natural ledge" (Carpenter 1992:5). He also describes the road as nearly devoid of flat paving stones and very much overgrown (Ibid.). From this description it appears that the mossrock pickers observed by Kelly in 1984 have continued to degraded the road remnant.

PHRI conducted an archaeological assessment of the Kaloko Beach area in 1994. The report's primary objective was to "assess the potential impacts of proposed development upon any significant archaeological resources that might be present within the project area" (Walker et al. 1996:ii). Background historical document research and a review of previous archaeology



together with one day of limited ground survey was the basis for this report. Three previously identified sites were relocated. Kelly, Kurashina, and Sinoto's site T-3 (middens deposit) at Wawamalu Beach and the 1931 Wawamalu bridge (Kelly *et al.* 1984) were relocated. McAllister's site 3, Kealakipapa Road was relocated and was described by Walker *et al.* (1996:11) as "a cleared zone within the *kaue*, usually containing no vegetation other than grasses or small shrubs. The road is relatively straight, and no curb stones or paving were visible." Kurashina and Sinoto recorded seeing stone paving along the road way in 1984 (Kelly *et al.* 1984:9). Walker's *et al.* (1996) description indicates that degradation of the site had occurred since the archaeological assessment of Kurashina and Sinoto in 1984 and possibly since the field check of Carpenter in 1992. The PHRI assessment makes recommendations for a full inventory survey of the project with subsurface testing to locate any buried cultural deposits.

A recent report within Maunaloa *chupua'a* was completed by Aki Sinoto Consulting on a total of 375 acres in nine separate parcels scattered about Maunaloa (Jones 1996). The investigation consisted of surface survey and limited test excavations. Four of their parcels (Marina 1/Strip, Marina 4B, Golf Course 2/1A, and Kalamia Valley) were found to be without archaeological or historic sites due to extensive prior disturbances. These disturbances included dredging and expansion of land masses with dredged material. The remaining five parcels contained 11 archaeological sites consisting of 71 features. However, even within the five parcels containing archaeological sites, there has been ample modern disturbance from road construction, bulldozing, and grading.

The 11 sites found within the five parcels consist almost exclusively of temporary habitation and/or activity areas, burials, and agricultural features. One of the most common site types reported is a modified rock shelter. These natural shelters are found along the ridges within the project area parcels. They provide ready-made shelter from sun, wind, and rain. They are also located adjacent to the agricultural land in the valley and drainage bottoms. These agricultural areas were removed in historical and traditional accounts for their sweet potato production (Summers and Sterling 1978:257). The rock shelters contain basalt lithic scatters, volcanic glass, *kukui* endocarp, marine shell midden, and fish and bird bone. These midden deposits are consistent with recurrent, temporary habitation and the use of the sites as activity areas, e.g. lithic reduction and tool manufacture. The elevation and distance from the ocean of these sites, in most cases, allowed good accessibility to agricultural land as well as marine resources.

The rock shelters are also the sites of human burials. Internment in lava tubes and bedrock cavities was a common practice in prehistoric and early historic Hawai'i. Jones (1996) described incomplete burials and bundle burials which often appeared disturbed or redeposited.

The agricultural features reported by Jones are located in the vicinity of Kamilonui and Kamiloiki valleys. Site 4950 is an extensive agricultural complex which incorporates "much of the traditional Hawaiian types of irrigation and agricultural systems in its construction" (Jones 1996:183).

Five radiocarbon dates were obtained from charcoal samples excavated within the 11 sites recorded within the project area. Three rockshelter features were dated to the precontact period. Sites 4941-3, 4946-1, and 4951-2 were dated to 1655 AD, 1475 AD, and 1665 AD,

respectively. Site 4942-1, a rock shelter located in the Mau'uwai parcel was dated to the late historic period (1880 AD). This late date is credited to ranching activity. The large agricultural complex, site 4950, was dated to AD 1900-1930. Jones suggests the complex "represents the efforts of Chinese lessees common in Kamilonui Valley from the 1860s to modern times (1996:160).

In 1997, Cultural Surveys Hawaii completed an archaeological inventory survey of approximately 166 acres in Kealakipapa Valley, the flats below the valley, and along the coast of Queen's Beach (McDermott *et al.* 1997). The area had been heavily impacted by the 1946 tsunami and by subsequent grading, dredging, excavating, and material stockpiling associated with development activities in the 1960s and 1970s. Only one site, an historic roadway remnant, was identified during the survey.



## V. PREDICTIVE MODEL

The previous archaeology of Maunaloa documents a procession of changes which transformed the landscape. Traditional Hawaiian settlement consisted of coastal settlement (house sites, *ko'a*, canoe sheds, and *heiau*) with agricultural features in the plains and valleys behind the coast. Natural rock shelters were utilized as temporary habitations or activity areas as well as internment places for the dead. *Heiau* were constructed in the interior. The large Kuapa fishpond was constructed and was another location of settlement. Trails connected these settlements.

Unfortunately, the small number of radiocarbon dates from Maunaloa offer little towards settlement chronology. We do know that utilization of the ridge rock shelters was occurring by at least the 16th century (Jones 1996:180). Bayard's excavations at the Hawaii Kai rock shelter yielded three dates spanning AD 1330-1800 (Bayard 1966: 7-8, cited in Jones 1996:181). From these dates it is clear that settlement occurred by the 14th century, possibly earlier.

In the historic era traditional settlement gave way to ranching and cash-crop farming. More permanent coastal settlement was replaced in many areas with recurrent temporary habitation. Agricultural fields were maintained in some areas, and abandoned and incorporated into ranch lands in others. The 1946 tsunami was a major destructive force. In the 1960s and 1970s, the development of Hawaii Kai drastically changed large portions of Maunaloa.

Within the bounds of the present Koko Head Regional Park, decades of 20<sup>th</sup> century military, commercial and recreational activities have altered the landscape as it had been previously shaped by the Hawaiian inhabitants. Previous archaeological studies discussed above have recorded the presence of habitation, burial and petroglyph sites within discrete portions of the park. As burials have been noted on the outer southeast slope of Koko Crater, it is likely that others are present along its slope. However, within the eight study area of the present survey, it is unlikely that any traditional Hawaiian archaeological site would be present. All eight study areas are localities where the decades of 20<sup>th</sup> century development have been focused.

Of specific concern for the present inventory survey is identification of structures older than fifty years which may be eligible for historic site designation. As noted in Section III above, a fire control station was established atop Koko Head during the 1930s. During World War II a radar installation - with associated base camp and a tramway - was constructed at the summit of Koko Crater. Remnants of the tramway have long been evident and it is likely that other structures associated with the military activities at Koko Head and Koko Crater continue to exist.

## VI. INVENTORY SURVEY RESULTS

### Study Area 1: Former Hawaii'i Job Corps center at the southwest base of Koko Crater

Study Area 1 is dominated by the abandoned buildings and associated infra-structure of the former Hawaii'i Job Corps camp. The camp consists of a variety of buildings, walkways, a basketball court, and other miscellaneous small structures. There is a large, old quonset hut in the northern corner of the camp that was formerly a part of the base camp associated with the radar installation at the summit of Koko Crater. The hut is addressed as a feature of the radar installation in radar installation base camp. The quonset hut is designated a feature of the radar installation and is addressed in the discussion of Study Area 3 below. No other archaeological or historic sites were observed in the area.

**Study Area 2: Corridor of the former tramway on southwest slope of Koko Crater**  
The tramway was accessed from the Koko Crater summit trail. The survey was conducted by two archaeologists inspecting both sides of the tramway corridor on the descent to the its base at the former Hawaii'i Job Corps camp. The tramway is designated a feature of the radar installation at the Koko Crater summit and is addressed in the discussion of Study Area 3 below. No other archaeological or historic sites were observed on either side of the tramway corridor.

### Study Area 3: Summit of Koko Crater at the terminus of the tramway

The summit area contains the remains of the former radar installation originally installed in 1942. Since the installation continued to operate until 1966, an effort was made to correlate the existing remnants with structures observed in the historic 1948 and 1949 photographs presented in Section III above (see Figures 13-28 above). Any such structures would thus be approximately older than 60 years and thus eligible for historic site designation. These remnants, along with the quonset hut and tramway noted in Study areas 1 and 2 respectively, have been assigned State Site no. 50-80-15-5699.

State Site #: 50-80-15-5699  
Site Type: Remnant Communications Facility  
Function: Ascent/Descent, Communications, and Support  
Features (#): 6 (A-F)  
CSH Site #: 2

**General Description:** State Site -5699 consists of wooden, concrete, and metal structures located on the slope and at the highest point of the rim of Koko Crater (1208 ft. a.m.s.l.), facing south-west towards Koko Head. The site complex consists of a tramway with adjacent utility poles, metal support platforms for radar screens, wooden support structures, cable and heavy machinery related to the tramway, and concrete foundations which supported either other structures or antenna arrays.

The summit can be accessed by the tramway corridor or from the crater rim trail which originates from within the botanical garden in Koko Crater. The summit portion of the site, which was originally used by as a radar and radio communications facility by the U.S. military, is in a state of general disrepair.

Additionally, a quonset hut, located near and to the west of the base of the tramway is the last remnant of the base camp which provided maintenance and support for the summit activities. The remainder of the base camp was later supplanted by a Hawai'i Job Corps facility, the unoccupied buildings of which remain to this day.

Plentiful modern trash and graffiti indicate that the summit of the site complex is frequently visited by hikers. The overall site, from the base camp quonset hut, to the highest structure on the summit are sub-divided into features, and are described here from the lowest in elevation to the highest respectively.

#### Feature A: Quonset Hut

Feature A, a military-style quonset hut, is located at the original radar installation base camp approximately 40 m. west of the base of the tramway. It consists of quonset hut in a general state of disrepair. Historic photographs (see Figures 24-28 above) indicate that quonset huts served multiple functions at the base camp. Based on examination of the photographs, the existing quonset hut appears to have been the camp mess hall which was constructed between 1948 and 1949 (see Figure 26 above).

#### Feature B: Tramway and Adjacent Utility Poles

Feature B is the almost complete remnant of a fixed rail tramway which rises approximately 1000 ft. from the base of Koko Crater's southwestern slope until it reaches the summit where it joins the upper communications complex. Though the track itself has been kept clear of vegetation, *koa haole* predominates the whole slope. The track originates from behind the Hawai'i Job Corps main office building, and consists of railroad track and wooden ties (Figure 29). The majority of the tramway tracks are on a slightly elevated and leveled berm measuring approximately 4 meters wide and generally 0.5 m. in height. Midway up the slope a section of the track bridges a gully where concrete foundations are utilized to support the tracks. The upper reaches are very steep (Figure 30), and some grading of the bedrock is evident near the top. The original tram cable still lies the entire length of the track. The bottom cable tie off has been removed, but the heavily corroded remains of the upper wench are still in place at the summit. Wooden utility poles, which would have provided electricity to the summit complex, border the entire length of the track, approximately 6 to 10 meters to its west, and are still strung with what appears to be the original electrical cable.

#### Feature C: Summit Support Buildings

The radar complex at the summit consists of roughly four levels. The lowest level, Feature C, consists of a cluster of dilapidated structures constructed of concrete (Figure 31), metal, wood, and tin roofing and siding, which are located on both sides of the tracks. These structures would have probably served as offices, work areas, equipment storage, tram way platforms, etc., necessary for the operation and maintenance of both the communications array and the tram way system.

#### Feature D: Support Platforms

Above the support buildings, unenclosed concrete and steel platforms, designated Feature D, are grouped on the west side of the tracks (Figure 32). These platforms probably would have served as supports for various communications equipment, such as radio antennae and radar screens. Presently they are devoid of any equipment, and covered with graffiti spanning at least a decade.



Site 50-80-15-5699B; tramway alignment near base of slope; view to northeast

Figure 29



Site 50-80-15-5699B; tramway at top with former landing area in right foreground; view to southwest

Figure 30

**Feature E: Summit Structures**  
 On the summit ground surface are the remnants of various structures associated with the communications complex, here designated Feature E. Functional designations for these structures is based on comparison with designs and locations of the structures identified in the historic photographs.

Not included within this feature designation, but located in the same area are the upper terminus of the tram track and the associated cable wench (Feature B), and a large steel grated support platform which bore a large radar screen, described below (Feature F). To the west of the large steel grid are the remnants of the foundation footings for the installation's radio shack (see Figure 19 above). Nothing else remains of the two-story wooden structure (Figure 33). Next to the western side of the structure identified as a radar screen support (see Figure 18 above) is a small rectangular concrete bunker of unknown function. It is not of the typical World War II anti-aircraft design however, and if not a shelter designed for human occupancy, possibly served as storage for equipment related to the radar screen it was adjacent to. Directly adjacent to the east side of the radar screen support is located a small concrete structure, with a pyramid shaped roofed and a steel floor. The interior is vented with small windows, suggesting that it may have served to store the generator which powered the radar screen. Further to the east of the radar screen support is another small rectangular bunker with adjacent footing pads. These are apparently the remnants of a small radar screen set atop a high metal frame support, with an associated small bunker adjacent to it (Figure 34). Plentiful modern trash is strewn throughout the soil surface of the summit, and upon and within the remnants of the structures.

**Feature F: Large radar screen platform**  
 The largest feature on the summit is the large metal grating which served as the support platform for a large radar screen (Figures 35&36; see Figure 20 above). It is elevated approximately six feet above the ground surface on a framework of steel girders and thick timber posts, thus becoming, albeit artificially, the highest point on the rim of Koko Crater. Standing atop the platform affords a panoramic view all surrounding areas. As with all the other structures in the area, the platform and its framework contain scattered modern trash and graffiti.

**Study Area 4: Area at the intersection of Kalaniana'ole Highway and the entrance road to Hanauma Bay**

This area includes portions of the modern Kalaniana'ole Highway right-of-way, the Hanauma Bay entrance road, and a single-lane road leading to the former Hawai'i Job Corps camp and Koko Head District Park. The construction and subsequent use of these roadways since the 1930s have altered the area significantly. No archaeological or historical sites were observed.

**Study Area 5: Area of the present Hanauma Bay visitor center and parking lots**  
 This area includes the modern visitor facility, park lots and open landscaped areas above Hanauma Bay. These constructions and decades of visitor use have altered the area significantly. No archaeological or historical sites were observed.



Figure 31 Site 50-80-15-5699C; concrete building on lowest summit support facility level, view to southeast



Figure 32 Site 50-80-15-5699D; two levels of concrete platforms

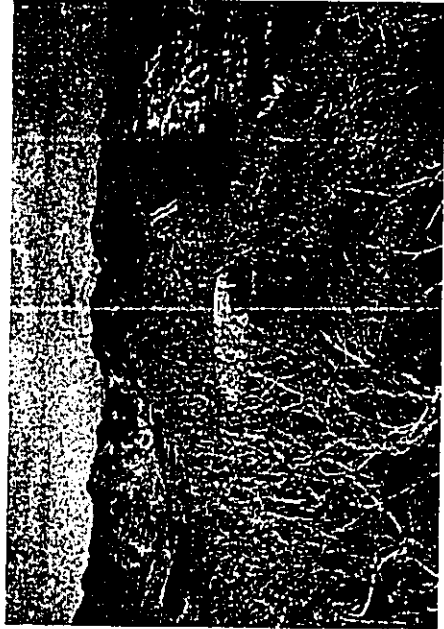


Figure 33  
 Site 50-80-15-5699E; concrete foundation, presumed to have been for two-story wooden "radio shack"; view to northwest

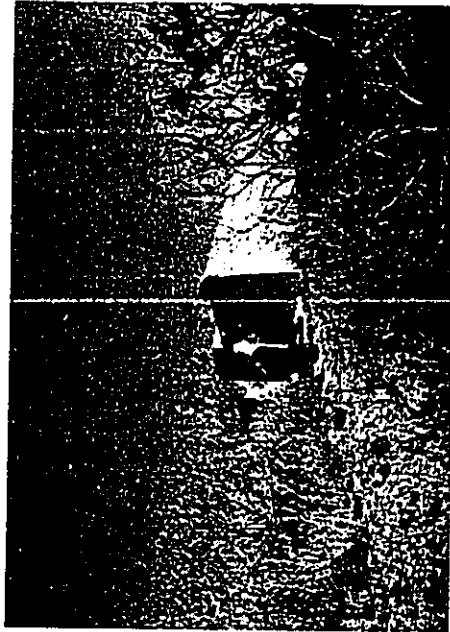


Figure 34  
 Site 50-80-15-5699E; roofless bunkers on crater rim summit, east of metal grate radar foundation; view to north



Figure 35  
 Site 50-80-15-5699E; large metal grate foundation for former radar antenna with probable generator house to right; view to north



Figure 36  
 Site 50-80-15-5699E; metal grate and upper terrace level with probable generator house at center

**Study Area 6: Portion of Hanauma Bay limited to the grounds immediately surrounding the concession and comfort station at the base of the access road to the beach**

No structures in this study area are older than fifty years. Decades of public use of the bay have removed all traces of any surface sites that may have existed in the area. The location of the rockshelter excavated by the University of Hawai'i (Emory and Sinoto 1961) (see PREVIOUS ARCHAEOLOGICAL STUDY section above) was identified. This rockshelter is located well away from the present study area, on the opposite side of the access road to the beach.

**Study Area 7: Koko Crater Botanical Garden loop trail**

The loop trail is a well-defined, up to eight-meter wide, dirt path that is used both as a foot and horse trail. No sites were observed along the route of the loop trail or within ten meters on either side of the trail.

**Study Area 8: Koko Head communication facilities access road and area at summit**

The study area included the asphalt-paved access road which commences at the Study area 4 road intersection and follows the spine of Koko Head. There are modern facilities including a Board of Water Supply tank and telecommunication installations that are accessed from the paved roadway.

Near the southwestern tip of Koko Head are three reinforced concrete bunkers and a basalt-and-concrete structure. The design of the concrete bunkers corresponds to that of the structure identified as a "Fire Control Station...Koko Head for Battery Granger Adams, Fort Ruger, T.H.", constructed in 1934, on a U.S. Army Engineers information sheet (see Figure 9 above). As discussed in Section III above, fire control stations were look-out installations which directed fire from associated gun emplacements. The station at Koko Head supported Battery Granger Adams at Black Point. The information sheet for one of the Koko Head fire control station units indicates that it consisted of a reinforced concrete bunker which was concealed by earth fill on its roof. The three bunkers and the associated structure have been assigned State site no. 50-80-15-5698.

**State Site #:** 50-80-15-5698  
**Site Type:** Reinforced Concrete Bunkers & Associated Structure  
**Function:** Military  
**Features (#):** 4 (A, B, C, D)  
**Site Area:** 68 m.<sup>2</sup> (731.7 ft.<sup>2</sup>)

**CSH Site #: 1**

**Feature A Description:** Feature A (Figure 37) is a reinforced concrete bunker located 20 m. (65.6 ft.) north of a new communications building within the communications complex at the end of Koko Head. The bunker is square, with exterior dimensions of 6 m. (19.7 ft.) by 6 m. (19.7 ft.). A square opening in the top of the bunker provides access to the interior by means of a metal ladder. The interior is square, measuring 4.6 m. (15.1 ft.) by 4.6 m. (15.1 ft.), with a ceiling height of 2.4 m. (8 ft.). A seaward facing continuous slit opening, approximately 0.5 m. wide, provides an unobstructed view to the south and west. On the floor of the bunker, directly fronting the slit, are located two 1 m. (3.28 ft.) wide raised octagonal concrete pads,

providing the bases for the mounts which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition, however, it has sustained some minor damage due to bulldozing with the result that soil, vegetation and modern trash now covers much of it. It is now devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti. A rough inscription, drawn into wet concrete on the surface of the structure read "1941". Additionally, a USGS marker, dated 1963, is located on the top of the structure at its southeast corner.

**Feature B Description:** Feature B (Figure 38) is a reinforced concrete bunker located approximately 85 m. (280.5 ft.) south of a Feature A. The bunker is square, with exterior dimensions of 4 m. (13.1 ft.) by 4 m. (13.1 ft.). A square opening in the top of the bunker provides access to the interior by means of a metal ladder. The interior is square, measuring 3 m. (9.8 ft.) by 3 m. (9.8 ft.), with a ceiling height of 2.4 m. (8 ft.). A seaward facing continuous slit opening, approximately 0.5 m. high, provides an unobstructed view to the south and west. On the floor of the bunker, directly fronting the slit, is located one 1 m. (3.28 ft.) wide raised octagonal concrete pad, providing the base for a mount which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition, however, it has sustained some minor damage due to bulldozing with the result that soil and vegetation now covers much of the slit opening. It is devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti.

**Feature C Description:** Feature C (Figure 39) is a reinforced concrete bunker located approximately 30 m. (98 ft.) south of a Feature B. The bunker is square, with exterior dimensions of 4 m. (13.1 ft.) by 4 m. (13.1 ft.). A square opening in the top of the bunker provides access to the interior by means of a metal ladder. The interior is square, measuring 3 m. (9.8 ft.) by 3 m. (9.8 ft.), with a ceiling height of 2.4 m. (8 ft.). A seaward facing continuous slit opening, approximately 0.5 m. high, provides an unobstructed view to the south and west. On the floor of the bunker, directly fronting the slit, is located one 1 m. (3.28 ft.) wide raised octagonal concrete pad, providing the base for a mount which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition. It is devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti.

**Feature D Description:** Feature D (Figure 40), just north of Feature A, is a basalt rock and mortar structure, measuring roughly 1.5 m. square and in height. The structure has parallel walls that used to support metal pipes at the base and top, which was formerly capped by concrete. The structure may have supported a communications tower, or may have been a support anchor for a larger structure. Though not of reinforced concrete, it is presumed associated with the bunkers, based on proximity.

**Study Area 6: Portion of Hanalei Bay limited to the grounds immediately surrounding the concession and comfort station at the base of the access road to the beach**

No structures in this study area are older than fifty years. Decades of public use of the bay have removed all traces of any surface sites that may have existed in the area. The location of the rockshelter excavated by the University of Hawai'i (Emory and Sinolo 1961) (see PREVIOUS ARCHAEOLOGICAL STUDY section above) was identified. This rockshelter is located well away from the present study area, on the opposite side of the access road to the beach.

**Study Area 7: Koko Crater Botanical Garden loop trail**

The loop trail is a well-defined, up to eight-meter wide, dirt path that is used both as a foot and horse trail. No sites were observed along the route of the loop trail or within ten meters on either side of the trail.

**Study Area 8: Koko Head communication facilities access road and area at summit**

The study area included the asphalt-paved access road which commences at the Study area 4 road intersection and follows the spine of Koko Head. There are modern facilities including a Board of Water Supply tank and telecommunication installations that are accessed from the paved roadway.

Near the southwestern tip of Koko Head are three reinforced concrete bunkers and a basalt-and-concrete structure. The design of the concrete bunkers corresponds to that of the structure identified as a "Fire Control Station...Koko Head for Battery Granger Adams, Fort Ruger, T.H.", constructed in 1934, on a U.S. Army Engineers information sheet (see Figure 9 above). As discussed in Section III above, fire control stations were look-out installations which directed fire from associated gun emplacements. The station at Koko Head supported Battery Granger Adams at Black Point. The information sheet for one of the Koko Head fire control station units indicates that it consisted of a reinforced concrete bunker which was concealed by earth fill on its roof. The three bunkers and the associated structures have been assigned State site no. 50-80-15-5698.

State Site #: 50-80-15-5698 CSH Site #: 1  
Site Type: Reinforced Concrete Bunkers & Associated Structure  
Function: Military  
Features (#): 4 (A, B, C, D)  
Site Area: 68 m.<sup>2</sup> (731.7 ft.<sup>2</sup>)

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providing the bases for the mounts which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition, however, it has sustained some minor damage due to bulldozing with the result that soil, vegetation and modern trash now covers much of it. It is now devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti. A rough inscription, drawn into wet concrete on the surfaces of the structure read "1941". Additionally, a USGS marker, dated 1963, is located on the top of the structure at its southeast corner.

**Feature B Description:** Feature B (Figure 38) is a reinforced concrete bunker located approximately 85 m. (280.5 ft.) south of a Feature A. The bunker is square, with exterior dimensions of 4 m. (13.1 ft.) by 4 m. (13.1 ft.). A square opening in the top of the bunker provides access to the interior by means of a metal ladder. The interior is square, measuring 3 m. (9.8 ft.) by 3 m. (9.8 ft.), with a ceiling height of 2.4 m. (8 ft.). A seaward facing continuous slit opening, approximately 0.5 m. high, provides an unobstructed view to the south and west. On the floor of the bunker, directly fronting the slit, is located one 1 m. (3.28 ft.) wide raised octagonal concrete pad, providing the base for a mount which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition, however, it has sustained some minor damage due to bulldozing with the result that soil and vegetation now covers much of the slit opening. It is devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti.

**Feature C Description:** Feature C (Figure 39) is a reinforced concrete bunker located approximately 30 m. (98 ft.) south of a Feature B. The bunker is square, with exterior dimensions of 4 m. (13.1 ft.) by 4 m. (13.1 ft.). A square opening in the top of the bunker provides access to the interior by means of a metal ladder. The interior is square, measuring 3 m. (9.8 ft.) by 3 m. (9.8 ft.), with a ceiling height of 2.4 m. (8 ft.). A seaward facing continuous slit opening, approximately 0.5 m. high, provides an unobstructed view to the south and west. On the floor of the bunker, directly fronting the slit, is located one 1 m. (3.28 ft.) wide raised octagonal concrete pad, providing the base for a mount which would have supported either observation or gunnery equipment. At present, the structure is in generally good condition. It is devoid of the military equipment it once contained, with the interior littered with modern trash and graffiti.

**Feature D Description:** Feature D (Figure 40), just north of Feature A, is a basalt rock and mortar structure, measuring roughly 1.6 m. square and in height. The structure has parallel walls that used to support metal pipes at the base and top, which was formerly capped by concrete. The structure may have supported a communications tower, or may have been a support anchor for a larger structure. Though not of reinforced concrete, it is presumed associated with the bunkers, based on proximity.



Figure 37 Site 50-80-15-5698A; concrete bunker showing partially-covered slit opening; view to northwest



Figure 38 Site 50-80-15-5698B showing soil cover over bunker and paved access; view to south



Figure 39 Site 50-80-15-5698C; soil-covered bunker; view to north



Figure 40 Site 50-80-15-5698D; boulder and concrete structure

## VII. SIGNIFICANCE AND RECOMMENDATIONS

### A. Significance Evaluation

Archaeological sites are evaluated for significance according to the broad criteria established for the National and State Registers of Historic Places. The five criteria are:

- A Site reflects major trends or events in the history of the state or nation.
- B Site is associated with the lives of persons significant in our past.
- C Site is an excellent example of a site type.
- D Site may be likely to yield information important in prehistory or history.
- E Site has cultural significances; probable religious structures (shrines, *heiau*) and/or burials present.

State site 50-80-15-5698 refers to the three reinforced concrete bunkers and the boulder-and-concrete structure at the end of Koko Head, identified in Study Area 8. Site 50-80-15-5698 is assessed as significant under Criteria A and D. The Criterion A assessment is based on major trends and events related to Hawai'i role in U.S. military history. The criterion D assessment is based on information already gathered, such as: location, condition and basic recordation, as well as future research or interpretive potential.

State site 50-80-15-5699 refers to the complex of features associated with the former Koko Crater radar installation. Site 50-80-15-5699 is assessed as significant under Criteria A, C and D. The Criterion A assessment is based on major trends and events related to Hawai'i's role in U.S. military history, beginning in World War II and continuing on into the Cold War era. Criterion C is based on the unique engineering accomplishment that the tramway and the associated summit radar facility represent. Criterion D is based on information already gathered, such as: location, condition and basic recordation, as well as future research or interpretive potential.

### B. Recommendations

The following recommendations are appropriate to the findings of the present Koko Head Park inventory survey:

- 1) No further archaeological investigation is deemed necessary for:
  - Study Area 4: Area at intersection of Kalaianaole Highway and the entrance road to Hanauma Bay
  - Study Area 5: Area of the present Hanauma Bay visitor center and parking lots
  - Study Area 6: Beach area of Hanauma Bay limited to the grounds surrounding the concession and comfort station at the base of the access road to the beach

### Study Area 7: Koko Crater Botanical Garden loop trail

This recommendation is limited to the specific, delimited areas subjected to the present inventory survey. It does not apply to other localities in the near vicinity of these study areas.

- 2) It is Cultural Surveys Hawaii's recommendation that State sites 50-80-15-5698 and 50-80-15-5699 be preserved, if possible.  
Site 50-80-15-5698 - the bunkers and associated structure at the end of Koko Head - though in fair to poor condition, could be integrated into any future park development.  
As noted above, Site 50-80-15-5699 - the former Koko Crater radar installation remnants - represents a unique engineering accomplishment dating back to Hawai'i's World War II experience.
- 3) It is Cultural Surveys Hawaii's recommendation that additional research, such as archival-quality photographs be undertaken, with the aim of further documenting and preserving the architectural quality of the sites.



VIII. REFERENCES

- Barrera, William M., Jr.  
1986 *Letter Report, Archaeological Reconnaissance Survey of Kaumana Ké amuku Transmission Line.*
- Bayard, Donn, T.  
1969 *Limited Survey and Excavation at Site O-16, Hawaii Kai*  
Ms. on file, DLNR, Honolulu
- Bevaqua, R.  
1972 *A Burial Case on Mauna O Ahi Ridge*  
(TMK: 3-9) Site 80-15-3998. Ms. on file, DLNR, Honolulu.
- Borthwick, Douglas and Hallett H. Hammatt  
1992 *Archaeological Assessment of the Proposed Fiber Optic Cable Landing for East O'ahu, Sandy Beach Park, Maunaloa (TMK 3-9-12-02), District of Honolulu, Cultural Surveys Hawaii*
- Borthwick, Douglas F. and Hallett H. Hammatt  
1991a *Archaeological Survey for the Proposed Na Pali Hauweo Electrical Transmission Line Relocation Alignment Kamehame Ridge, Hawaii Kai, O'ahu, Cultural Surveys Hawaii, Kailua, HI.*
- Borthwick, Douglas and Hallett H. Hammatt  
1991b *Archaeological Survey for the Proposed Kamehame Ridge Unit III Water Reservoir, Kamehame Ridge, Hawaii Kai, O'ahu TMK 3-9-10-1, Prepared for Pacific Planning and Engineering, Cultural Surveys Hawaii, Kailua, HI.*
- Carlson, Arne, K. and Paul H. Rosendahl  
1990 *Supplemental Archaeological Inventory Survey, Kalaunui - 1*  
Subdivision, Land of Maunaloa, Honolulu. PHRI, 1990.
- Carpenter, Alan  
1992 *Fieldcheck of Kealahipapa Valley Road Remnants, Makapu'u Head, Maunaloa, and Waimanalo, Koolau-poko, State Site 50-80-15-03*  
(TMK: 3-9-11-02, 4-1-14-02), DLNR, Division of State Parks.
- Clark, John R. K.  
1977 *The Beaches of O'ahu*, University of Hawaii Press, Honolulu, HI.
- Emory, Kenneth P., and Yosihiko H. Sinoto  
1961 *Hawaiian Archaeology: Oahu Excavations*, Bishop Museum Special Publication 49, Honolulu.
- Folk, William H., Douglas F. Borthwick and Hallett H. Hammatt  
1993 *Archaeological Survey for the Proposed 5-Acre Kalaunui Park Development at Maunaloa, Kona District, O'ahu, (Revised October) Kailua, HI.*

VIII. REFERENCES (continued)

- Handy, E.S. Craighill and Elizabeth G. Handy  
1972 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*, Bishop Museum Bulletin 233, Honolulu.
- Jones, Bruce A.  
1996 *Aspects of Inland Settlement in the Hawaii Kai Region: Results of an Archaeological Inventory Survey of Nine Parcels, Ahupua'a of Maunaloa, Honolulu District, Island of Oahu, (TMK: 3-9-8: Por. 13 and 3-9-10: Por. 1), Aki Sinoto Consulting, Honolulu, HI.*
- Kawachi, C. and H. McEldowney  
1989 *Koko Crater Slope Burials, Koko Head Park, Maunaloa (TMK 3-9-12-01). Ms.*  
on file, DLNR, Honolulu.
- Kawachi, Carol and Mark Smith  
1990 *Field Check and Removal of Burial at Ka'ilili, Maunaloa, Kona, O'ahu, Site 80-15-3990 (TMK 3-9-11-02), Memorandum, State of Hawaii, Department of Land and Natural Resources, Historic Preservation Program, Honolulu, HI.*
- Kelly, Marion  
1984 *Cultural Resources Overview for The Queen's Beach Park Feasibility Study, Maunaloa, Kona, O'ahu, Part I: Legends of Maunaloa, O'ahu and Part III: Historical Notes on Queen's Beach and Other Places in Maunaloa, O'ahu, Department of Anthropology, Bishop Museum, Honolulu, Hawaii.*
- Kennedy, Joseph and Tim Denham  
1992 *Inventory Survey and Subsurface Testing Report for an extension of Sandy Beach Park at Wauwamalu (Auwae-Malu), Island of Oahu, District of Koolau-poko, Maunaloa Ahupua'a, TMK: 3-9-10:2 & 3, 3-9-12:2 and 3-9-15:1, 19 & 20, ACH Inc. Haleiwa, Hawaii.*
- McDermott, Matthew, Douglas Borthwick and Hallett H. Hammatt  
1997 *Archaeological Inventory Survey of the 166-Acre Queen's Beach Project Area, Ahupua'a of Maunaloa, Island of O'ahu (TMK 3-9-11). Cultural Surveys Hawaii.*
- Maly and Wong-Smith  
1998 *Historical Documentary Research: Kawaihoa-Kuamo-okane, Hanalei, and Kohapelepe - The Koko Head Nature Preserve, Ahupua'a of Maunaloa, District of Kona, Island of O'ahu (TMK 3-6-12; por. 1,2,4,6,8,9,10,12,13,14&16) (DRAFT). Kumu Pono Associates.*
- McAllister, J.G.  
1993 *Archaeology of O'ahu*, Bishop Museum, Bulletin 104, Honolulu.

VIII. REFERENCES (continued)

- National Park Service, U.S. Department of the Interior  
1992 *Reconnaissance Survey, Ka Iwi Shoreline Study, Hawaii*. Washington, D.C.
- Price-Beggerly, Patricia and J.R. McNeill  
1985 *Archaeological Reconnaissance of the Proposed Marina Zoning Project, Kaulanui 1, 2, and 3 (Hawaii Kai)*, J. Stephen Athens, Honolulu.
- Shun, Kanalei  
1988 *Archaeological Survey of Kamehame Ridge Subdivision, Unit 2, Phase I, Hawaii Kai, O'ahu*, Archaeological Associates Oceanita, Honolulu.
- Spear, R.  
1987 *Archaeological Reconnaissance Survey of Golf Course 5 and 6 Cluster Subdivision Sites, Hawaii Kai Community, Maunaloa (TMK: 2-9-10:por 1)*. PHRI
- Takemoto, Anne H., et al.  
1976 "Historical/Cultural Essay Report on the Kuapa Pond Area," On file at the State Historic Preservation Division.
- Thompson, Erwin N.  
[no date] *Pacific Ocean Engineers: History of the U.S. Army Corps of Engineers in the Pacific, 1905-1980*.
- Walker, Alan T., and Kepa Maly and Paul H. Rosendahl  
1986 *Archaeological Assessment Proposed Golf Course at Queen's Beach Land of Maunaloa, Honolulu District, Island of O'ahu (TMK:1-3-9-11:3:Por: 2)* PHRI, Paul H. Rosendahl, Ph.D., Inc.
- Wallace, W.J., E.T. Wallace, and V. Meeker  
1986 *Excavation of a Coastal Dwelling Site (017) on the Island of Oahu (TMK: 3-9-11:02)*. MS on file, DLNR, Honolulu

## **APPENDIX F**

**Botanical Study: Koko Head Regional Park & Nature Preserve,  
East Honolulu, Island of Oahu**

**Char & Associates**

**November, 1998**

BOTANICAL STUDY  
KOKO HEAD REGIONAL PARK & NATURE PRESERVE  
EAST HONOLULU, ISLAND OF O'AHU

by

Winona P. Char  
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Prepared for: GROUP 70 INTERNATIONAL, INC.

November 1998

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**BOTANICAL STUDY  
KOKO HEAD REGIONAL PARK & NATURE PRESERVE  
EAST HONOLULU, ISLAND OF O'AHU**

**INTRODUCTION**

The proposed Koko Head Regional Park and Nature Preserve is approximately 1,265 acres. The Park encompasses the City and County of Honolulu's Koko Head Regional Park which includes the Hanauma Bay Nature Preserve. Other recreational areas within the Regional Park include Koko Head District Park, Halona Blow Hole, Koko Crater Botanical Garden, Koko Head Shooting Complex, and a portion of Sandy Beach Park.

The Koko Head Regional Park and Nature Preserve is envisioned as a world-class natural attraction. The Park will highlight themes of creation and nature; culture, volcanism, rift zone features, and the dramatic interface between the land and sea will be emphasized. Existing park facilities will be improved and new facilities constructed within Koko Head Regional Park at: Hanauma Bay Nature Preserve, the Job Corps site, and Koko Crater Botanical Garden and Stables (Group 70 International, Inc.).

Field studies to assess the botanical resources found on the undeveloped portions of the proposed Park, that is, the trails and scenic lookout areas, were conducted on 21 to 22 October 1998; a team of two botanists conducted the studies. The primary objectives of the survey were to: 1) provide a general description of the vegetation along the trails; 2) inventory the flora; and 3) search for threatened and endangered species as well as species of concern.

No studies were conducted for the areas proposed for the new facilities such as the Main Visitor/Nature Center and the Hanauma Bay Visitor/Education Center. These areas have been previously developed and support landscape plantings, parking lots, and buildings and other structures. No studies were made for the 60-acre Koko Head Botanical Garden. The botanical garden, located within the crater, features collections of dryland plants from four major geographic areas: the Americas, Hawai'i, Madagascar, and Africa; as well as several major plant groups including Euphorbia, Aloe, Adenium, cactus family, etc.

**SURVEY METHODS**

Prior to undertaking the field studies, a search was made of the pertinent literature to familiarize the principal investigator with other botanical studies conducted in the general area. A search was also made of The Nature Conservancy's Hawai'i Natural Heritage Program database for rare and endangered species. Topographic maps as well as the master plan maps for the new Park were examined to determine terrain characteristics, access, boundaries, and reference points.

A walk-through (pedestrian) survey method was used. Notes were made on plant associations and distribution, substrate types, drainage, exposure, disturbances, topography, etc. Plant identifications were made in the field; plants which could not be positively identified were collected for later determination in the herbarium, and for comparison with the recent taxonomic literature.

The species recorded are indicative of the season ("rainy" vs. "dry") and the environmental conditions at the time of the survey.

A survey taken at a different time of the year and under varying environmental conditions would no doubt yield slight variations in the species list, especially of the weedy, annual plants. Woody species have been censused to a greater degree of reliability.

#### DESCRIPTION OF THE VEGETATION

A brief description of the vegetation found along each of the proposed trails is presented below. An inventory of all the plants observed along the trails during the field studies is found in the plant checklist at the end of this report.

##### Koko Head

Koko Head Scenic Lookout Trail: This trail follows the existing paved access road which services the telecommunication facilities on Koko Head. A scenic lookout platform feature will be located at the end of the trail overlooking the ocean and offering sweeping panoramic views from Moloka'i to Diamond Head.

The vegetation bordering the access road consists of low, wind-swept, scattered thickets of koa haole shrubs (Leucaena leucocephala), 3 to 7 ft. tall, and a few small stands of individual trees of kiawe (Prosopis pallida), 10 to 15 ft. tall. Wild basil shrubs (Ocimum gratissimum) are locally common in some places under the koa haole thickets. Buffel grass (Cenchrus ciliaris) forms low, lumpy mats, 1 to 2 ft. tall, along the road. Clumps of Guinea grass (Panicum maximum) are found in low lying spots where there is somewhat deeper soil. Areas with stony, shallow soils support carrion flower (Stapelia gigantea), a succulent plant with thick, four-angled stems and reddish-brown, foul-smelling flowers which are pollinated by flies. A number of weedy, mostly annual species such as Spanish needle (Bidens pilosa), garden spurge (Chamaesyce

hirta), pigweed (Portulaca oleracea), etc., are found adjacent to the paved road. Runoff from the road surface even from light rains is funneled off to the sides of the road, creating somewhat moister soil conditions.

A number of native species are found close to the access road, primarily on the more exposed, makai, windward facing slopes. Rounded tussocks of kawelu (Eragrostis variabilis), an endemic grass with large, somewhat open or dense, spike-like cluster of flowers, are common. A few shrubs of 'a'ali'i (Dodonaea viscosa) also occur here; these can be easily identified by their yellowish-green colored, somewhat shiny leaves. Patches of the orange-flowered 'ilima (Sida fallax), a small upright shrub, are locally abundant especially during the rainy season. Nehe (Lipochaeta integrifolia), a low mat-forming, succulent perennial herb, is also found on the windward facing slopes, but the plants are more common along the Nature Preserve Loop Trail. Other native species found here include pili grass (Heteropogon contortus), alena (Hoerhavia repens), 'uhaloa (Malthesia indica), and pa'uohi'iaka (Jacquemontia ovalifolia ssp. sandwicensis).

Koko Head Nature Preserve Loop Trail: This trail is accessed from the Scenic Lookout Trail and loops around both Nono'ula and 'Ihi'ihilauakea (on USGS maps as 'Ihe'ihelauakea) craters. A nature preserve is planned for both of the craters and will include a native dryland vegetation restoration project. The endangered 'Ihi'ih fern (Marsilea villosa) occurs within 'Ihi'ihilauakea Crater (U.S. Fish and Wildlife Service 1992). The crater is managed cooperatively by the City and County of Honolulu, The Nature Conservancy of Hawai'i, and the U.S. Fish and Wildlife Service. There is a sign noting that the crater is the "Ancestral home of the 'Ihi'ihilauakea". Barriers have been erected to keep four-wheeled recreation vehicles out of the Marsilea area; these

were put in place by volunteers in 1987 (Wilkinson 1997). There is a small planting of young williwili trees (Erythrina sandwicensis) near one of the barriers.

The vegetation along the loop trail consists of low, windswept, scattered patches of koa haole scrub and large barren areas. A nearby gulch and Nono'ula Crater support dense forests of kiawe trees. The trees are taller, 25 to 30 ft. tall, in these more protected areas. Where the trail overlooks Hanalei Bay, near Nono'ula Crater, the seaward facing slopes support a grassland vegetation dominated by the native kawelu. Low, succulent mats of nehe, small tussocks of Fimbristylis cymosa, and sprawling mats of pa'uohi'iaka are also locally abundant.

Koko Head Palea Point Loop Trail: The vegetation along this trail is similar to that found along the other loop trail, but this portion of Koko Head appears to be somewhat more exposed and drier. Vegetation cover is roughly 50% and consists of low, windswept koa haole scrub, 2 to 4 ft. tall, with scattered windpruned kiawe trees, 3 to 6 ft. tall. Clumps of buffel grass and pitted beardgrass (Bothriochloa pertusa) are usually found along the edges of the koa haole scrub patches. Areas with exposed, reddish-brown colored, weathered substrate are abundant.

A small planting of native dry, lowland species is found along a portion of the trail where there are a few benches. These include naio (Myoporum sandwicense), ma'o (Gossypium tomentosum), maua (Xylosma hawaiiense), ho'awa (Pittosporum sp.), and Achyranthes splendens.

Koko Crater

Koko Crater Rim Lookout Trail: From the Koko Crater Botanical

Garden, this trail follows up a side ridge and onto the crater rim. The trail passes through a portion of the garden's Adenium and Aloe collections on the side ridge, and then through dense koa haole scrub, 6 to 12 ft. tall. Under the koa haole shrubs, there are clumps of Guinea grass and buffel grass. Wild basil shrubs are locally common in places. Also locally common are trailing clumps of Chinese violet (Asystasia gangetica).

The koa haole scrub becomes shorter and more open as one approaches the rim area, and rocky outcrops become more numerous. On the exposed, windward facing, outer slopes, the vegetation consists of kawelu grassland with scattered pockets of low, windswept koa haole scrub.

Koko Crater Summit Trail: This trail will follow the straight-line path of the old tramway up the crater side. The proposed trail will be improved with steps, railings and rest stops along the way to the top. A summit lookout with signage and cleared viewing areas is planned. The summit at Koholepelepe (or Pu'u Mai) is 1,208 ft. high; the trailhead, located at the proposed entrance plaza, is about 200 ft. elevation.

The native 'a'ali'i shrub along with koa haole are the dominant components of the vegetation along this trail. Scattered throughout the 'a'ali'i/koa haole shrubland are small stands of kiawe trees, 15 to 20 ft. tall. Wild basil shrubs, 2 to 3 ft. tall, are locally abundant in places along the trail. Ground cover consists of scattered clumps of buffel grass and occasionally a few Guinea grass clumps. Rocky outcroppings and areas with very shallow soil support carrion flower and tussocks of the native kawelu grass.

Where the trail/old tramway bridges a gulch, there is a large Chinese banyan tree (Ficus microcarpa) in the gulch. Other plants



found in this somewhat damper gulch microhabitat are four-o'clock (Mirabilis jalapa), West Indian beggar's tick (Bidens cynapiifolia), Christmas berry (Schinus terebinthifolius), comb hyptis (Hyptis pectinata), autograph tree (Clusia rosea), Chinese violet, and huehue haole (Passiflora suberosa). One large willow tree, with a trunk diameter of roughly 17 inches, is found about 150 ft. upslope of the gulch. As one approaches the summit, the 'a'ali'i shrubs become less numerous and kawelu increases, but koa haole shrubs are still abundant.

On the summit area, there are a number of concrete and metal structures which were part of the former cable/tram operation. One planting of a red-flowered Bougainvillea is found here. The branches of the kiawe trees and koa haole shrubs, in many places, are covered by lichens; primarily, a grayish-green, strap-shaped Ramalina species and the bright orange colored, pin cushion-like Taloschistes flavicans. Again, the windward facing, upper slopes on the summit area support kawelu grassland. A few plants of the native spurflower (Plectranthus parviflorus), a succulent, fuzzy-leaved perennial with pale blue flowers, and Schiedea globosa, a member of the pink or carnation family, are found on the wind-swept ledges on the summit area. A few members of the cactus family have escaped from the botanical garden and have become established on the upper slopes and rim of the crater.

#### RARE AND ENDANGERED PLANTS

The largest population of 'ihi'ihii fern (Marsilea villosa) is found within 'ihi'ihilaaukea Crater. The Koko Head Nature Preserve Loop Trail skirts the crater area. The fern, which resembles a four-leaf clover, is found in dry, lowland areas subject to periodic flooding during the rainy season. Recently, the U.S. Fish and Wildlife Service (1996) has prepared a recovery plan for

this species. The main threats to this population of 'ihi'ihii fern are habitat degradation and competition from introduced (alien) plant species; off-road vehicles; and trampling from humans. The Marsilea villosa lowland dry herbland plant community is considered a G1S1.1 element by the The Nature Conservancy's Hawai'i Natural Heritage Program. That is, the plant community is critically imperilled globally because of its extreme rarity or factors that make it especially vulnerable to extinction; one relatively pristine/intact/viable occurrence known.

One other endangered species is found within the proposed park, but not within the areas to be developed or proposed for trails. The endangered 'awii (Centaurium seabaeoides) is known from the steep slopes above Halona Blow Hole.

Three species considered rare by the Conservancy's Natural Heritage Program are: Lipochaeta lobata var. lobata, Portulaca villosa, and Schiedea globosa. Only the Schiedea was observed during this survey; three rounded clumps were found on the narrow ledges overlooking the interior of the Koko Crater.

Two species are believed to be extirpated from the Koko Head region. The endangered Spermolepis hawaiiensis was collected from the Koko Head area around 1864-1865, but has not been observed since then. Kokia lanceolata, a species of concern, was originally known from southeastern O'ahu on the hills of Makaku and Koko Head and from Waialupe Valley, but is believed to be extinct since the late 1800's or early 1900's (Wagner et al. 1990; U.S. Fish and Wildlife Service 1997).

#### DISCUSSION AND RECOMMENDATIONS

A world-class nature park which will highlight the themes of creation and nature is planned for the approximately 1,265-acre

project site. The park facilities and programs will emphasize nature, culture, volcanism and rift zone features, and the dramatic interface between land and sea (Group 70 International, Inc. 1998). The Main Visitor/Nature Center, Operations Center, parking lot, and trolley holding area will be located on the old Job Corps site. The Hanauma Bay facilities will be expanded and improved to include a Hanauma Bay Visitor/Education Center, and expanded picnic areas and lookout areas. Landscaping will be xeriscape with an emphasis on native species. Several pedestrian trails are planned for the Koko Head and Koko Crater areas.

Field studies were conducted for the proposed trails in October 1998. Low, windswept koa haole (Leucaena leucocephala) scrub dominates much of the landscape with barren areas especially common at the Koko Head site. Native plants generally occur as scattered patches within the koa haole scrub, but become the dominant components on the exposed, windward facing, upper slopes of Koko Head and Koko Crater; these areas support kawelu (Eragrostis villosa) grassland. The endangered 'ihi'ihia fern (Marsilea villosa) covers the bottom of 'ihi'ihiauakea Crater at Koko Head, forming a thick, light-green colored carpet during the rainy season. 'A'ali'i (Dodonaea viscosa)/ koa haole shrubland is found along the Koko Crater Summit Trail.

The only endangered species observed during the studies was the 'ihi'ihia fern. Three plants of Schiedea globosa, considered rare by The Nature Conservancy's Hawai'i Natural Heritage Program, were found on the narrow, windswept ledges near the summit lookout on Koko Crater. No other naturally occurring threatened and endangered species, or species of concern (U.S. Fish and Wildlife Service 1997) were observed during the field studies. A small planting of a few native species, some of them rare, is found along the Koko Head Palea Point Loop Trail.

Recommendations: Increased human presence and use of the trail areas is expected to have an impact on the vegetation.

Fires -- The chances for catastrophic wildfires will increase, especially during the drier, summer months. Areas with large concentrations of native plants are especially vulnerable; once these areas are burned, introduced or alien plants tend to invade and replace the native components. A fire plan which addresses these concerns should be prepared. The recovery plan prepared for the 'ihi'ihia fern (U.S. Fish and Wildlife Service 1996) outlines procedures for the protection and management of the fern; these procedures/recommendations can be applied to some of the other areas with large concentrations of native plants.

Erosion -- In many places, the substrate is very weathered and soft. Increased foot traffic will erode parts of the trail, especially on the more steeply sloping portions of the Koko Head loop trails. These areas may need to be hardened such as was done for the popular Diamond Head Crater Trail.

Natural Resources Management Plan -- A natural resources management plan will need to be prepared to address alien plant control in areas dominated by native species such as 'ihi'ihiauakea Crater, and to monitor rare and endangered species throughout the park. The native dryland restoration project planned for Koko Head should be included in the plan; an irrigation system may be needed for the initial plantings. The plants which have escaped from the Koko Crater Botanical Garden, most of them spiny or with poisonous sap, should be controlled.

The management plan should include input from and be reviewed by the U.S. Fish and Wildlife Service which also oversees the management of the 'ihi'ihia habitat.

#### LITERATURE CITED

- Evenhuis N.L. and S.E. Miller, eds. 1995-1998. Records of the Hawaii Biological Survey. Bishop Museum Occasional Papers Nos. 41-56.
- Group 70 International, Inc. 1998. Koko Head Regional Park & Nature Preserve, East Honolulu, island of Oahu. Environmental Impact Statement Preparation Notice. September 1998.
- Lamoureux, C.H. 1988. Draft checklist of Hawaiian pteridophytes, "Kupukupu O Hawai'i Ne'i". Lyon Arboretum, University of Hawai'i, Manoa.
- U.S. Fish and Wildlife Service. 1992. Endangered and threatened wildlife and plants: Determination of endangered status for Marsilea villosa ('ihi'ihii). Federal Register 57(120): 27863-27867.
- \_\_\_\_\_. 1996. Marsilea villosa recovery plan. U.S. Fish and Wildlife Service, Portland, OR.
- \_\_\_\_\_. 1997. U.S. Fish and Wildlife Service species list, plants. September 25, 1997. 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.
- Wilkinson, M. 1997. Status of the Marsilea villosa population at 'Ihe'ihelauakea Crater, O'ahu. Newsletter of the Hawaiian Botanical Society 36(1): 12-18.

#### PLANT SPECIES LIST -- Koko Head Regional Park/Nature Preserve

The following checklist is an inventory of all the plants observed on the proposed trails at Koko Head and Koko Crater, O'ahu. The plant names are arranged alphabetically by families within each of three groups: Ferns, Dicots, and Monocots. The taxonomy and nomenclature of the Ferns follow Lamoureux (1988), while the flowering plants, Dicots and Monocots, are in accordance with Wagner et al. (1990). The few recent name changes for the flowering plants follow those reported in the Hawaii Biological Survey series (Evenhuis and Miller 1995-1998).

For each species, the following information is provided:

1. Scientific name with author citation.
2. Common English and/or Hawaiian name(s), when known.
3. Biogeographic status. The following symbols are used:
  - E = endemic = native only to the Hawaiian Islands.
  - I = indigenous = native to the Hawaiian Islands and also elsewhere throughout the Pacific and/or tropics.
  - I? = questionably indigenous = data not clear if dispersal by natural or human-related mechanisms, but weight of evidence suggests probably indigenous.
  - P? = questionably Polynesian = may be a Polynesian introduction, or possibly introduced in early historical times (after Western contact, i.e., Cook's discovery of the islands in 1778).
  - X = introduced or alien = all those plants brought to the Hawaiian Islands by humans, intentionally or accidentally, after Western contact.
4. Presence (+) or absence (-) of a particular species on each of the trails within the proposed park (see text for discussion):
  - 1 = Koko Head Scenic Lookout Trail
  - 2 = Koko Head Nature Preserve Loop Trail

| Scientific name   | Common name                 | Status | Trail |   |   |   |   |
|---|-----------------------------|--------|-------|---|---|---|---|
|   |                             |        | 1     | 2 | 3 | 4 | 5 |
| <b>FERNS</b>  |                             |        |       |   |   |   |   |
| <b>MARSILEACEAE (Waterfern family)</b>                      |                             |        |       |   |   |   |   |
| Marsilea villosa Kaulf.                                     | 'ihi'ihilaukea              | E      | -     | + | - | - | - |
| <b>FLOWERING PLANTS</b>                                     |                             |        |       |   |   |   |   |
| <b>DICOTS</b>   |                             |        |       |   |   |   |   |
| <b>ACANTHACEAE (Acanthus family)</b>                        |                             |        |       |   |   |   |   |
| Asystasia gangetica (L.) T. Anderson                        | Chinese violet, coromandel  | X      | +     | + | + | + | + |
| <b>AIZOACEAE (Fur-marigold family)</b>                      |                             |        |       |   |   |   |   |
| Sesuvium portulacastrum (L.) L.                             | 'akulikuhi                  | I      | -     | - | + | - | - |
| Triantha portulacastrum L.                                  |                             | X      | -     | - | + | - | - |
| <b>AMARANTHACEAE (Amaranthus family)</b>                    |                             |        |       |   |   |   |   |
| Achyranthes splendens Mart. ex Moq.                         |                             | E      | -     | - | + | - | - |
| <b>ANACARDIACEAE (Mango family)</b>                         |                             |        |       |   |   |   |   |
| Schinus terebinthifolius Raddi                              | Christmas berry             | X      | +     | + | + | + | + |
| <b>APOCYNACEAE (Periwinkle family)</b>                      |                             |        |       |   |   |   |   |
| Adenium coetaneum Stapf                                     | desert rose, rock azalea    | X      | -     | - | - | + | - |
| <b>ASCLEPIADACEAE (Milkweed family)</b>                     |                             |        |       |   |   |   |   |
| Ceropegia sp. (?)   |                             | X      | -     | - | - | + | - |
| Stapelia gigantea N.E. Brown                                | carion flower, Zulu-giant   | X      | +     | + | + | + | + |
| <b>ASTERACEAE (Daisy family)</b>                            |                             |        |       |   |   |   |   |
| Bidens alba var. radiata (Schultz-Bip.) Ballard ex Melchert | white-flowered bidens       | X      | +     | - | - | - | - |
| Bidens cynapiifolia Kunth                                   | West Indian beggar's tick   | X      | -     | - | - | + | + |
| Bidens pilosa L.  | Spanish needle, ki, ki nehe | X      | +     | + | - | - | - |

- 3 = Koko Head Palea Point Loop Trail
- 4 = Koko Crater Rim Lookout Trail
- 5 = Koko Crater Summit Trail

| Scientific name  | Common name                    | Status | Trail |   |   |   |   |
|--|--------------------------------|--------|-------|---|---|---|---|
|  |                                |        | 1     | 2 | 3 | 4 | 5 |
| <b>EUPHORBIACEAE (Spurge family)</b>                     |                                |        |       |   |   |   |   |
| <i>Chamaesyce hirta</i> (L.) Millsp.                     | hairy spurge, garden spurge    | X      | +     | + | - | - | - |
| <i>Euphorbia heterophylla</i> L.                         | Mexican fireweed, kaliko       | X      | -     | - | - | - | + |
| <i>Euphorbia nerifolia</i> L.                            | Indian spurge tree             | X      | +     | - | - | - | - |
| <b>FABACEAE (Pea family)</b>                             |                                |        |       |   |   |   |   |
| <i>Acacia farnesiana</i> (L.) Willd.                     | klu                            | X      | +     | + | + | - | - |
| <i>Alysicarpus vaginalis</i> (L.) DC                     | alysicarpus                    | X      | +     | - | - | - | - |
| <i>Chamaecrista nictitans</i> (L.) Moench                | partridge pea, lauki           | X      | +     | - | - | - | + |
| <i>Desmanthus pernambucanus</i> (L.) Thellung            | virgate mimosa, slender mimosa | X      | +     | - | - | - | - |
| <i>Desmodium triflorum</i> (L.) DC                       | three-flowered beggarweed      | X      | +     | - | - | - | - |
| <i>Erythrina sandwicensis</i> Degener                    | wiliwili                       | E      | -     | + | - | - | + |
| <i>Indigofera spicata</i> Forssk.                        | creeping indigo                | X      | +     | - | - | - | - |
| <i>Leucaena leucocephala</i> (Lam.) de Wit               | koa haole                      | X      | +     | + | + | + | + |
| <i>Macroptelium latyroides</i> (L.) Urb.                 | wild bean, cow pea             | X      | +     | - | - | - | - |
| <i>Pithecellobium dulce</i> (Roxb.) Benth.               | 'opiuma                        | X      | +     | - | - | - | - |
| <i>Prosopis pallida</i> (Humb. & Bonpl. ex Willd.) Kunth | kiawe                          | X      | +     | + | + | + | + |
| <b>FLACOURTIACEAE (Flacourtia family)</b>                |                                |        |       |   |   |   |   |
| <i>Xylosma hawaiiense</i> Seem.                          | maua                           | E      | -     | - | + | - | - |
| <b>LAMIACEAE (Mint family)</b>                           |                                |        |       |   |   |   |   |
| <i>Hyptis pectinata</i> (L.) Pott.                       | comb hyptis                    | X      | -     | - | - | + | + |
| <i>Leonotis nepetifolia</i> (L.) R. Br.                  | lion's ear                     | X      | -     | - | - | - | + |
| <i>Ocimum gratissimum</i> L.                             | wild basil                     | X      | +     | - | + | + | + |
| <i>Plectranthus parviflorus</i> Willd.                   | 'ala'ala wai nui, spurflower   | I      | -     | - | - | - | + |
| <b>MALVACEAE (Mallow family)</b>                         |                                |        |       |   |   |   |   |
| <i>Gossypium tomentosum</i> Nutt. ex Seem.               | ma'o, huluhulu                 | E      | -     | - | + | - | - |
| <i>Sida ciliaris</i> L.                                  | 'ilima                         | X      | +     | - | - | - | - |
| <i>Sida fallax</i> Walp.                                 | Cuba jute                      | I      | +     | + | + | + | + |
| <i>Sida rhombifolia</i> L.                               |                                | X      | +     | - | - | - | - |

| Scientific name  | Common name                            | Status | Trail |   |   |   |   |
|--|--|--------|-------|---|---|---|---|
|  |  |        | 1     | 2 | 3 | 4 | 5 |
| <i>Emilia fosbergii</i> Nicolson   | pualele                                | X      | -     | + | + | - | + |
| <i>Lipochaeta integrifolia</i> (Nutt.) A. Gray                                 | nehe                                   | E      | +     | + | - | - | - |
| <i>Pluchea carolinensis</i> (Jacq.) G. Don                                     | pluchea, sourbush                      | X      | +     | + | + | - | - |
| <i>Pluchea indica</i> (L.) Less.   | Indian pluchea, Indian fleabane        | X      | -     | + | + | - | - |
| <i>Tridax procumbens</i> L.  | coat buttons                           | X      | +     | - | - | - | - |
| <i>Xanthium strumarium</i> var. <i>canadense</i> (Mill.) Torr. & A. Gray       | cocklebur, kikania                     | X      | -     | + | - | - | - |
| <b>BORAGINACEAE (Borage family)</b>  |  |        |       |   |   |   |   |
| <i>Heliotropium procumbens</i> var. <i>depressum</i> (Cham.) Fosb.             | heliotrope                             | X      | +     | - | - | - | - |
| <b>CACTACEAE (Cactus family)</b>   |  |        |       |   |   |   |   |
| <i>Cereus</i> sp.  |  | X      | -     | - | - | + | + |
| <i>Hylocereus</i> sp.  |  | X      | -     | - | - | + | + |
| <i>Opuntia ficus-indica</i> (L.) Mill.   | panini                                 | X      | -     | - | - | + | + |
| <i>Trichocereus</i> sp. (?)  |  | X      | -     | - | - | + | + |
| Indet. sp.   |  | X      | -     | - | - | + | + |
| <b>CARYOPHYLLACEAE (Pink family)</b>   |  |        |       |   |   |   |   |
| <i>Schiefelia globosa</i> H. Mann  |  | E      | -     | - | - | - | + |
| <b>CHENOPODIACEAE (Goosefoot family)</b>                                       |  |        |       |   |   |   |   |
| <i>Atriplex semibaccata</i> R. Br.   | Australian saltbush                    | X      | +     | - | + | - | - |
| <i>Chenopodium murale</i> L.   | 'aheahea                               | X      | -     | - | + | - | - |
| <b>CLUSIACEAE (Mangosteen family)</b>  |  |        |       |   |   |   |   |
| <i>Clusia rosea</i> Jacq.  | autograph tree, copey, Scotch attorney | X      | -     | + | - | - | + |
| <b>CONVOLVULACEAE (Morning glory family)</b>                                   |  |        |       |   |   |   |   |
| <i>Ipomoea obscura</i> (L.) Ker-Gawl.  | field bindweed                         | X      | +     | - | - | - | - |
| <i>Jacquemontia ovalifolia</i> ssp. <i>sandwicensis</i> (A. Gray) K. Robertson | pa'uahi'iaka                           | E      | +     | + | + | - | - |

| Scientific name   | Common name                         | Status | Trail |   |   |   |   |
|---|-------------------------------------|--------|-------|---|---|---|---|
|   |                                     |        | 1     | 2 | 3 | 4 | 5 |
| <b>MONOCOTS</b>   |                                     |        |       |   |   |   |   |
| COMMELINACEAE (Spiderwort family)<br><i>Commelina benghalensis</i> L.                 | hairy honohono                      | X      | -     | - | - | - | + |
| CYPERACEAE (Sedge family)<br><i>Fimbristylis cymosa</i> R. Br.                        |                                     | I      | -     | + | - | - | - |
| LILIACEAE (Lily family)<br><i>Aloe vera</i> L.<br><i>Aloe</i> spp.                    | aloe                                | X<br>X | +     | - | - | - | - |
| POACEAE (Grass family)<br><i>Bothriochloa</i> aff. <i>barbinodis</i> (Lag.)<br>Herter | fuzzy top                           | X      | +     | - | - | - | - |
| <i>Bothriochloa pertusa</i> (L.) A. Camus   | pitted beardgrass                   | X      | +     | - | - | + | + |
| <i>Bothriochloa</i> sp.   |                                     | X      | +     | - | - | - | - |
| 18 <i>Cenchrus ciliaris</i> L.  | buffelgrass                         | X      | +     | + | + | + | + |
| <i>Chloris barbata</i> (L.) Sw.   | swollen fingergrass, mau'u lei      | X      | +     | - | + | - | - |
| <i>Cynodon dactylon</i> (L.) Pers.  | Bermuda grass, manienie             | X      | +     | - | - | - | - |
| <i>Digitaria insularis</i> (L.) Mez ex Ekman  | sourgrass                           | X      | +     | - | - | - | + |
| <i>Eragrostis variabilis</i> (Gaud.) Steud.   | kawelu, 'emoloa, kalamalo           | E      | +     | + | - | + | + |
| <i>Heteropogon contortus</i> (L.) P. Beauv.<br>ex Roem. & Schult.                     | pili, pili grass                    | I?     | +     | + | - | + | - |
| <i>Melinis repens</i> (Willd.) Zizka  | Natal redtop, Natal grass           | X      | +     | + | - | - | + |
| <i>Panicum maximum</i> Jacq.  | Guinea grass                        | X      | +     | + | + | + | + |
| <i>Panicum maximum</i> var. <i>trichoglume</i> Eyles<br>ex Robyns                     | green panicgrass                    | X      | +     | - | - | - | - |
| <i>Setaria verticillata</i> (L.) P. Beauv.  | bristly foxtail, mau'u<br>pili-pili | X      | -     | + | - | - | - |
| <i>Sporobolus indicus</i> (L.) R. Br.   | Indian dropseed                     | X      | +     | - | - | - | - |

| Scientific name   | Common name                               | Status | Trail |   |   |   |   |
|---|---|--------|-------|---|---|---|---|
|   |   |        | 1     | 2 | 3 | 4 | 5 |
| MORACEAE (Mulberry family)<br><i>Ficus microcarpa</i> L.f.                | Chinese banyan, Malayan banyan            | X      | +     | + | - | + | + |
| MYOPORACEAE (Myoporium family)<br><i>Myoporium sandwicense</i> A. Gray    | nato, false sandalwood                    | I      | -     | - | + | - | - |
| NYCTAGINACEAE (Four-o'clock family)<br><i>Boerhavia coccinea</i> Mill.    | red-flowered boerhavia                    | X      | +     | - | - | - | - |
| <i>Boerhavia repens</i> L.  | alena                                     | I      | +     | + | + | - | - |
| <i>Bougainvillea hybrid</i>   | red-flowered bougainvillea                | X      | -     | - | - | - | + |
| <i>Mirabilis jalapa</i> L.  | four-o'clock, nani ahiahi                 | X      | -     | - | - | - | + |
| OXALIDACEAE (Wood sorrel family)<br><i>Oxalis corniculata</i> L.          | yellow wood sorrel, 'ihi 'ai              | P?     | -     | - | - | - | + |
| PASSIFLORACEAE (Passion flower family)<br>17 <i>Passiflora foetida</i> L. | pohapoha, running pop, love-<br>in-a-mist | X      | +     | + | + | - | + |
| <i>Passiflora suberosa</i> L.   | huehue haole                              | X      | -     | - | - | - | + |
| PITTIOSPORACEAE (Pittosporum family)<br><i>Pittosporum</i> sp.            | hoawa                                     | E      | -     | - | + | - | - |
| PORTULACACEAE (Purslane family)<br><i>Portulaca oleracea</i> L.           | pigweed, common purslane, 'ihi            | X      | +     | - | - | - | + |
| <i>Portulaca pilosa</i> L.  |   | X      | +     | + | + | + | + |
| SAPINDACEAE (Soapberry family)<br><i>Dodonaea viscosa</i> Jacq.           | 'a'ali'i                                  | I      | +     | - | - | - | + |
| STERCULIACEAE (Cacao family)<br><i>Waltheria indica</i> L.                | 'uhaloa, hi'aloa, kanakalao               | I?     | +     | + | + | + | + |
| VERBENACEAE (Verbena family)<br><i>Lantana camara</i> L.                  | lantana                                   | X      | +     | - | + | - | - |
| <i>Stachytarpheta jamaicensis</i> (L.) Vahl                               | Jamaica vervain, owi, oi                  | X      | +     | - | - | - | + |

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**APPENDIX G**

**Additional Botanical Studies: Koko Head Regional Park & Nature  
Preserve, East Honolulu, Oahu**

**Char & Associates**

**November 20, 1998**



## CHAR & ASSOCIATES

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20 November 1998

### ADDITIONAL BOTANICAL STUDIES KOKO HEAD REGIONAL PARK & NATURE PRESERVE EAST HONOLULU, O'AHU

structures consists of beach naupaka (Scaevola sericea) and red hibiscus (Hibiscus rosa-sinensis cultivars) hedges and trees such as tiger's claw (Erythrina variegata), hala (Pandanus tectorius), and milo (Thespesia populnea). A small planting of variously colored hybrid Bougainvillea is found near the visitor parking lot.

On the lower beach level, there are patches of Bermuda grass lawn and scattered coconut palms (Cocos nucifera). Also present are kiawe trees, beach naupaka shrubs, and tree heliotrope (Tournefortia argentea).

**Job Corps Site:** On the former Job Corps site, plantings of various ornamental species are found around the buildings. Most of the buildings are not occupied except for those in use by the lifeguard service, the police, and the truck maintenance area.

The Bermuda grass lawns are now weedy in most places and have been invaded by clumps of buffel grass (Cenchrus ciliaris), Guinea grass (Panicum maximum), and young koa haole shrubs (Leucaena leucocephala) and kiawe saplings. Most of the larger trees and shrubs which were used in the landscaping are in fair to good condition despite the lack of maintenance and watering. Around the lifeguard building, plantings consist of coconut, Chinese banyan (Ficus microcarpa), sea grape trees (Coccoloba uvifera), and various cultivars of Plumeria. A line of rose-flowered Jatropha (Jatropha integerrima) is found alongside the basketball court. Large, rounded clumps of variously colored Bougainvillea shrubs are a prominent feature on the grounds of the former Job Corps site. A stand of Eucalyptus trees, 40 to 50 ft. tall, is found near the truck maintenance area. Other plants observed on the site include shrubs of dracaena (Pleomele emarginata), croton (Codiaeum variegatum), and hybrid Hibiscus

A general description of the landscape plantings found on the developed areas at Hanauma Bay and on the former Job Corps site is presented. Additional information is also provided for the vegetation types found on the undeveloped portions of the project site. Only a brief discussion is provided, drawn largely from the field notes and observations made during the 21 to 22 October studies, and from the literature.

The plant names used follow Wagner et al. (1990) for the native and naturalized species and St. John (1973) for the ornamental plants.

#### LANDSCAPE PLANTINGS ON DEVELOPED AREAS

**Hanauma Bay:** Landscaping on the developed upper plateau area consists of large expanses of Bermuda grass or manienie (Cynodon dactylon) lawn with scattered large, old kiawe trees (Prosopis pallida); these appear to have been originally growing on or near the site and were incorporated into the landscaping plan. Plantings around the comfort stations, visitor checkin building, and other

cultivars; trees of mango (Mangifera indica), Cook pine (Araucaria columnaris), various Citrus cultivars -- lime, orange, lemon, octopus tree (Schefflera actinophylla), kiawe, tiger's claw, gourka (Garcinia dulce), and papaya (Carica papaya).

Scattered between the buildings in some places are areas which were never landscaped. These areas support scattered stands of large kiawe trees and thickets of koa haole shrubs. Clumps of buffel grass and Guinea grass are scattered between the woody components. The weedy ivy gourd vine (Coccinia grandis) is common in these areas.

#### VEGETATION TYPES ON UNDEVELOPED AREAS

Five general vegetation types are recognized on the undeveloped portions of the project site and are described below.

Koa Haole Scrub: Koa haole is the most abundant species on the project site where it forms low, windswept thickets, 3 to 7 ft. tall, on the slopes and ridge tops of Koko Head and Koko Crater. On the mauka (leeward) side of Koko Crater and in some gulch areas where it is more protected, the koa haole is taller and more tree-like. Scattered trees or small stands of kiawe, 10 to 20 ft. tall, are commonly associated with the koa haole scrub.

The understory consists of low, scattered mats of buffel grass, 1 to 2 ft. tall, and clumps of somewhat taller Guinea grass in areas with slightly deeper soil. Locally common in some places are shrubs of wild basil (Ocimum gratissimum), 1 to 3 ft. tall. Areas with rocky outcroppings or stony, shallow soils support carrion flower (Stapelia gigantea), a succulent-stemmed plant up to 10 inches tall with foetid-smelling, brownish-red flowers.

Kiawe Forest: Kiawe forest is found in the areas with deeper soil around the outside base of Koko Crater and on the crater floor. It is also found in gulches, drainageways, and Mono'ula Crater on Koko Head. In these more protected situations, tree cover may be somewhat dense and the trees 25 to 30 ft. tall. Scattered patches of koa haole shrubs are found under the trees. Buffel grass and Guinea grass form dense mats between the woody components.

Along the windward facing lower slopes of Koko Crater, above the Halona Blow Hole area and the rugged coastline, the kiawe trees form low, dense, windswept thickets, 3 to 6 ft. tall.

Kawelu Grassland: Kawelu or 'emoloa (Eragrostis variabilis) grassland is found on the more exposed, windward facing mid to upper slopes and rims of Koko Head and Koko Crater. Kawelu forms low, rounded tussocks and can be easily recognized by its large spike-like inflorescences which persist for a long time on the plant. Common associates of this vegetation type include other native species such as shrubs of 'ilima (Sida fallax), 'uhaloa (Waltheria indica), and 'a'ali'i (Dodonaea viscosa); clumps of pilli grass (Heteropogon contortus); and low mats of pa'uohi'iaka (Jacquemontia ovalifolia subsp. sandwicensis), nehe (Lipochaeta integrifolia), and alena (Boerhavia repens, B. glabrata). The introduced koa haole occurs here as scattered, low patches.

'A'ali'i/Koa Haole Shrubland: This vegetation type is found on Koko Crater on the broad slopes surrounding the old tramway/cable car path. 'A'ali'i shrubs, 5 to 7 ft. tall, are found scattered in the kiawe forest at the foot of the tramway at about 200 ft. elevation, but quickly become very abundant along with koa haole on the slopes along the tramway path, up to about the 1,000-foot elevation contour.

#### LITERATURE CITED

- Cagne, W.C. and L.W. Cuddihy. 1990. Vegetation. pp 45-114.  
In Wagner, Herbst and Sohmer, Manual of the flowering plants of Hawai'i. University of Hawai'i Press and B.P. Bishop Museum Press, Honolulu.
- St. John, H. 1973. List and summary of the flowering plants in the Hawaiian Islands. Pacific Tropical Botanical Garden, Memoir No. 1, Lawai, Kauai, HI.
- U.S. Fish and Wildlife Service. 1996. Marsilea villosa recovery plan. U.S. Fish and Wildlife Service, Portland, OR.
- Wagner, W.L., D.R. Herbst, and S.H. Sohmer. 1990. Manual of the flowering plants in Hawai'i. 2 vols. University of Hawai'i Press and B.P. Bishop Museum Press, Honolulu. B.P. Bishop Museum Special Publication 83.

Small stands of kiawe trees are scattered throughout this shrubland. Wild basil shrubs are locally abundant in places under the taller 'a'ali'i and koa haole shrubs. Ground cover consists of scattered clumps of buffel grass. The native kawelu grass is abundant, especially on rocky outcroppings and areas with thin soils. Also quite common are small patches of carrion flower.

'Ihi'ihii Herbland: This vegetation type or plant community is dominated by the endangered 'ihii fern (Marsilea villosa). It occurs in perennially dry lowland areas subject to seasonal flooding. On O'ahu, it is found at 'Ihi'ihilauea Crater on Koko Head and in Luualalei Valley.

At 'Ihi'ihilauea Crater, an almost solid mat of the fern covers about 0.5 acre (0.2 hectares) of the crater floor. A dense ring of kiawe trees surrounds the Marsilea except for a small entrance on the east side of the crater. During the dry summer months or drought conditions, the fern becomes dormant. During the winter season and the arrival of the rains, the ferns quickly send out new leaves and the crater floor turns a bright green color from the dense mat of ferns. Every few years, the crater floor may be flooded; during the 1987-1988 flooding, several species of crustaceans appeared in the ponded crater bottom (U.S. Fish and Wildlife Service 1996). Weedy species found in this vegetation type include cocklebur (Xanthium strumarium var. canadense), bristly foxtail (Setaria verticillata), Bermuda grass, swollen fingergrass (Chloris barbata), hairy merremia (Merremia aegyptia), Guinea grass, sourgrass (Digitaria insularis), and jungle-rice (Echinochloa colona). A few shrubs of the native 'ilima are also found here (Cagne and Cuddihy 1990; U.S. Fish and Wildlife Service 1996).

## APPENDIX H

Survey of The Avifauna and Feral Mammals at Koko Head and  
Koko Crater, Oahu, Hawaii

Phillip L. Bruner

May 27, 1988

**SURVEY OF THE AVIFAUNA AND FERAL MAMMALS AT KOHO HEAD  
AND KOHO CRATER, OAHU, HAWAII**

**Prepared for  
Belt Collins & Associates**

**By**

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**27 May 1988**

SURVEY OF THE AVIFAUNA AND FERAL MAMMALS AT KOKO HEAD  
AND KOKO CRATER, OAHU, HAWAII

-2-

GENERAL SITE DESCRIPTION

The field site is located on the south shore of Oahu (see Fig. 1). Total acreage of the property is 1,270 acres. This sector of Oahu normally receives light precipitation and strong tradewinds and hence is quite arid and wind swept in appearance. Vegetation on the property consists of mostly exotic (introduced) trees with an understory of exotic weeds and grasses. Kiawe (Prosopis pallida) and Koa Haole (Leucaena glauca) are the dominant trees.

Weather during the field survey varied from clear to overcast. Winds were gusty NE tradewinds on all days of the survey.

STUDY METHODS

Field observations were made with the aid of binoculars and by listening for vocalizations. These observations were concentrated during the peak activity periods of early morning and late afternoon. Attention was also paid to the presence of tracks and scats as indicators of bird and mammal activity.

At various locations (see Fig. 1) eight minute counts were made of all birds seen or heard. Between these count stations walking tallies of birds seen or heard were also kept. These counts provide the basis for the population estimates given

INTRODUCTION

The purpose of this report is to summarize the findings of a three day ( 12, 26 April and 18 May, 1988) bird and mammal field survey at Koko Head and Koko Crater, Oahu, for the proposed Koko Head Regional Park Resource Plan Land of Kaunala, Honolulu District, Island of Oahu ( see Fig. 1). Also included are references to pertinent literature as well as unpublished reports.

The objectives of the field survey were to:

- 1- Document what bird and mammal species occur on the property or may likely occur given the range of habitats available.
- 2- Provide some baseline data on the relative density of each species and where possible, within the constraints of the available time, determine the extent to which each species may be dependent on the resources located on the property.
- 3- Compare these findings with published and/or unpublished data.

in this report. Data on habitat preferences come from these observations plus information provided in Berger (1972), Hawaii Audubon Society (1984) and Pratt et al. (1987). Census data on birds contained in the annual Christmas bird surveys conducted by the Hawaii Audubon Society were also consulted along with unpublished records of birds in order to acquire a more complete picture of avifauna activity on the site and in adjacent lands (Pyle 1987, 1988). Observations of feral mammals were limited to visual sightings and evidence in the form of scats and tracks. No attempts were made to trap mammals in order to obtain data on their relative density and distribution. Two nights were devoted to searching for the presence of owls and the Hawaiian Hoary Bat (Lasiorus cinereus scottus).

Scientific names used herein follow those given in the most recent American Ornithologist's Union Checklist (A.O.U. 1983), Hawaii's Birds (Hawaii Audubon Society 1984) and Mammal species of the World (Honacki et al. 1982).

#### RESULTS AND DISCUSSION

##### Resident Endemic (Native) Land Birds:

No endemic land birds were recorded during the course of the field survey. On two occasions, in 1986, I observed the Short-eared Owl or Pueo (Asio flammeus sandwicensis) on the slopes of Koko Crater near Kalona Point. This endemic subspecies

is listed as endangered on Oahu by the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife. No other endemic land birds are known to occur on the property nor would any be expected given the nature of the present habitat.

##### Migratory Indigenous (Native) Birds:

Pacific Golden Plover (Pluvialis dominica fulva) - Seventy eight plovers were recorded during the first two days of the field survey. Most were in breeding plumage. Plovers prefer open areas such as mud flats and lawns. They arrive in Hawaii in early August and depart to their arctic breeding grounds during the last week of April (Johnson et al. 1981). Johnson et al. (1981) and Bruner (1983) have also shown plovers are extremely site-faithful on their wintering grounds and many establish foraging territories which they defend vigorously. Such behavior makes it possible to acquire a fairly good estimate of the abundance of plover in any one area. These populations likewise remain relatively stable over many years.

##### Wandering Tattler (Heteroscelus incanus) -

Three tattler were seen during the survey. All three were observed foraging along the rocky shelf between Kalona Point and Koko Head. Studies of site-faithfulness in this species have not been conducted. S. Conant (Chairperson of General Science, University of Hawaii pers. comm.) has some limited

unpublished data from her work in the MW Hawaiian Islands that would suggest tattler may be site-faithful but are probably not territorial on their winter foraging grounds.

Two other migratory species of shorebirds, Ruddy Turnstone (Arenaria interpres) and Sanderling (Calidris alba), have been recorded regularly along this coastline of Oahu (Bruner- personal unpublished observations).

Resident Indigenous (Native) Land Birds:

No resident indigenous species were observed. The only possible bird in this category that might occur would be Black-crowned Night Heron (Nycticorax nycticorax). I have observed this species foraging among the mangroves at Kaloko cove, an estuary adjacent to the survey site.

Resident Indigenous (Native) Seabirds:

If one is patient and spends enough time virtually all the seabirds common to Hawaiian waters could likely be seen from this sector of Oahu's coastline. The following is a list of only those species recorded during this survey along with the number seen:

|   |       |
|---|-------|
| Laysan Albatross ( <u>Diomedea immutabilis</u> ) -      | 1     |
| Hedge-tailed Shearwater ( <u>Puffinus pacificus</u> ) - | 12    |
| Brown Noddy ( <u>Anous stolidus</u> ) -                 | 100 + |
| Black Noddy ( <u>Anous minutus</u> ) -                  | 6     |
| White Tern ( <u>Gygis alba</u> ) -                      | 18    |
| Sooty Tern ( <u>Sterna fuscata</u> ) -                  | 600 + |
| Red-tailed Tropicbird ( <u>Phaethon rubricauda</u> ) -  | 3     |
| White-tailed Tropicbird ( <u>Phaethon lepturus</u> ) -  | 1     |
| Red-footed Booby ( <u>Sula sula</u> ) -                 | 9     |
| Brown Booby ( <u>Sula leucogaster</u> ) -               | 1     |
| Great Frigatebird ( <u>Fregata minor</u> ) -            | 3     |

Seabirds typically nest on offshore islands which are free from disturbances brought about by dogs, cats, mongoose and rats. However, there are areas on the main islands where predators lack access and nesting can be successful (Bruner 1988). The first nesting activity of the White Tern on Oahu was recorded at Koko Head (Ord 1961). Red-tailed Tropicbirds nested successfully in 1987 at Makapuu Point (Bruner personal observation). Hedge-tailed Shearwaters and Bulwer's Petrel (Bulweria bulwerii) nest in burrows and under ledges in cliff faces. It would not be surprising to find these two species nesting on the inaccessible seaward facing cliffs at Koko Head.

Laysan Albatross have recently been observed in increasing numbers on the main Hawaiian Islands (Mortarty et al. 1986). This event may be due to over crowding in the Leeward H.H. Hawaiian Islands which has caused some birds to disperse to the main islands. Predators, however, will likely limit the success of this strategy.

Exotic (Introduced) Birds:

A total of 17 species of exotic birds were recorded during the field survey. Table One shows the relative abundance and typical habitat preferences of these species. The most abundant species during the three day survey were Japanese White-eye (Zosterops japonicus) Zebra Dove (Geopelia striata) and Red-vented Bulbul (Pycnonotus cafer). Exotic species not recorded on the actual survey but which also, in the past, have been



observed on the property include: Common Barn Owl (Tyto alba), Common Nighthawk (Estrilda astrifid), Chestnut Mannikin (Lonchura malacca), Warbling Silverbill (Lonchura malabarica) and Melodious Laughing-Thrush (Garrulax canorus) (Bruner personal field notes, Conant 1984).

Warbling Silverbill has had a rather spotty history of occurrence in the area. First recorded on Oahu at Sandy Beach (Conant 1984) it has subsequently been reported from a variety of localities along the leeward coast (Pyle 1987), but to date no actual breeding populations are known for Oahu. This species has shown a spectacular display of dispersal ability since its first introduction to Hawaii (Berger 1975; Hirai 1980; Conant 1983, 1984; Starratt 1984).

Red-vented Bulbul have become one of Oahu's most abundant species in recent years. The adaptability of this species to a wide variety of habitats and its remarkable population increase have been well documented (Williams 1983, Williams and Giddings 1984, and Williams and Evenson 1985).

Earlier studies (Wilson et al: 1977, Yeh 1984) reported a more limited list of birds for this area. These studies were inadequate. In addition the Wilson (1977) study includes a species, Mourning Dove (Zenaidura macroura) (genus misspelled Zenaida), that is not known from Oahu (Pratt et al: 1987) and is therefore suspect.

The combined list of exotic species, those obtained on

the actual survey plus those observed on the property in the recent past, include the typical array of introduced birds one would expect in this type of habitat on Oahu (Hawaii Audubon Society 1984, Pratt et al. 1987).

Feral Mammals:

The only feral mammals observed during the survey were the Small Indian Mongoose (Herpestes auro-punctatus) and cats. No rats or mice were recorded but it would be highly unusual if these ubiquitous mammals did not occur on the property. Without a trapping program it is difficult to conclude anything about the relative abundance of rats, mice, mongooses and cats. However, it is likely that their numbers are typical of what one would find elsewhere in similar habitat on Oahu.

Records of the endemic and endangered Hawaiian Hoary Bat (Lasiurus cinereus semotus) are sketchy but the species has been reported from Oahu (Tomich 1986). None were observed on this field survey despite two nights of intense searching. However, bats have been observed in dry coastal habitat elsewhere in Hawaii (Bruner 1985).

CONCLUSIONS


A brief field survey can at best provide a limited perspective of the wildlife present in any given area. Not all species will necessarily be observed and information on their

use of the site must be sketched together from brief observations and the available literature. The number of species and the relative density of each species may vary throughout the year due to available resources and reproductive success. Species which are migratory will quite obviously be a part of the ecological picture only at certain times during the year. Exotic species sometimes prosper for a time only to later disappear or become a less significant part of the ecosystem (Williams 1987). Thus only long term studies can provide the insights necessary to acquire both a broad view as well as a more definitive perspective of the bird and mammal populations in a particular area. However, when brief field studies are coupled with data gathered from other similar habitats the value of the conclusions drawn are significantly increased.

The following are broad conclusions related to bird and mammal activity on the property:

- 1- The present environment provides a limited range of habitats which are utilized by the typical array of exotic birds one would expect at this elevation and in this type of environment on Oahu.

- 2- In order to obtain more data on mammals, a trapping program would be required. The brief observations of this survey did not reveal any unusual activity.

  
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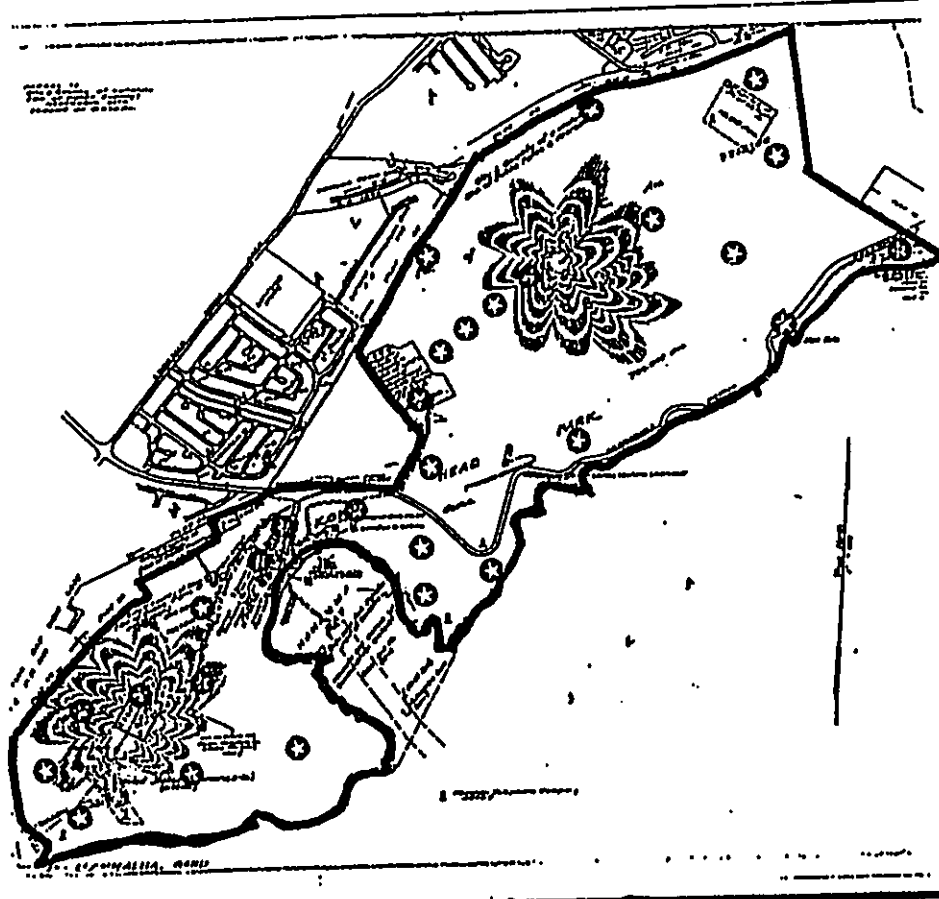


Fig. 1. Project site with eight minute count stations indicated by a ⊗.

KEY TO TABLE 1

Relative Abundance = Average number of individuals observed during walking survey or average frequency on eight minute counts in appropriate habitat.

- A = Abundant (ave. 10+) on 8 min. counts
- C = Common (ave. 5-10) on 8 min. counts
- U = Uncommon (ave. less than 5) on 8 min. counts
- R = Rare (number which follows is total recorded)

(\*R\* may be followed by a large number as in the case of the Common Peafowl and Java Sparrow. In such cases "R" does not mean rare but recorded only once)

Habitat Preference = Area most likely to occur

- G = Open grassland
- T = Thickets of dense vegetation (trees/brush)
- E = Ecotone (boundary of wooded areas and open grasslands)

TABLE 1

Relative abundance and general habitat preferences of exotic birds at Koko Head and Koko Crater, Oahu.

| COMMON NAME           | SCIENTIFIC NAME               | RELATIVE ABUNDANCE* | HABITAT*             |
|-----------------------|-------------------------------|---------------------|----------------------|
| Common Peafowl        | <u>Pavo cristatus</u>         | R = 16              | E (Koko Crater only) |
| Ring-necked Pheasant  | <u>Phasianus colchicus</u>    | R = 2               | G, E                 |
| Spotted Dove          | <u>Streptopelia chinensis</u> | U = 4.6             | E, G                 |
| Zebra Dove            | <u>Geopelia striata</u>       | A = 15.1            | E, G                 |
| Rock Dove             | <u>Columba livia</u>          | C = 6.4             | G                    |
| White-rumped Shama    | <u>Copsychus malabaricus</u>  | R = 7               | T (Koko Crater only) |
| Common Myna           | <u>Acridotheres tristis</u>   | C = 5.2             | E, G                 |
| Red-vented Bulbul     | <u>Pycnonotus cafer</u>       | A = 11.6            | E                    |
| Northern Mockingbird  | <u>Mimus polyglottos</u>      | U = 3.3             | E                    |
| Northern Cardinal     | <u>Cardinalis cardinalis</u>  | U = 4.3             | T, E                 |
| Red-crested Cardinal  | <u>Paroaria coronata</u>      | U = 2.1             | E                    |
| Java Sparrow          | <u>Padda oryzivora</u>        | R = 10              | G                    |
| Japanese Bush-warbler | <u>Cettia diphone</u>         | R = 1               | T (Koko Crater only) |
| Japanese White-eye    | <u>Zosterops japonicus</u>    | A = 13              | T, E                 |
| House Sparrow         | <u>Passer domesticus</u>      | U = 3.9             | E, G                 |
| House Finch           | <u>Carpodacus mexicanus</u>   | C = 8.6             | E, G                 |
| Nutmeg Mannikin       | <u>Lonchura punctulata</u>    | C = 6.2             | G                    |

\* (See page 12 for key to symbols)

SOURCES CITED

American Ornithologist's Union 1983. Check-list of North American Birds. 6th edition. American Ornithologist's Union, Washington, D.C.

Berger, A.J. 1972. Hawaiian Birdlife. The Univ. Press of Hawaii, Honolulu. 270 pp.

\_\_\_\_\_. 1975. The Marbling Silverbill, a new nesting bird in Hawaii. Pac. Sci. 29: 51-54.

Bruner, P.L. 1983. Territorial behavior of wintering Pacific Golden Plover in Hawaii. ms. (Paper presented at the 100th meeting of the Amer. Ornith. Union).

\_\_\_\_\_. 1985. An Avifaunal and feral mammal survey of Maikoloa Beach Resort property, coastal area between south property boundary line and proposed Kvatt site, Hawaii. Unpublished ms. prepared for Belt Collins and Associates, Honolulu.

\_\_\_\_\_. 1988. Survey of avifauna and feral mammals at Grove Farm Properties, Poipu, Kauai. Unpublished ms. prepared for Belt Collins and Associates. Honolulu.

Conant, S. 1983. Kaho'olawe birds-including first Marbling Silverbill record. 'Elepaio 44 (6): 63-65.

\_\_\_\_\_. 1984. First O'ahu record of the Marbling Silverbill. 'Elepaio 44 (12): 116.

Hawaii Audubon Society. 1984. Hawaii's Birds. Third Edition. Hawaii Audubon Society, Honolulu. 96 pp.

Hirai, L.T. 1980. First record of the Marbling Silverbill on Lanai. 'Elepaio 40 (9): 119-120.

Honacki, J.H., K.E. Kimman and J.W. Koeppl ed. 1982. Mammal species of the world: A taxonomic and geographic reference. Allen Press, Inc. and the Association of Systematics Collections, Lawrence, Kansas. 694 pp.

Johnson, O.M., P.M. Johnson, and P.L. Bruner. 1981. Wintering behavior and site-faithfulness of Golden Plovers on Oahu. 'Elepaio 41 (12): 123-130.

Mariarty, D., R. Bottomley, S. Fisher, and T. Telfer. 1986. The status of Laysan Albatross on Kauai. 'Elepaio 46 (9): 95-97.

Ord, W.H. 1961. White Terns at Koko Head, Oahu. 'Elepaio 22: 17-18.

Pratt, H.D., P.L. Bruner, and D.G. Berrett. 1987. A field guide to the birds of Hawaii and the tropical Pacific. Princeton Univ. Press. 500 pp.

Pyle, R.L. 1987. Honolulu Christmas Count - 1986. 'Elepaio 47 (5): 51-53.

\_\_\_\_\_. 1988. Honolulu Christmas Count - 1987. 'Elepaio 48 (3): 19-21.

Starrett, A. 1984. Marbling Silverbill reported on Kauai. 'Elepaio 45 (11): 117.

Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press. Honolulu. 375 pp.

VTH Pacific, Inc. 1984. Queen's Beach Park feasibility study. Phase I: site Assessment. Honolulu, Hawaii. Unpublished report.

Williams, R.H. 1987. Alien Birds on Oahu 1944-1985. 'Elepaio 47 (9): 87-92.

\_\_\_\_\_. 1983. Bulbul introduction on Oahu. 'Elepaio 43 (11): 89-90.

Williams, R.H., and L.V. Siddings. 1984. Differential range expansion and population growth of bulbuls in Hawaii. Wilson Bulletin 96: 647-655.

Williams, R.H., and M.E. Evenson. 1985. Foraging niche of two introduced bulbul species (*Pycnonotus*) on Oahu, Hawaii. Unpubl. ms.

Wilson, Okamoto and Associates, Inc. 1977. Hanalei Bay Beach Park site development plan. Honolulu, Hawaii. Unpublished report.

**APPENDIX I**

**Investigation of the Marine Environment in the Vicinity of the  
Koko Head Regional Park and Nature Preserve, East Honolulu,  
Island of Oahu**

**Marine Research Consultants**

**November 1998**

INVESTIGATION OF THE MARINE ENVIRONMENT  
IN THE VICINITY OF THE KOKO HEAD  
REGIONAL PARK AND NATURE PRESERVE  
East Honolulu, Island of Oahu

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## INTRODUCTION

The proposed Koko Head Regional Park and Nature Preserve encompasses approximately 1,265 acres of East Honolulu, Oahu. The project site includes the Hanauma Bay Nature Preserve, as well as the Koko Head District Park, Halona Blow Hole, Koko Crater Botanical Gardens, Koko Head Shooting Complex, and a portion of Sandy Beach Park. The proposed action is to improve existing park facilities and to construct new facilities at Hanauma Bay, the Job Corps site, and at the Botanical Gardens and Stables. As the Job Corps site, Botanical Gardens and Stables are located well inland, the only component of the project that appears to have any association with the marine environment is the Hanauma Bay Nature Preserve. While construction of permanent facilities at the lower level will be kept to a minimum, planning documents stipulate that "...the beach and waters shall be kept pristine and natural features preserved." Hence it appears necessary to determine the nature of the present "pristine conditions" in order to establish relevant management strategies that can be applied to the proposed nature preserve.

A key concern regarding maintenance of the natural biotic habitats at Hanauma Bay is the effects from high volume human usage. This concern of "carrying capacity" of the bay may also become a factor to be considered for the proposed nature preserve. Thus, a major goal of this report is to address the present effects of human usage on the marine habitats of Hanauma Bay. The two components of the marine habitat, water chemistry and biotic composition, are evaluated in the following sections.

## WATER QUALITY

### METHODS

A concern regarding high density usage of Hanauma Bay is the effect on water chemistry that may, in turn, affect the biotic composition of the area. A characterization of water chemistry of the inner and outer bay was conducted by establishing two water sampling transects that extended from the shoreline seaward beyond the reef crest to a distance from shore (approximately 100 m) that is beyond the area of most human usage. By evaluating these constituents along transects oriented perpendicular to the beach, it is possible to determine gradients that could identify the sources of change with respect to water quality within the bay.

Transect A was located in the approximate center of the bay in the area where several cables breach the outer reef crest. Transect B was located in the northern end of the bay in an area where a large sand patch known as the "keyhole" is located (Figure 1).

Samples were collected twice at identical locations on the transects: once at 06:30 on October 21, 1998 following a full day of closure of the park, and again at 18:00 on the same day. Hence, the morning sampling was conducted following the maximum interval of no human usage, and the time between samplings spanned a full day of park usage. Park Manager Alan Hong indicated that typical usage of Hanauma Bay during the period of study is approximately one half of peak usage. Hence, the results of the present work do not represent an upper limit of the effects to water quality from human usage.

Samples were collected by swimmers opening pre-rinsed 1-liter polyethylene bottles at eight locations along each transect (0, 2, 10, 20, 30, 50, 75, 100 m from shore). All samples were collected within the upper 50 cm of the water column. Samples were stored on ice until delivered to the laboratory.

Water quality constituents that were measured included the specific criteria designated for open coastal waters in Chapter 11-54, Section 06 (Embayments) of the State of Hawaii, Department of Health (DOH) Water Quality Standards. These criteria include: total nitrogen (TN), nitrate + nitrite nitrogen ( $\text{NO}_3^- + \text{NO}_2^-$ ; hereafter referred to as  $\text{NO}_3^-$ ), ammonium ( $\text{NH}_4^+$ ), total phosphorus, chlorophyll *a* (Chl *a*), turbidity, pH and salinity. In addition, orthophosphate phosphorus ( $\text{PO}_4^{3-}$ ) and silica (Si) are also reported because these parameters are sensitive indicators of biological activity and the degree of input of freshwater.

Analyses for  $\text{NH}_4^+$ ,  $\text{PO}_4^{3-}$ , and  $\text{NO}_3^- + \text{NO}_2^-$  were performed with a Technicon autoanalyzer using standard methods for seawater analysis (Strickland and Parsons 1968, Grasshoff 1983). TN and TP were analyzed in a similar fashion following oxidative digestion. Dissolved organic nitrogen (DON) and dissolved organic phosphorus (DOP) were calculated as the difference between TDN and dissolved inorganic N, and TDP and dissolved inorganic P, respectively. The level of detection for the dissolved nutrients is 0.2  $\mu\text{M}$  for TN and Si, 0.02  $\mu\text{M}$  for TP,  $\text{NO}_3^-$  and  $\text{NH}_4^+$ , and 0.01  $\mu\text{M}$  for  $\text{PO}_4^{3-}$ .

Water for other analyses was subsampled from 1-liter polyethylene bottles and kept chilled until analysis. Turbidity was determined on 60-ml subsamples using a Monitek Model 21 nephelometer, and reported in nephelometric turbidity units (NTU). Chl *a* was measured by filtering 300 ml of water through sub-micron glass-fiber filters (GF/F); pigments on filters were extracted in 90% acetone in the dark at  $-5^\circ\text{C}$  for 12-24 hours, and the fluorescence before and after acidification of the extract was measured with a

Turner Designs fluorometer. Salinity was determined using an AGE Model 2100 laboratory salinometer with a precision of 0.0003%.

All water quality analyses were conducted by Marine Analytical Specialists (Honolulu, HI). This laboratory possess the required approval ratings for the analyses.

## RESULTS

### Horizontal Stratification

Tables 1-4 show the results of all water chemistry analyses for the two sets of samples collected on Transects A and B in Hanauma Bay. Tables 1 and 2 show results for Transects A and B, respectively, with concentrations of nutrients in units of micromoles ( $\mu\text{M}$ ). Tables 3 and 4 show the same data with concentrations of micrograms per liter ( $\mu\text{g/L}$ ). Figures 2-5 show plots of concentrations of water quality constituents as functions of distance from the shoreline.

Several major points regarding horizontal stratification are evident in Figures 2-5. On both transects, the concentrations of several nutrients ( $\text{Si}$ ,  $\text{NO}_3^-$ , and  $\text{TN}$ ) are elevated in samples collected from the station at the shoreline (0 m), and decrease sharply with distance offshore. Salinity exhibits the opposite trend with sharply decreased values at the sampling sites nearest the shoreline, and increasing values with distance from shore (Figure 3). The steep gradients of dissolved nutrients and salinity are more pronounced on Transect A compared to Transect B. While gradients are apparent at both stations in the AM sampling, the patterns differ substantially in the PM sampling. On Transect A, the gradients are steepest during the evening, while on Transect B, there is little detectable gradient in the PM sampling.

The peak values of  $\text{Si}$ ,  $\text{NO}_3^-$ , and  $\text{TN}$  in combination with low salinity in the nearshore zone of Hanauma Bay suggests input of groundwater at the shoreline. Groundwater normally contains high concentrations of these nutrients and low salinity. It is apparent in Figures 2 and 3 and Tables 1-4 that the groundwater input is relatively minor compared to the volume of oceanic water, as the signal is essentially gone within a distance of 2 m from the shoreline. It is a common occurrence in Hawaii that groundwater enters the ocean near the shoreline. Typically, the mixing of groundwater and oceanic water results in zone of mixing. Beyond the zone of mixing, turbulent forces associated with waves, winds and currents effectively homogenizes the water column. As such turbulent forces are of minor magnitude in the protected inner area of Hanauma Bay, the narrow horizontal extent of the mixing area corroborates that the discharge of freshwater into the Bay is of small magnitude.

Dissolved nutrients not present in high concentrations in groundwater relative to ocean water ( $\text{NH}_4^+$ ,  $\text{PO}_4^{3-}$ ,  $\text{DON}$  and  $\text{DOP}$ ) do not show the same distinctive patterns with respect to distance from the shoreline. Concentrations of these constituents showed no distinct horizontal gradients on either transect (Figures 2-4).

On both transects, turbidity and  $\text{Chl } a$  were elevated in the shoreline sample, with values dropping sharply and remaining nearly constant across the remainder of the sampling range (Figure 5). Concentrations of turbidity and  $\text{Chl } a$  also were higher in samples collected nearest the shoreline of Transect A compared to Transect B.

### Temporal Variation

The other pattern that is apparent in Figures 2-5 is the difference (or lack of difference) between the sets of samples collected in the morning versus samples collected in the evening. With the exception of the samples collected at the shoreline, salinity on both transects was slightly higher in the evening compared to the morning (Figure 3). As the salinity at the shoreline of Transect B was not depressed in the PM sampling, it appears that the uniformly elevated salinity in the evening is not a result of freshwater input. Rather, it appears that over the course of the day, evaporation resulting from solar warming may result in slightly elevated salinities. During the night, when evaporation from solar warming is not taking place, flushing of the bay with oceanic water appears to result in lowering of salinity.

The concentrations of several nutrients appears to remain constant throughout the day. Concentrations of  $\text{Si}$ ,  $\text{NO}_3^-$ ,  $\text{DON}$ ,  $\text{TN}$  and  $\text{TP}$  show little temporal variation. Similarly, turbidity and  $\text{Chl } a$  showed no general pattern with respect to differences between morning and evening sampling.

On the other hand, several constituents exhibited clear differences between samplings. Concentrations of  $\text{PO}_4^{3-}$  (Figure 2) and  $\text{NH}_4^+$  (Figure 4) were consistently higher on both transects in the evening. Similarly, oxygen saturation was substantially higher throughout both transects in the evening compared to the morning. While the processes causing the elevated  $\text{PO}_4^{3-}$  and  $\text{NH}_4^+$  at the end of the day are not clear, the elevated oxygen is likely a result of either photosynthetic activity during the course of the day, or perhaps increased mixing of the water column by wind chop, that does not occur during the normally calm evenings.

In summary, several water quality constituents ( $\text{PO}_4^{3-}$ ,  $\text{NH}_4^+$ ) on transects in Hanauma Bay appear to change over the course of the day in what may be a response to human usage. Overall, the water quality of the Bay does not appear to change substantially, or



to a level that might be considered detrimental to marine biota as a result of human usage.

#### Compliance with DOH Standards

DOH standards include specific criteria that are not to be exceeded during either 10% or 2% of the time, or as the geometric mean of the sampling set. With only one set of samples, comparison of the 10% or 2% criteria or the geometric mean criteria for any sampling station are not statistically meaningful. However, comparing sample concentrations to these criteria provide an indication of whether water quality is near the stated specific criteria.

Tables 1-4 show the DOH water quality standards for embayments under "dry" conditions. The criteria for dry conditions are applied to the Hanauma Bay because the average fresh water inflow from land per day appears to be substantially less than one percent of the embayment volume. No measurements of TP, Tn, turbidity or Chl *a* from either sampling exceeded any of the specific DOH criteria. Concentrations of NO<sub>3</sub><sup>-</sup> in shoreline samples from all four transects exceeded all three criteria. However, as discussed above, it is apparent that these samples contained a detectable component of groundwater, which is naturally high in NO<sub>3</sub><sup>-</sup>. Several of the offshore samples also exceeded the 10% criteria for NO<sub>3</sub><sup>-</sup> and NH<sub>4</sub><sup>+</sup>. In general, however, it appears that water quality in Hanauma Bay on the day of the sampling for this study appeared to be compliance with DOH water quality criteria.

#### PHYSICAL-BIOLOGICAL STRUCTURE OF HANAUMA BAY

A major concern regarding human usage of Hanauma Bay is the effect of high densities of swimmers on biotic composition. In the past, feeding of fish was documented to substantially alter the behavior and population structure within the bay, and this activity is now well controlled. Also of concern is the effect that swimmers have on the benthic community, primarily stony corals. Corals which are considered "keystone" species in that they provide much of the physical structure of the coral reef framework, as well as provide food and shelter for the associated reef community. As the coral community structure of Hanauma Bay has been described well in the literature, another field survey quantifying the species composition in the bay did not appear to be of value for planning of the Koko Head Regional Park. However, as walking on live coral has often been reported as a potential or actual anthropogenic impact in Hanauma Bay, it is important to understand the geologic structure of the bay as it applies to the biotic composition.

Grigg (in press) has described the physical composition, coral community structure, and geologic history of Hanauma Bay, part of which is summarized below. Hanauma Bay, which lies within a double sided steep volcanic crater, is exposed to ocean swells directly from the southeast and indirectly from the south and east. The entrance to Hanauma Bay is 350 m wide, approximately 60% the width of the inner bay. As a result the inner bay and fringing reef is semi-sheltered from open ocean swell. The submerged reef area is divided into a back reef flat that extends from the shoreline approximately 80 m seaward (Figure 1). The back reef flat consists of shallow calcium carbonate platforms less than one meter in depth, that are bisected by pockets of sand. Few corals occur in this area, and the majority of the limestone substratum is covered with a veneer of calcareous algae. While coral growth on the upper flat surface of the platform may be restricted by exposure to air during low tidal stands, few corals occur on the vertical sides of the platform at the edges of sand patches, or in deep crevices and pockets on the platform. The lack of corals on deeper vertical surfaces suggests that some physical factors other than aerial exposure are also responsible for the present lack of corals on the back reef.

The back reef terminates in a reef crest, or algal ridge that is exposed to the atmosphere at low tidal stands. The reef crest absorbs much of the wave energy that reaches the inner bay. Seaward of the reef crest, water depth increases sharply to a depth of approximately 5 m. The most substantial reef development consisting of living corals is found in the outer fore reef zone seaward of the algal ridge. This reef is one of the best developed on Oahu (Wells 1988). With increasing distance seaward toward the mouth of the bay, water depth increases to up to 18 m. The sides of the bay lack the shallow reef platform, and the shoreline consists of nearly vertical basaltic walls.

In 1964, ten cores were drilled through the shallow reef platform (Easton and Olson 1976). This work showed that the reef at Hanauma Bay began growing about 7,000 years ago at 15 m depth when rising sea level flooded the bay. While the vertical rate of accretion (reef growth) was initially high, the rate of accretion has slowed to about 1 mm/yr for the past 3,000 years. In the middle of the reef flat, the youngest reef material present today is dated at 2,000 to 3,000 years old. The youngest samples obtained from the inner reef flat by Easton and Olson (1976) was 480 ± 100 yrs. Hence, it appears from geologic data that the inner reef flat at Hanauma Bay has not been an actively growing coral reef for at least four centuries. Based on this geologic record, as well as the observations that few corals occur on the inner reef flat on deep or vertical surfaces (below the depth of aerial exposure, and where people can't walk) it appears that the community composition of the bay is primarily a result of natural processes, and not a result of human impact.

#### OTHER AREAS OF THE KOKO HEAD REGIONAL PARK AND NATURE PRESERVE

Implementation of the proposed Master Plan for the Koko Head Regional Park and Nature Preserve will involve grading, vegetation removal, new construction and other changes to the existing environment on land. However, at present there are no plans for any alteration of the shoreline or offshore areas. Therefore, potential impacts to the marine environment can only be considered from activities on land that may result in delivery of materials to the ocean through infiltration to groundwater, changes in surface runoff, and wind transport.

A potential mechanism for impact to nearshore marine systems is increased sedimentation from wind or runoff as a consequence of grading and changes in land use. With respect to alteration to the marine community offshore of the Koko Head area from increased sedimentation, several environmental conditions suggest little chance for impacts to the marine environment. In addition to the required best management practices that would be mandated to minimize erosion during construction, the porous nature of the volcanic tuff that comprises the area would likely prevent erosional materials from reaching the ocean.

More importantly, the extremely high rates of mixing and water exchange in the wave-exposed nearshore area off the project site would likely result in very rapid flushing of any sediment that might reach the shoreline. Corals and other reef organisms are capable of removing sediment suspended by natural phenomena, up to threshold levels of deposition where cleaning mechanisms are overwhelmed and organisms become buried. As a result of normally turbulent conditions, it is very unlikely that sediments would ever be deposited. In addition, a natural factor of the nearshore marine environment is resuspension of sand by wave and currents. As a result, existing communities are pre-conditioned to some sediment stress.

Several other scenarios around the Hawaiian Islands can also be drawn upon to estimate the potential for impact from sedimentation at Koko Head. In particular, a study conducted at Princeville, Kauai (Grigg and Dollar, 1980) compared the reef environments off the completed phase of the resort with the environments off an area of pristine coastline. The hypothesis tested during this comparison was that increased sedimentation from exposure of soil during construction caused some modification of the coral reef environments offshore. Results of the survey showed that, if anything, the coral environments were better developed off of the existing Princeville development that was potentially subjected to increased runoff than off the unperturbed parcel. Even though the resort construction might have temporarily increased suspended sediment loads, this increase would have been insignificant in comparison to the natural sediment loads to which the reef communities are already pre-adapted. Therefore, the

hypothesis was rejected that developmental alteration of land for Princeville construction, and by inference for similar developments such as the Oneloa Development, would result in offshore impacts to the marine environment.

In addition, while it is generally accepted that sedimentation is a major source of impact on coral reefs throughout the world, several studies show that Hawaiian reefs may be significantly more resistant to heavy sediment loads than other reef areas. Results of surveys conducted at French Frigate Shoals (Dollar and Grigg, 1981) following the inadvertent grounding of a freighter and subsequent dumping of 2,000 tons of a fine-grained mineral clay indicated that there was no damage to the reef corals and associated communities except where the organisms were actually buried by clay deposits for greater than a two-week period. Another study, conducted in Hilo Bay where natural sediment loads are very high and water is extremely turbid, reported that the dominant bottom cover consisted of nearly solid living coral—a condition rarely found under even the most "optimal" conditions (Dollar 1985).

At this time no estimates exist of how drainage patterns might be changed as a result of the development plans. There appear to be no areas offshore of the Koko Head area where marine systems have been adversely affected by runoff to date. It is expected that this would remain the case.

#### POTENTIAL EFFECTS TO PROTECTED SPECIES

Protected marine species that may inhabit the nearshore environment include the green sea turtle (*Chelonia mydas*), humpback whale (*Megaptera novaeangliae*), and possibly the Hawaiian Monk Seal (*Monachus schauinslandi*). With little or no work in the nearshore region, there is no potential for blasting or excavation that might affect behavior of turtles, whales and other marine mammals. Short term changes in water quality resulting from construction would also be of a magnitude to affect the behavior of sea turtles that might inhabit the reefs off of Koko Head. Thriving turtle populations have been documented off many of the existing development projects on Oahu, and are presently abundant in Hanauma Bay. In addition, it is not likely that the proposed project would result in substantial changes to human activities in the marine environment. Thus, any human-induced effects to turtle populations have probably already occurred.

#### SUMMARY

The potential for impacts to marine communities as a result of development of the Koko Head Regional Park appear to be minimal. None of the developmental activities

appear to have the potential to induce long-term changes in physio-chemical water quality parameters of a magnitude sufficient to cause changes in biological community structure. With respect to Hanauma Bay, the results of the present study indicate that the carrying capacity of the bay (with respect to human visitation) is not dependent on alteration to water quality or biotic composition. However, it is important to point out that this study was carried out during a period of non-peak usage. While beyond the scope of this project, it is possible that a parameter that might affect carrying capacity is the public health risk associated with high human usage. Several indicator bacteria have been shown to increase during the course of the day owing to "shedding" from swimmers.

Construction and operational activities associated with other aspects of the Koko Head Nature Preserve appear to be sufficiently separated from the ocean to have essentially no effect. At present, the marine environment offshore of the Koko Head area shows little effects of activities on land. For instance, ongoing compliance monitoring in the vicinity of the ocean outfall from the East Honolulu Wastewater Treatment Facility has been conducted by Marine Research Consultants since 1987. The results of the monitoring program shows that discharge of treated sewage effluent at a depth of 10 m off of Sandy Beach has little or no effect to water quality and biotic community structure. Marine environments are routinely subjected to stresses that can be much more destructive than the slight and temporary changes that might result from construction and operational activities on land that might be associated with the Koko Head Nature Preserve. If some unexpected event related to development activities does occur, the resulting alterations to marine community structure would probably be reversible and recovery rapid once the stress factor is mitigated. Tolerance to such changes appears to already be part of the physiological range of the community.

#### REFERENCES CITED

- Dollar, S. J. 1985. Environmental assessment of Hilo Bay: Marine biological community structure in the vicinity of the proposed Hilo sewage outfall extension. Prepared for M & E Pacific, Inc.
- Dollar, S. J. and R. W. Grigg. 1981. Impact of a kaolin clay spill on a coral reef in Hawaii. *Marine Biology* 65:269-76.
- Dollar, S. J. and G. W. Tribble. 1993. Recurrent storm disturbance and recovery: a long-term study of coral communities in Hawaii. *Coral Reefs*.
- Easton, W.H. and E.A. Olson (1976). Radiocarbon profile of Hanauma Reef, Oahu, Hawaii. *Geol. Soc. Amer.* 87:711-719.
- Grigg, R. W. (in press). Holocene coral reef accretion in Hawaii: a function of wave exposure and sea level history. *Coral Reefs*.
- Grigg, R. W. and S. J. Dollar. 1980. Environmental impact assessment of nearshore marine life at Princeville, Kauai, Hawaii. Prepared for Princeville Development Corporation.
- Wells, S. 1988. Coral reefs of the world. Vol. 3. Central and Western Pacific. UNDP/UNCN Columbia Univ. Press, Irvington NY. p. 161.

TABLE 2. Results of water quality analyses on transect B in Hanauma Bay (units of  $\mu\text{M}$ ). Samples on the AM transect were collected following a day when the park was closed; samples on the PM transect were collected at 1800 after a full day of park use. DFS indicates distance from shore. Also shown are DOH standard for embayments under dry conditions. "D" indicates deep sample. See Figure 1 for location of sampling transects.

| TRANSECT      | DFS (m) | PO4 ( $\mu\text{M}$ ) | NO3 ( $\mu\text{M}$ ) | NH4 ( $\mu\text{M}$ ) | SI ( $\mu\text{M}$ ) | DOP ( $\mu\text{M}$ ) | DON ( $\mu\text{M}$ ) | TP ( $\mu\text{M}$ ) | TN ( $\mu\text{M}$ ) | TURB (ntu) | SALT (o/oo) | pH (rel) | Chl-a ( $\mu\text{g/l}$ ) | O2 (mg/l) | O2 (%) |
|---------------|---------|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|------------|-------------|----------|---------------------------|-----------|--------|
| B-AM          | 0       | 0.09                  | 11.26                 | 0.49                  | 6.45                 | 0.21                  | 7.44                  | 0.30                 | 19.19                | 0.27       | 34.987      | 8.030    | 0.490                     | 7.58      | 92.5   |
| B-AM          | 2       | 0.09                  | 0.80                  | 0.32                  | 2.26                 | 0.22                  | 6.12                  | 0.31                 | 7.24                 | 0.10       | 35.180      | 8.059    | 0.233                     | 7.00      | 85.5   |
| B-AM          | 10      | 0.11                  | 0.79                  | 0.31                  | 2.55                 | 0.22                  | 8.09                  | 0.33                 | 9.19                 | 0.10       | 35.135      | 8.059    | 0.289                     | 7.06      | 86.0   |
| B-AM          | 20      | 0.08                  | 0.69                  | 0.31                  | 2.26                 | 0.21                  | 5.98                  | 0.29                 | 6.98                 | 0.08       | 35.161      | 8.069    | 0.287                     | 6.57      | 80.2   |
| B-AM          | 30      | 0.09                  | 0.65                  | 0.37                  | 2.22                 | 0.22                  | 6.73                  | 0.31                 | 7.75                 | 0.08       | 35.145      | 8.072    | 0.225                     | 6.73      | 81.8   |
| B-AM          | 50      | 0.08                  | 0.75                  | 0.28                  | 2.74                 | 0.23                  | 6.80                  | 0.31                 | 7.83                 | 0.09       | 35.124      | 8.069    | 0.303                     | 6.69      | 81.6   |
| B-AM          | 75S     | 0.04                  | 0.29                  | 0.36                  | 3.52                 | 0.27                  | 7.74                  | 0.31                 | 8.39                 | 0.12       | 35.078      | 8.084    | 0.279                     | 6.84      | 83.4   |
| B-AM          | 75D     | 0.05                  | 0.35                  | 0.43                  | 2.23                 | 0.23                  | 7.21                  | 0.28                 | 7.99                 | 0.09       | 35.093      | 8.086    | 0.292                     | 6.73      | 82.1   |
| B-AM          | 100S    | 0.05                  | 0.52                  | 0.25                  | 2.83                 | 0.22                  | 7.53                  | 0.27                 | 8.30                 | 0.09       | 35.141      | 8.089    | 0.185                     | 7.10      | 86.5   |
| B-AM          | 100D    | 0.06                  | 0.61                  | 0.42                  | 1.96                 | 0.23                  | 8.20                  | 0.29                 | 9.23                 | 0.09       | 35.163      | 8.084    | 0.217                     | 6.92      | 84.4   |
| B-PM          | 0       | 0.14                  | 2.21                  | 0.56                  | 3.03                 | 0.21                  | 9.72                  | 0.35                 | 12.49                | 0.16       | 35.228      | 8.205    | 0.270                     | 8.72      | 105.1  |
| B-PM          | 2       | 0.14                  | 0.96                  | 0.53                  | 2.11                 | 0.19                  | 9.23                  | 0.33                 | 10.72                | 0.10       | 35.237      | 8.177    | 0.233                     | 8.50      | 102.2  |
| B-PM          | 10      | 0.12                  | 0.87                  | 0.38                  | 2.07                 | 0.19                  | 5.84                  | 0.31                 | 7.09                 | 0.09       | 35.212      | 8.155    | 0.228                     | 8.40      | 100.9  |
| B-PM          | 20      | 0.14                  | 1.09                  | 0.40                  | 2.26                 | 0.19                  | 6.58                  | 0.33                 | 8.07                 | 0.09       | 35.225      | 8.153    | 0.222                     | 8.12      | 97.4   |
| B-PM          | 30      | 0.15                  | 1.03                  | 0.64                  | 1.89                 | 0.17                  | 7.11                  | 0.32                 | 8.78                 | 0.10       | 35.247      | 8.165    | 0.201                     | 8.18      | 98.3   |
| B-PM          | 50      | 0.16                  | 1.13                  | 0.25                  | 1.88                 | 0.18                  | 7.66                  | 0.34                 | 9.04                 | 0.08       | 35.231      | 8.158    | 0.190                     | 8.08      | 97.2   |
| B-PM          | 75S     | 0.12                  | 0.89                  | 0.59                  | 1.86                 | 0.21                  | 8.17                  | 0.33                 | 9.65                 | 0.08       | 35.245      | 8.168    | 0.193                     | 8.29      | 99.5   |
| B-PM          | 75D     | 0.11                  | 0.90                  | 0.45                  | 1.76                 | 0.21                  | 6.75                  | 0.32                 | 8.10                 | 0.07       | 35.240      | 8.170    | 0.241                     | 8.32      | 99.9   |
| B-PM          | 100S    | 0.10                  | 0.58                  | 0.38                  | 1.62                 | 0.21                  | 8.84                  | 0.31                 | 9.80                 | 0.08       | 35.240      | 8.158    | 0.268                     | 8.33      | 99.9   |
| B-PM          | 100D    | 0.10                  | 0.63                  | 0.39                  | 1.98                 | 0.21                  | 6.45                  | 0.31                 | 7.47                 | 0.09       | 35.220      | 8.165    | 0.265                     | 8.35      | 100.3  |
| DOH Standards |         |                       |                       |                       |                      |                       |                       |                      |                      |            |             |          |                           |           |        |
| 10%           |         |                       | 1.00                  | 0.61                  |                      |                       |                       | 1.29                 | 17.86                | 1.00       |             |          | 1.50                      |           |        |
| 2%            |         |                       | 1.78                  | 1.07                  |                      |                       |                       | 1.93                 | 25.00                | 1.15       |             |          | 3.00                      |           |        |
| Geo. mean     |         |                       | 0.36                  | 0.25                  |                      |                       |                       | 0.64                 | 16.71                | 0.40       |             |          | 0.50                      |           |        |

TABLE 1. Results of water quality analyses on transect A in Hanauma Bay (units of  $\mu\text{M}$ ). Samples on the AM transect were collected following a day when the park was closed; samples on the PM transect were collected at 1800 after a full day of park use. DFS indicates distance from shore. Also shown are DOH standard for embayments under dry conditions. "D" indicates deep sample. See Figure 1 for location of sampling transects.

| TRANSECT      | DFS (m) | PO4 ( $\mu\text{M}$ ) | NO3 ( $\mu\text{M}$ ) | NH4 ( $\mu\text{M}$ ) | SI ( $\mu\text{M}$ ) | DOP ( $\mu\text{M}$ ) | DON ( $\mu\text{M}$ ) | TP ( $\mu\text{M}$ ) | TN ( $\mu\text{M}$ ) | TURB (ntu) | SALT (o/oo) | pH (rel) | Chl-a ( $\mu\text{g/l}$ ) | O2 (mg/l) | O2 (%) |
|---------------|---------|-----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|----------------------|------------|-------------|----------|---------------------------|-----------|--------|
| A-AM          | 0       | 0.10                  | 7.34                  | 0.12                  | 7.78                 | 0.24                  | 7.53                  | 0.34                 | 14.99                | 0.60       | 34.834      | 8.047    | 0.849                     | 7.68      | 93.6   |
| A-AM          | 2       | 0.05                  | 0.56                  | 0.12                  | 2.05                 | 0.22                  | 7.89                  | 0.27                 | 8.57                 | 0.11       | 35.180      | 8.059    | 0.182                     | 6.93      | 84.5   |
| A-AM          | 10      | 0.06                  | 0.15                  | 0.11                  | 1.80                 | 0.22                  | 7.05                  | 0.28                 | 7.31                 | 0.09       | 35.183      | 8.050    | 0.209                     | 6.39      | 77.3   |
| A-AM          | 20      | 0.06                  | 0.24                  | 0.13                  | 2.76                 | 0.22                  | 6.71                  | 0.28                 | 7.08                 | 0.08       | 35.148      | 8.075    | 0.249                     | 6.76      | 81.8   |
| A-AM          | 30      | 0.05                  | 0.25                  | 0.11                  | 2.40                 | 0.26                  | 9.39                  | 0.31                 | 9.75                 | 0.08       | 35.173      | 8.075    | 0.262                     | 6.90      | 82.9   |
| A-AM          | 50      | 0.07                  | 0.18                  | 0.30                  | 1.62                 | 0.26                  | 6.88                  | 0.33                 | 7.36                 | 0.13       | 35.176      | 8.074    | 0.378                     | 7.52      | 90.7   |
| A-AM          | 75      | 0.05                  | 0.10                  | 0.24                  | 1.93                 | 0.23                  | 8.96                  | 0.28                 | 9.30                 | 0.09       | 35.162      | 8.072    | 0.268                     | 6.94      | 84.2   |
| A-AM          | 75D     | 0.07                  | 0.16                  | 0.26                  | 1.74                 | 0.23                  | 7.95                  | 0.30                 | 8.37                 | 0.10       | 35.192      | 8.077    | 0.276                     | 6.86      | 83.8   |
| A-AM          | 100     | 0.06                  | 0.11                  | 0.16                  | 1.84                 | 0.26                  | 6.54                  | 0.32                 | 6.81                 | 0.08       | 35.183      | 8.129    | 0.190                     | 7.38      | 90.0   |
| A-AM          | 100D    | 0.08                  | 0.12                  | 0.28                  | 1.58                 | 0.25                  | 7.64                  | 0.33                 | 8.04                 | 0.08       | 35.200      | 8.138    | 0.177                     | 7.42      | 90.7   |
| A-PM          | 0       | 0.11                  | 14.58                 | 0.65                  | 9.52                 | 0.21                  | 10.33                 | 0.32                 | 25.56                | 0.87       | 34.853      | 8.128    | 0.608                     | 7.51      | 91.2   |
| A-PM          | 2       | 0.10                  | 1.59                  | 0.48                  | 2.89                 | 0.22                  | 10.50                 | 0.32                 | 12.57                | 0.17       | 35.182      | 8.210    | 0.335                     | 8.72      | 104.2  |
| A-PM          | 10      | 0.04                  | 0.11                  | 0.70                  | 1.95                 | 0.21                  | 8.30                  | 0.25                 | 9.11                 | 0.12       | 35.244      | 8.224    | 0.276                     | 8.59      | 103.0  |
| A-PM          | 20      | 0.12                  | 0.79                  | 0.46                  | 2.03                 | 0.21                  | 7.92                  | 0.33                 | 9.17                 | 0.11       | 35.207      | 8.209    | 0.246                     | 8.20      | 98.6   |
| A-PM          | 30      | 0.10                  | 0.42                  | 0.47                  | 1.89                 | 0.22                  | 8.68                  | 0.32                 | 9.57                 | 0.10       | 35.235      | 8.210    | 0.279                     | 8.11      | 97.6   |
| A-PM          | 50      | 0.09                  | 0.27                  | 0.35                  | 1.83                 | 0.23                  | 9.68                  | 0.32                 | 10.30                | 0.11       | 35.227      | 8.224    | 0.295                     | 8.12      | 97.6   |
| A-PM          | 75      | 0.12                  | 0.62                  | 0.47                  | 1.73                 | 0.20                  | 9.45                  | 0.32                 | 10.54                | 0.11       | 35.210      | 8.224    | 0.273                     | 8.54      | 101.8  |
| A-PM          | 75D     | 0.11                  | 1.21                  | 0.37                  | 1.84                 | 0.18                  | 8.03                  | 0.29                 | 9.61                 | 0.10       | 35.217      | 8.227    | 0.308                     | 8.66      | 103.2  |
| A-PM          | 100     | 0.13                  | 0.95                  | 0.55                  | 1.93                 | 0.21                  | 7.66                  | 0.34                 | 9.16                 | 0.11       | 35.247      | 8.237    | 0.193                     | 8.96      | 106.3  |
| A-PM          | 100D    | 0.07                  | 0.54                  | 0.35                  | 2.01                 | 0.22                  | 7.74                  | 0.29                 | 8.63                 | 0.08       | 35.201      | 8.202    | 0.270                     | 8.33      | 99.4   |
| DOH Standards |         |                       |                       |                       |                      |                       |                       |                      |                      |            |             |          |                           |           |        |
| 10%           |         |                       | 1.00                  | 0.61                  |                      |                       |                       | 1.29                 | 17.86                | 1.00       |             |          | 1.50                      |           |        |
| 2%            |         |                       | 1.78                  | 1.07                  |                      |                       |                       | 1.93                 | 25.00                | 1.15       |             |          | 3.00                      |           |        |
| Geo. mean     |         |                       | 0.36                  | 0.25                  |                      |                       |                       | 0.64                 | 16.71                | 0.40       |             |          | 0.50                      |           |        |

TABLE 4. Results of water quality analyses on transect B in Hanauma Bay (units of  $\mu\text{M}$ ). Samples on the AM transect were collected following a day when the park was closed; samples on the PM transect were collected at 1800 after a full day of park use. DFS indicates distance from shore. Also shown are DOH standard for embayments under dry conditions. "D" indicates deep sample. See Figure 1 for location of sampling transects.

| TRANSECT      | DFS<br>(m) | PO4<br>( $\mu\text{M}$ ) | NO3<br>( $\mu\text{M}$ ) | NH4<br>( $\mu\text{M}$ ) | Si<br>( $\mu\text{M}$ ) | DOP<br>( $\mu\text{M}$ ) | DON<br>( $\mu\text{M}$ ) | TP<br>( $\mu\text{M}$ ) | TN<br>( $\mu\text{M}$ ) | TURB<br>(ntu) | SALT<br>(o/oo) | pH<br>(rel) | Chl-a<br>( $\mu\text{g/l}$ ) | O2<br>(mg/l) | O2<br>(%) |
|---------------|------------|--------------------------|--------------------------|--------------------------|-------------------------|--------------------------|--------------------------|-------------------------|-------------------------|---------------|----------------|-------------|------------------------------|--------------|-----------|
| B-AM          | 0          | 2.79                     | 157.64                   | 6.86                     | 180.60                  | 6.51                     | 104.16                   | 9.30                    | 268.66                  | 0.27          | 34.987         | 8.030       | 0.490                        | 7.58         | 92.5      |
| B-AM          | 2          | 2.79                     | 11.20                    | 4.48                     | 63.28                   | 6.82                     | 85.68                    | 9.61                    | 101.36                  | 0.10          | 35.180         | 8.059       | 0.233                        | 7.00         | 85.5      |
| B-AM          | 10         | 3.41                     | 11.06                    | 4.34                     | 71.40                   | 6.82                     | 113.26                   | 10.23                   | 128.66                  | 0.10          | 35.135         | 8.059       | 0.289                        | 7.08         | 86.0      |
| B-AM          | 20         | 2.48                     | 9.66                     | 4.34                     | 63.28                   | 6.51                     | 83.72                    | 8.99                    | 97.72                   | 0.08          | 35.161         | 8.089       | 0.287                        | 6.57         | 80.2      |
| B-AM          | 30         | 2.79                     | 9.10                     | 5.18                     | 62.16                   | 6.82                     | 94.22                    | 9.61                    | 108.50                  | 0.08          | 35.145         | 8.072       | 0.225                        | 6.73         | 81.8      |
| B-AM          | 50         | 2.48                     | 10.50                    | 3.92                     | 76.72                   | 7.13                     | 95.20                    | 9.61                    | 109.62                  | 0.09          | 35.124         | 8.069       | 0.303                        | 6.69         | 81.6      |
| B-AM          | 75S        | 1.24                     | 4.06                     | 5.04                     | 98.56                   | 8.37                     | 108.36                   | 9.61                    | 117.46                  | 0.12          | 35.078         | 8.084       | 0.279                        | 6.84         | 83.4      |
| B-AM          | 75D        | 1.55                     | 4.90                     | 6.02                     | 62.44                   | 7.13                     | 100.94                   | 8.68                    | 111.86                  | 0.09          | 35.093         | 8.086       | 0.292                        | 6.73         | 82.1      |
| B-AM          | 100S       | 1.55                     | 7.28                     | 3.50                     | 79.24                   | 6.82                     | 105.42                   | 8.37                    | 116.20                  | 0.09          | 35.141         | 8.089       | 0.185                        | 7.10         | 86.5      |
| B-AM          | 100D       | 1.86                     | 8.54                     | 5.88                     | 54.88                   | 7.13                     | 114.80                   | 8.99                    | 129.22                  | 0.09          | 35.163         | 8.084       | 0.217                        | 6.92         | 84.4      |
| B-PM          | 0          | 4.34                     | 30.94                    | 7.84                     | 84.84                   | 6.51                     | 136.08                   | 10.85                   | 174.86                  | 0.16          | 35.228         | 8.205       | 0.270                        | 8.72         | 105.1     |
| B-PM          | 2          | 4.34                     | 13.44                    | 7.42                     | 59.08                   | 5.89                     | 129.22                   | 10.23                   | 150.08                  | 0.10          | 35.237         | 8.177       | 0.233                        | 8.50         | 102.2     |
| B-PM          | 10         | 3.72                     | 12.18                    | 5.32                     | 57.96                   | 5.89                     | 81.76                    | 9.61                    | 99.26                   | 0.09          | 35.212         | 8.155       | 0.228                        | 8.40         | 100.9     |
| B-PM          | 20         | 4.34                     | 15.26                    | 5.60                     | 63.28                   | 5.89                     | 92.12                    | 10.23                   | 112.98                  | 0.09          | 35.225         | 8.153       | 0.222                        | 8.12         | 97.4      |
| B-PM          | 30         | 4.65                     | 14.42                    | 8.96                     | 52.92                   | 5.27                     | 99.54                    | 9.92                    | 122.92                  | 0.10          | 35.247         | 8.165       | 0.201                        | 8.18         | 98.3      |
| B-PM          | 50         | 4.96                     | 15.82                    | 3.50                     | 52.64                   | 5.58                     | 107.24                   | 10.54                   | 126.56                  | 0.08          | 35.231         | 8.158       | 0.190                        | 8.08         | 97.2      |
| B-PM          | 75S        | 3.72                     | 12.46                    | 8.26                     | 52.08                   | 6.51                     | 114.38                   | 10.23                   | 135.10                  | 0.08          | 35.245         | 8.168       | 0.193                        | 8.29         | 99.5      |
| B-PM          | 75D        | 3.41                     | 12.60                    | 6.30                     | 49.28                   | 6.51                     | 94.50                    | 9.92                    | 113.40                  | 0.07          | 35.240         | 8.170       | 0.241                        | 8.32         | 99.9      |
| B-PM          | 100S       | 3.10                     | 8.12                     | 5.32                     | 45.36                   | 6.51                     | 123.76                   | 9.61                    | 137.20                  | 0.08          | 35.240         | 8.158       | 0.268                        | 8.33         | 99.9      |
| B-PM          | 100D       | 3.10                     | 8.82                     | 5.46                     | 55.44                   | 6.51                     | 90.30                    | 9.81                    | 104.58                  | 0.09          | 35.220         | 8.165       | 0.265                        | 8.35         | 100.3     |
| DOH Standards |            |                          |                          |                          |                         |                          |                          |                         |                         |               |                |             |                              |              |           |
| 10%           |            |                          | 14.00                    | 8.50                     |                         |                          |                          | 40.00                   | 250.00                  | 1.00          |                |             | 1.50                         |              |           |
| 2%            |            |                          | 25.00                    | 15.00                    |                         |                          |                          | 60.00                   | 350.00                  | 1.15          |                |             | 3.00                         |              |           |
| Geo. mean     |            |                          | 5.00                     | 3.50                     |                         |                          |                          | 20.00                   | 150.00                  | 0.40          |                |             | 0.50                         |              |           |

TABLE 3. Results of water quality analyses on transect A in Hanauma Bay (units of  $\mu\text{g/L}$ ). Samples on the AM transect were collected following a day when the park was closed; samples on the PM transect were collected at 1800 after a full day of park use. DFS indicates distance from shore. Also shown are DOH standard for embayments under dry conditions. "D" indicates deep sample. See Figure 1 for location of sampling transects.

| TRANSECT      | DFS<br>(m) | PO4<br>( $\mu\text{g/L}$ ) | NO3<br>( $\mu\text{g/L}$ ) | NH4<br>( $\mu\text{g/L}$ ) | Si<br>( $\mu\text{g/L}$ ) | DOP<br>( $\mu\text{g/L}$ ) | DON<br>( $\mu\text{g/L}$ ) | TP<br>( $\mu\text{g/L}$ ) | TN<br>( $\mu\text{g/L}$ ) | TURB<br>(ntu) | SALT<br>(o/oo) | pH<br>(rel) | Chl-a<br>( $\mu\text{g/l}$ ) | O2<br>(mg/l) | O2<br>(%) |
|---------------|------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------------------|----------------------------|---------------------------|---------------------------|---------------|----------------|-------------|------------------------------|--------------|-----------|
| A-AM          | 0          | 3.10                       | 102.76                     | 1.68                       | 217.84                    | 7.44                       | 105.42                     | 10.54                     | 209.96                    | 0.60          | 34.834         | 8.047       | 0.849                        | 7.68         | 93.6      |
| A-AM          | 2          | 1.55                       | 7.84                       | 1.68                       | 57.40                     | 6.82                       | 110.46                     | 8.37                      | 119.98                    | 0.11          | 35.180         | 8.059       | 0.182                        | 6.93         | 84.5      |
| A-AM          | 10         | 1.86                       | 2.10                       | 1.54                       | 50.40                     | 6.82                       | 98.70                      | 8.68                      | 102.34                    | 0.09          | 35.183         | 8.050       | 0.209                        | 6.39         | 77.3      |
| A-AM          | 20         | 1.86                       | 3.36                       | 1.82                       | 77.28                     | 6.82                       | 93.94                      | 8.68                      | 99.12                     | 0.08          | 35.148         | 8.075       | 0.249                        | 6.76         | 81.8      |
| A-AM          | 30         | 1.55                       | 3.50                       | 1.54                       | 67.20                     | 8.06                       | 131.46                     | 9.61                      | 136.50                    | 0.08          | 35.173         | 8.075       | 0.262                        | 6.90         | 82.9      |
| A-AM          | 50         | 2.17                       | 2.52                       | 4.20                       | 45.36                     | 8.06                       | 98.32                      | 10.23                     | 103.04                    | 0.13          | 35.176         | 8.074       | 0.378                        | 7.52         | 90.7      |
| A-AM          | 75         | 1.55                       | 1.40                       | 3.36                       | 54.04                     | 7.13                       | 125.44                     | 8.68                      | 130.20                    | 0.09          | 35.162         | 8.072       | 0.268                        | 6.94         | 84.2      |
| A-AM          | 75D        | 2.17                       | 2.24                       | 3.64                       | 48.72                     | 7.13                       | 111.30                     | 9.30                      | 117.18                    | 0.10          | 35.192         | 8.077       | 0.276                        | 6.66         | 83.8      |
| A-AM          | 100        | 1.86                       | 1.54                       | 2.24                       | 51.52                     | 8.06                       | 91.56                      | 9.92                      | 95.34                     | 0.08          | 35.183         | 8.129       | 0.190                        | 7.38         | 90.0      |
| A-AM          | 100D       | 2.48                       | 1.68                       | 3.92                       | 44.24                     | 7.75                       | 106.96                     | 10.23                     | 112.56                    | 0.08          | 35.200         | 8.138       | 0.177                        | 7.42         | 90.7      |
| A-PM          | 0          | 3.41                       | 204.12                     | 9.10                       | 266.56                    | 6.51                       | 144.62                     | 9.92                      | 357.84                    | 0.87          | 34.653         | 8.128       | 0.608                        | 7.51         | 91.2      |
| A-PM          | 2          | 3.10                       | 22.26                      | 6.72                       | 75.32                     | 6.82                       | 147.00                     | 9.92                      | 175.98                    | 0.17          | 35.182         | 8.210       | 0.335                        | 8.72         | 104.2     |
| A-PM          | 10         | 1.24                       | 1.54                       | 9.80                       | 54.60                     | 6.51                       | 116.20                     | 7.75                      | 127.54                    | 0.12          | 35.244         | 8.224       | 0.276                        | 8.59         | 103.0     |
| A-PM          | 20         | 3.72                       | 11.06                      | 6.44                       | 56.84                     | 6.51                       | 110.88                     | 10.23                     | 128.38                    | 0.11          | 35.207         | 8.209       | 0.246                        | 8.20         | 98.6      |
| A-PM          | 30         | 3.10                       | 5.88                       | 6.58                       | 52.92                     | 6.82                       | 121.52                     | 9.92                      | 133.98                    | 0.10          | 35.235         | 8.210       | 0.279                        | 8.11         | 97.6      |
| A-PM          | 50         | 2.79                       | 3.78                       | 4.90                       | 51.24                     | 7.13                       | 135.52                     | 9.92                      | 144.20                    | 0.11          | 35.227         | 8.224       | 0.295                        | 8.12         | 97.8      |
| A-PM          | 75         | 3.72                       | 8.68                       | 6.58                       | 48.44                     | 8.20                       | 132.30                     | 9.92                      | 147.56                    | 0.11          | 35.210         | 8.224       | 0.273                        | 8.54         | 101.8     |
| A-PM          | 75D        | 3.41                       | 16.94                      | 5.18                       | 51.52                     | 5.58                       | 112.42                     | 8.99                      | 134.54                    | 0.10          | 35.217         | 8.227       | 0.308                        | 8.66         | 103.2     |
| A-PM          | 100        | 4.03                       | 13.30                      | 7.70                       | 54.04                     | 6.51                       | 107.24                     | 10.54                     | 128.24                    | 0.11          | 35.247         | 8.237       | 0.193                        | 8.96         | 106.3     |
| A-PM          | 100D       | 2.17                       | 7.56                       | 4.90                       | 56.28                     | 6.82                       | 108.38                     | 8.99                      | 120.82                    | 0.08          | 35.201         | 8.202       | 0.270                        | 8.33         | 99.4      |
| DOH Standards |            |                            |                            |                            |                           |                            |                            |                           |                           |               |                |             |                              |              |           |
| 10%           |            |                            | 14.00                      | 8.50                       |                           |                            |                            | 40.00                     | 250.00                    | 1.00          |                |             | 1.50                         |              |           |
| 2%            |            |                            | 25.00                      | 15.00                      |                           |                            |                            | 60.00                     | 350.00                    | 1.15          |                |             | 3.00                         |              |           |
| Geo. mean     |            |                            | 5.00                       | 3.50                       |                           |                            |                            | 20.00                     | 150.00                    | 0.40          |                |             | 0.50                         |              |           |

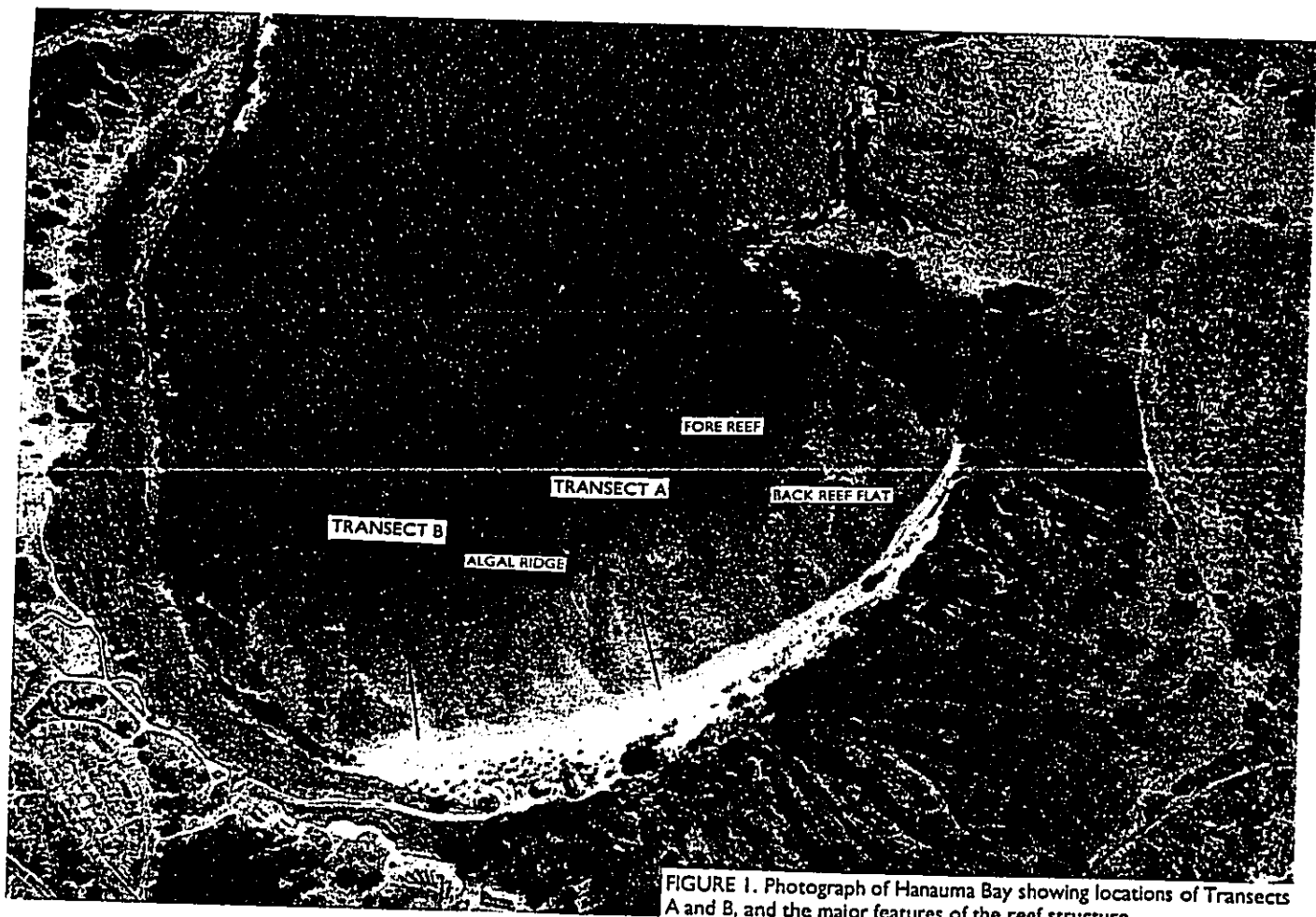


FIGURE 1. Photograph of Hanauma Bay showing locations of Transects A and B, and the major features of the reef structure.

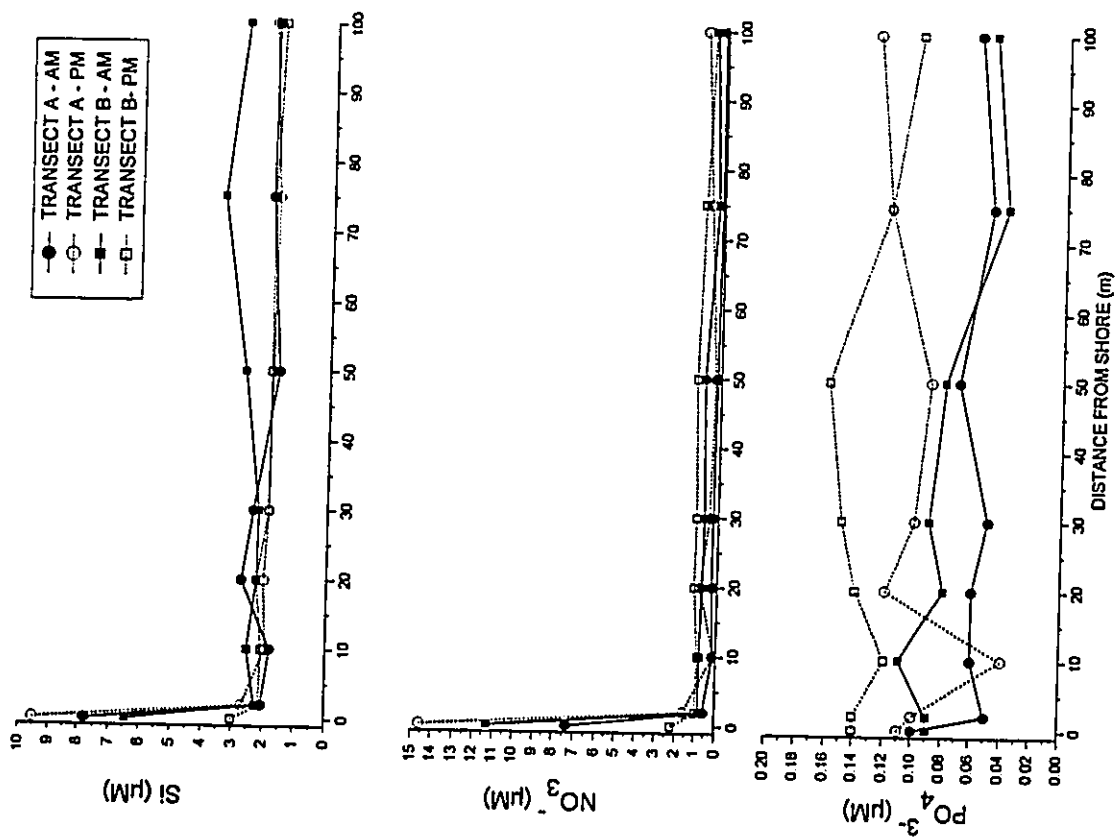


FIGURE 2. Plots of silicate, nitrate and phosphate in surface samples collected on two transects in Hanauma Bay, Oahu as functions of distance from the shoreline. AM indicates samples were collected in the morning before any human activities in the Bay. PM samples were collected in the evening immediately after closure of the Bay. For transect locations, see Figure 1.

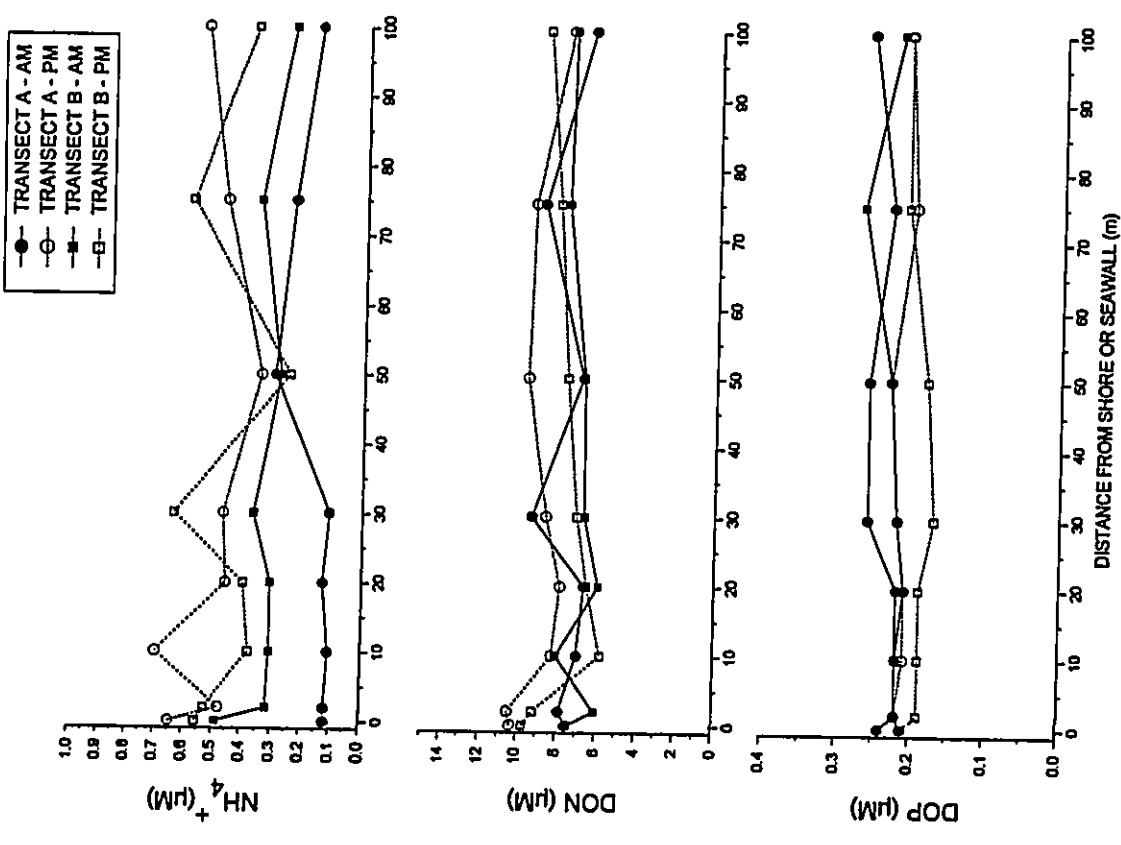


FIGURE 4. Plots of ammonium, dissolved organic nitrogen (DON) and phosphorus (DOP) collected on two transects in Hanatama Bay, Oahu as functions of distance from the shoreline. AM indicates samples were collected in the morning before any human activity in the Bay. PM samples were collected in the evening immediately after closure of the Bay. For transect locations, see Figure 1.

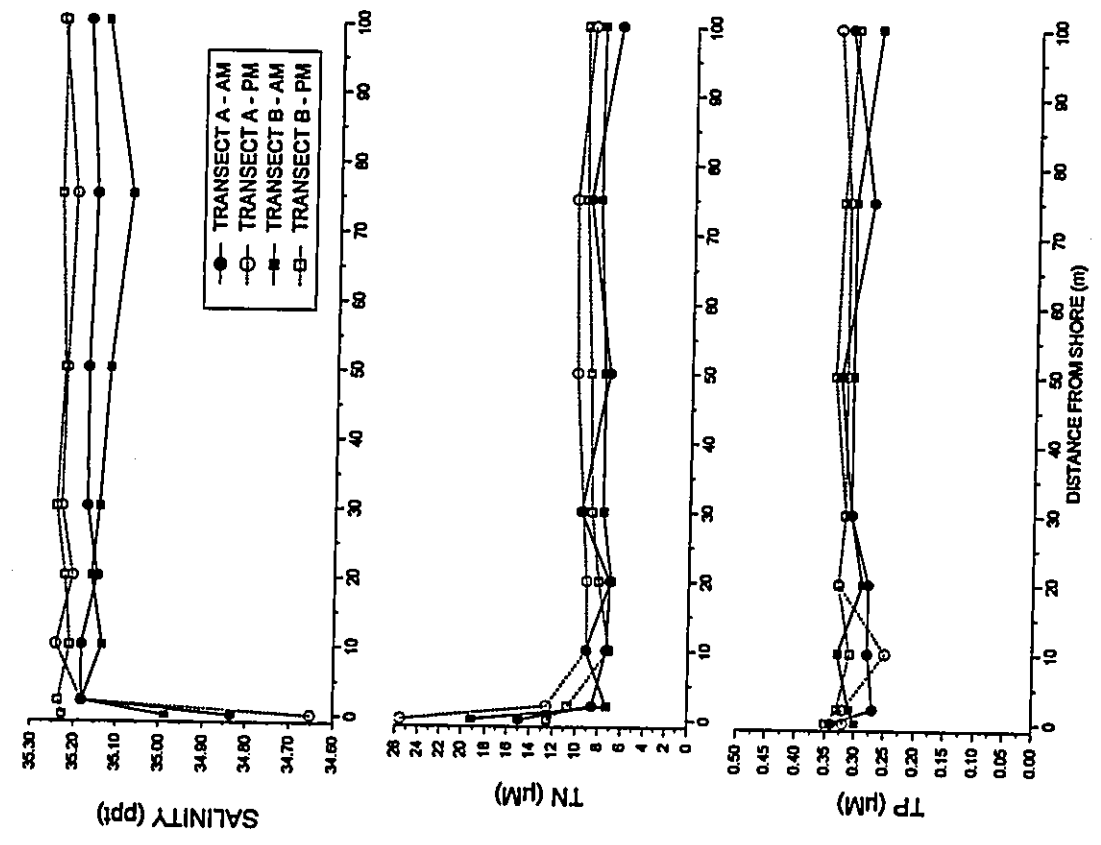


FIGURE 3. Plots of salinity, total nitrogen and total phosphorus collected on two transects in Hanatama Bay, Oahu as functions of distance from the shoreline. AM indicates samples were collected in the morning before any human activity in the Bay. PM samples were collected in the evening immediately after closure of the Bay. For transect locations, see Figure 1.

● TRANSECT A - AM  
 ○ TRANSECT A - PM  
 ■ TRANSECT B - AM  
 □ TRANSECT B - PM

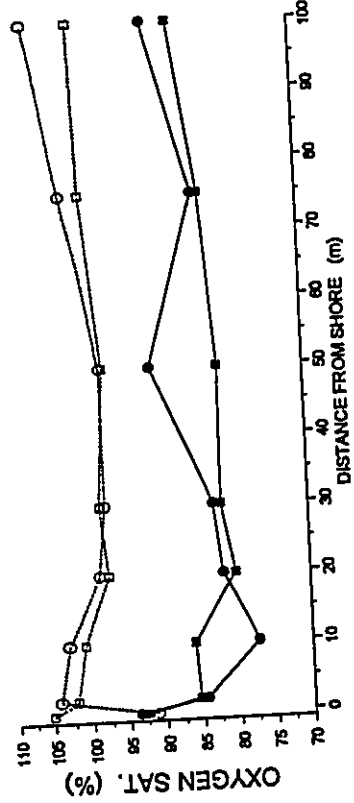
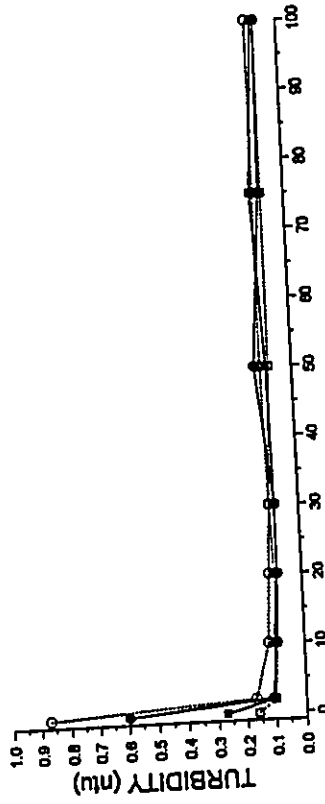
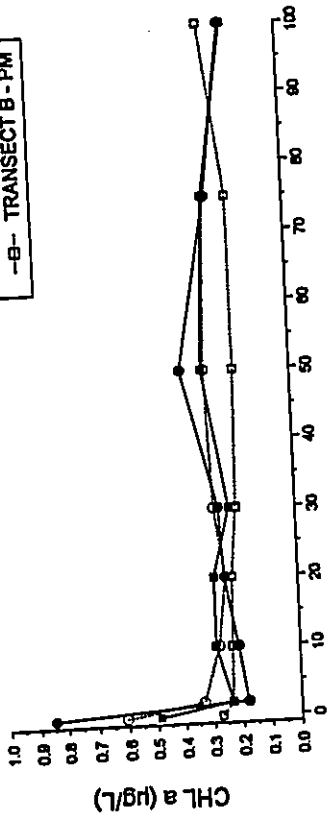


FIGURE 5. Plots of Chlorophyll a, turbidity and oxygen saturation collected on two transects in Honsauma Bay, Oahu as functions of distance from the shoreline. AM indicates samples were collected in the morning before any human activity in the Bay; PM samples were collected in the evening immediately after closure of the Bay. For transect locations, see Figures 1-3



# **APPENDIX J**

## **Traffic Impact Assessment Report for Koko Head Regional Park and Nature Preserve**

**Pacific Planning & Engineering, Inc.**

**December 14, 1998**

**TRAFFIC IMPACT ASSESSMENT REPORT**

**FOR**

**KOKO HEAD REGIONAL PARK AND  
NATURE PRESERVE**

**February 15, 1989**

**Oahu, Hawaii**

**Prepared for:**

**Group 70 International, Inc.**

**Prepared By:**

**Pacific Planning & Engineering, Inc.  
1221 Kapiolani Boulevard, Suite PH 60  
Honolulu, Hawaii 96814**

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**FOREWORD**

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**APPENDICES**

Appendix A. Traffic Count Data

Appendix B. Level-of-Service Definitions for Signalized and Unsignalized Intersections

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, 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 report deals with traffic volumes and roadway capacity, and is not a design document. No conclusions of traffic safety are stated or implied. Recommendations of mitigation actions relate solely to capacity improvements to reduce or minimize traffic delays.

## EXECUTIVE SUMMARY

Pacific Planning & Engineering, Inc. (PPE) was engaged to identify and assess potential future traffic impacts that would be caused by the proposed Koko Head Regional Park and Nature Preserve in the year 2001.

### Project Description

The City and County of Honolulu is proposing to develop the Koko Head Regional Park and Nature Preserve. The project is envisioned as a world-class natural attraction where themes of creation and nature will highlight and direct the development and implementation of park facilities and programs. The project consists of approximately 1,265 acres which includes all the land area from Sandy Beach to Koko Head and includes Koko Head District Park, Koko Crater, Hanauma Bay, Koko Head Shooting Complex, Halona Blow Hole and the Koko Crater Botanical Garden. It is located in East Honolulu on the southeastern tip of Oahu and identified by Tax Map Keys: 3-9-12; 1, 2, 4, 6, 8, 9, 10, 12, 13, 14 and 16.

The project includes the following:

1. Koko Crater Nature Learning Center
2. Summit Punicular
3. Hanauma Bay Marine Education Center
4. Park Shuttle Transportation System

Access to the project will be via Koko Head Park Road at the existing intersection of Kalaniana'ole Highway with Koko Head Park Road. This intersection is proposed to be realigned with Hanauma Bay Road to form a signalized 4-leg intersection.

### Methodology

Traffic analysis was conducted at the following intersections to determine the impact of the proposed project on the adjacent roadways:

- Kalaniana'ole Highway with Lunalilo Home Road,
- Kalaniana'ole Highway with Nawiliwili Street,
- Kalaniana'ole Highway with Koko Head Park Road,
- Kalaniana'ole Highway with Hanauma Bay Road,
- Kalaniana'ole Highway with Kealahou Street and
- Kealahou Street with Botanic Garden/Koko Crater/Stables Access.

Future traffic was forecasted by adding the following:

- existing traffic volumes at the study intersections,
- traffic generated by other potential developments in the area,
- the increase in through traffic and
- traffic generated by the proposed project.

This study assesses the impact on the above intersections by determining the level-of-service (LOS) for:

- existing traffic volumes,
- Year 2001 forecast without project and
- Year 2001 forecast with project.

### Conclusions and Recommendations

The proposed Koko Head Regional Park and Nature Preserve, when completed by the year 2001, is not expected to have an impact at the study intersections except at the proposed Park entrance.

## PROJECT DESCRIPTION

Impacts at the following intersections would be minimal, therefore, no mitigation measures are required:

- Kalanianaʻole Highway with Lunaliʻo Home Road
- Kalanianaʻole Highway with Nawiliwili Street
- Kalanianaʻole Highway with Kealahou Street
- Kealahou Street with Botanic Garden Access

The intersection of Kalanianaʻole Highway with Hanauma Bay Road and Koko Head Park Road will be realigned to form a signalized 4-leg intersection. As a signalized intersection, this intersection would operate at an acceptable Level-of-Service with the following minimum lane requirements:

- Northbound approach (Hanauma Bay Road): shared left-turn/through-lane, exclusive right-turn lane.
- Southbound approach (Project Access): shared left-turn/through-lane, exclusive right-turn lane.
- Eastbound approach (Kalanianaʻole Highway): exclusive left-turn storage lane, single through-lane.
- Westbound approach (Kalanianaʻole Highway): shared left-turn/through/right-turn lane.

The project road leading to the Koko Crater Nature Learning Center should be at least a two-lane two-way roadway to accommodate the project traffic.

The City and County of Honolulu is proposing to develop the Koko Head Regional Park and Nature Preserve. The project is envisioned as a world-class natural attraction where themes of creation and nature will highlight and direct the development and implementation of park facilities and programs.

The project consists of approximately 1,265 acres which includes all the lands from Sandy Beach to Koko Head and includes Koko Head District Park, Koko Crater, Hanauma Bay, Koko Head Shooting Complex, Halona Blow Hole and the Koko Crater Botanical Garden. It is located in East Honolulu on the southeastern tip of Oahu and identified by Tax Map Keys: 3-9-12: 1, 2, 4, 6, 8, 9, 10, 12, 13, 14 and 16. Figure 1 shows the project location.

Access to the project will be via Koko Head Park Road at the existing intersection of Kalanianaʻole Highway with Koko Head Park Road. This intersection is proposed to be realigned with Hanauma Bay Road to form a signalized 4-leg intersection.

The following land uses within the Koko Head Regional Park and Nature Preserve are shown below and on Figure 2.

1. Koko Crater Nature Learning Center
2. Summit Funicular
3. Hanauma Bay Marine Education Center
4. Park Shuttle Transportation System

The planned operation of the project will have visitors parking at a central parking area at the Koko Crater Nature Learning Center. From there, they will be transported to (1) Hanauma Bay via a shuttle system, (2) Halona Blowhole, Lanai Lookout and Botanical Garden via a shuttle system and (3) The Koko

Crater Summit Lookout via a funicular system. Of these three routes, only the first two would impact traffic flow on the adjacent roadways. Visitors who are just sightseeing at Hanauma Bay will still be transported directly to Hanauma Bay via Bus or Van.

Projected attendance for the project is estimated to be from 4,000 to 5,000 visitors per day. Approximately 450 parking stalls will be provided at the Main Visitor Center with an additional 30 stalls for Buses/Vans. At Hanauma Bay, no parking will be allowed for passenger cars. Completion of the project is expected by the year 2001.

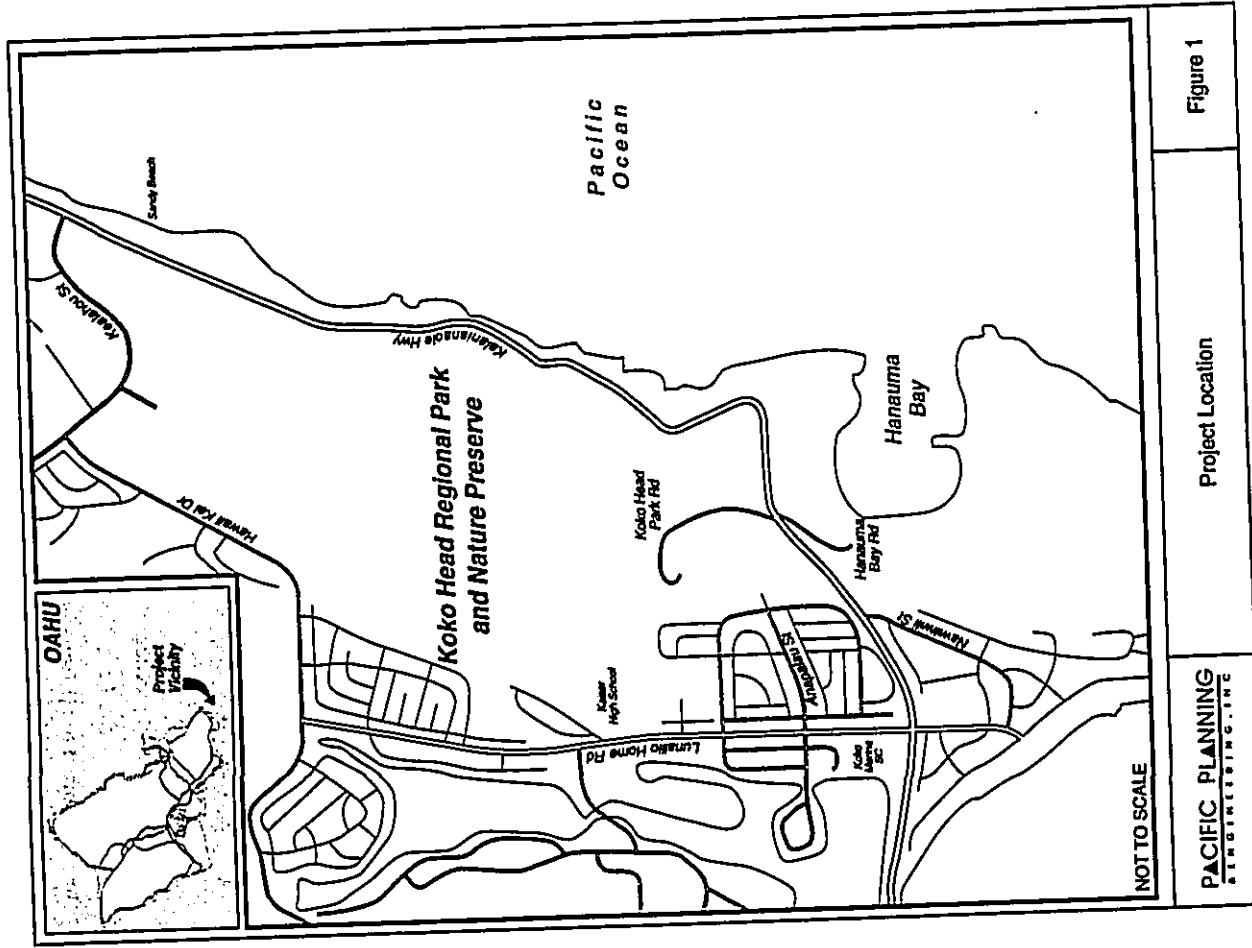
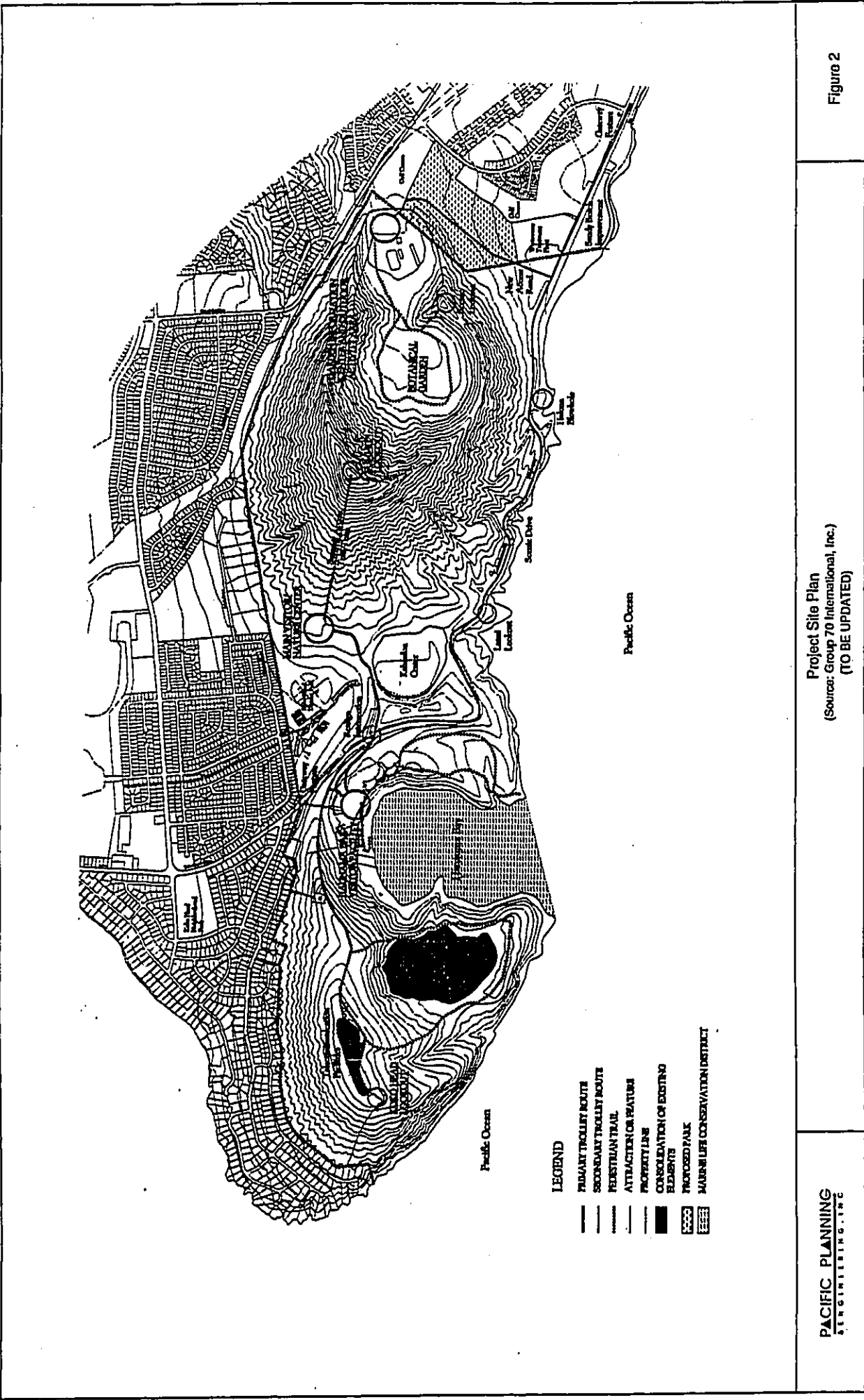


Figure 1

Project Location

NOT TO SCALE  
PACIFIC PLANNING & ENGINEERING





## EXISTING CONDITIONS

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

### Land Uses

Currently, the existing project site is the Koko Head Regional Park. It includes all the lands from Sandy Beach to Koko Head and includes Koko Head District Park, Koko Crater, Hanauma Bay, Koko Head Shooting Complex, Halona Blow Hole and the Koko Crater Botanical Garden.

The land uses near the project include residential, commercial and recreational areas. Residential and commercial areas lie to the west. The Hawaii Kai Golf Course is to the north.

### Roadway Facilities

Kalaniana'ole Highway, in the vicinity of the project, is a two-lane highway which traverses the eastern coast of Oahu. Traffic signals are provided at its intersections with Lunalilo Home Road and Kealahou Street. The posted speed limit varies from 35 miles per hour (mph) to 45 mph. Kalaniana'ole Highway provides access to various commercial and recreational areas such as Koko Marina Shopping Center, Hanauma Bay, Sandy Beach and Hawaii Kai Golf Course.

Lunalilo Home Road is a two-way four-lane collector street. The posted speed limit varies from 25 to 30 mph. Various signalized intersections exist along this road. Lunalilo Home Road primarily serves residential areas.

Nawiliwili Street is a two-way two-lane road which provides access for area residents. Nawiliwili Street has terminuses at Kalaniana'ole Highway and Lunalilo Home Road. The posted speed limit is 25 mph and curb side parking is allowed.

Koko Head Park Road is an unstriped two-way roadway which provides access to both Koko Head District Park and the former Job Corps site. The posted speed limit is 10 mph.

Hanauma Bay Road is a two-lane two-way road which provides access to Hanauma Bay Nature Preserve. The posted speed limit is 25 mph and curb side parking is prohibited. Its intersection with Kalaniana'ole Highway is just east of the intersection of Koko Head Park Road with Kalaniana'ole Highway.

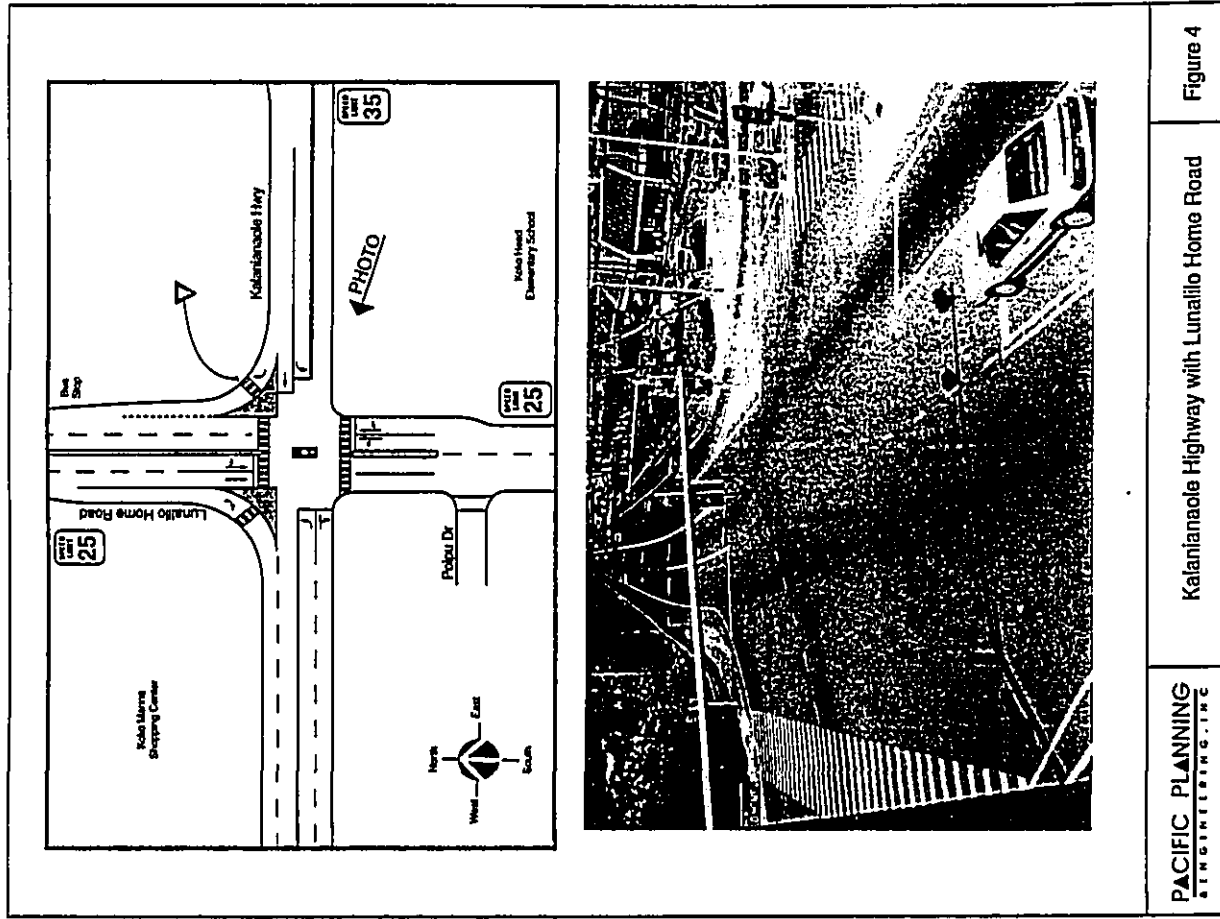
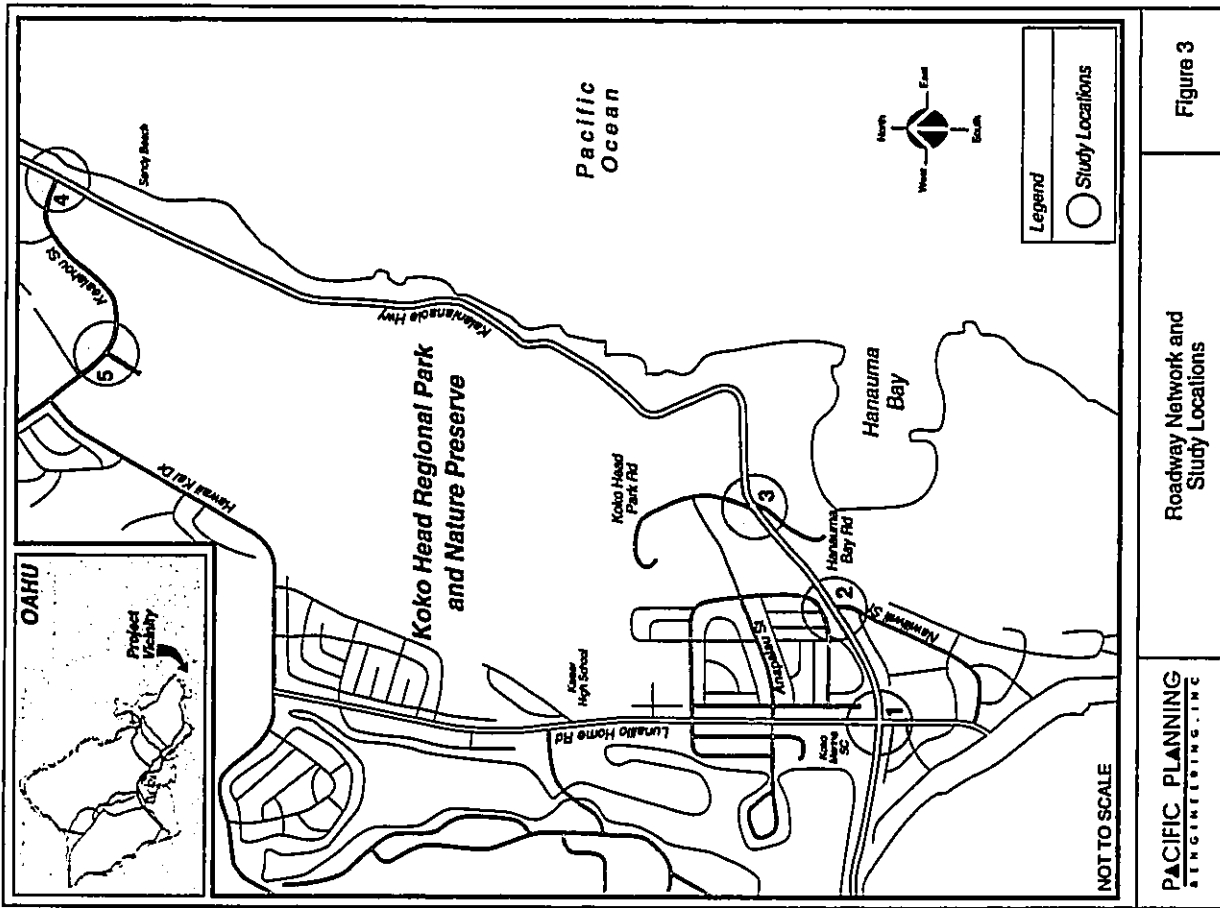
Kealahou Street is a two-way two-lane road which provides connections to Kalaniana'ole Highway and Hawaii Kai Drive. The posted speed limit is 30 mph and curb side parking is allowed.

### Study Intersections

The roadway network is shown on Figure 3 with the study intersections highlighted. Figures 4 through 9 show each of the individual study intersections.

### Traffic Conditions

The State Department of Transportation 24-hour count data indicate that the weekday peak commuter traffic periods in the vicinity typically occurs from 6:00 a.m. to 8:00 a.m. in the morning and from 4:00 p.m. to 6:00 p.m. in the afternoon. On a typical weekend, the peak traffic flow occurs from about 1:00

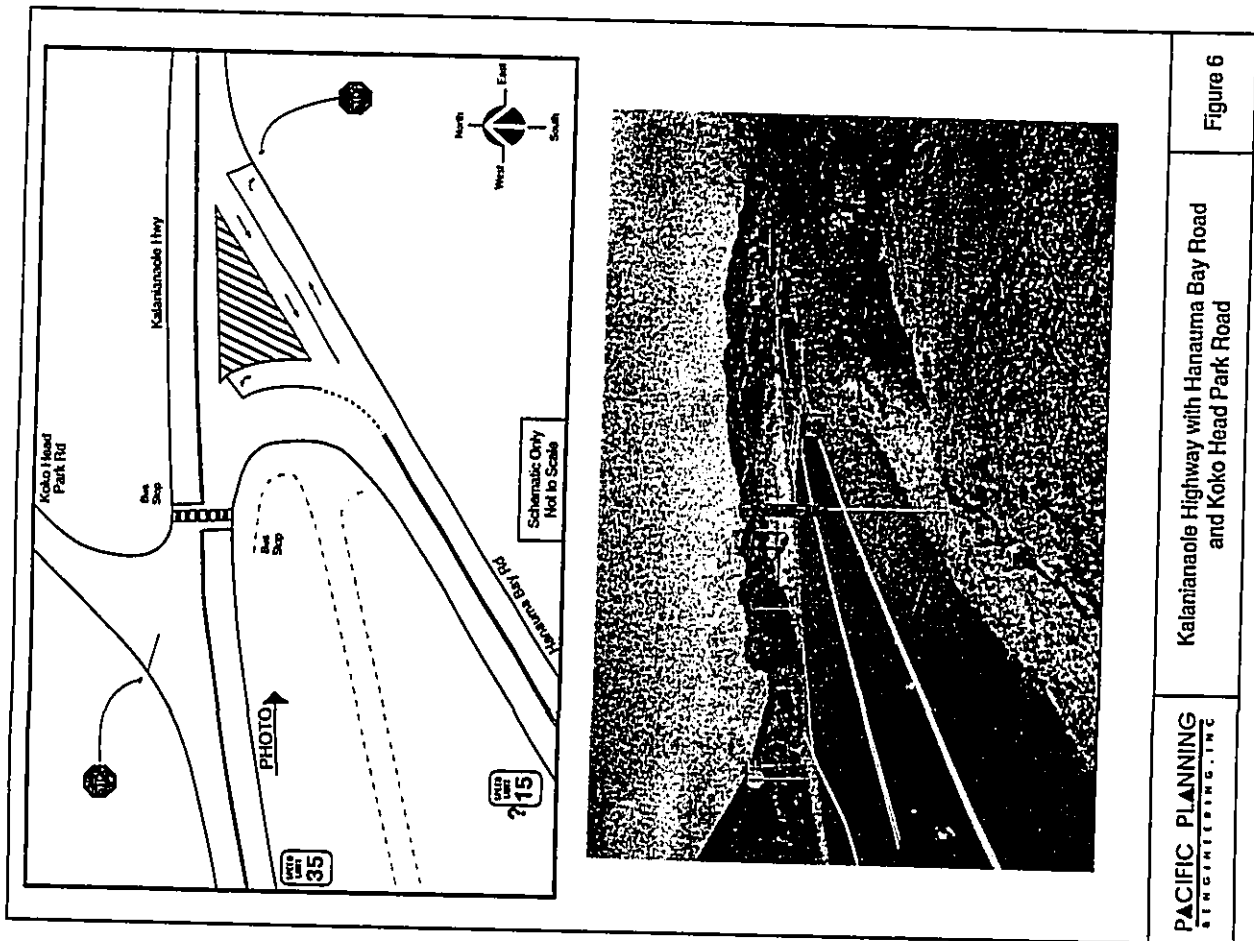
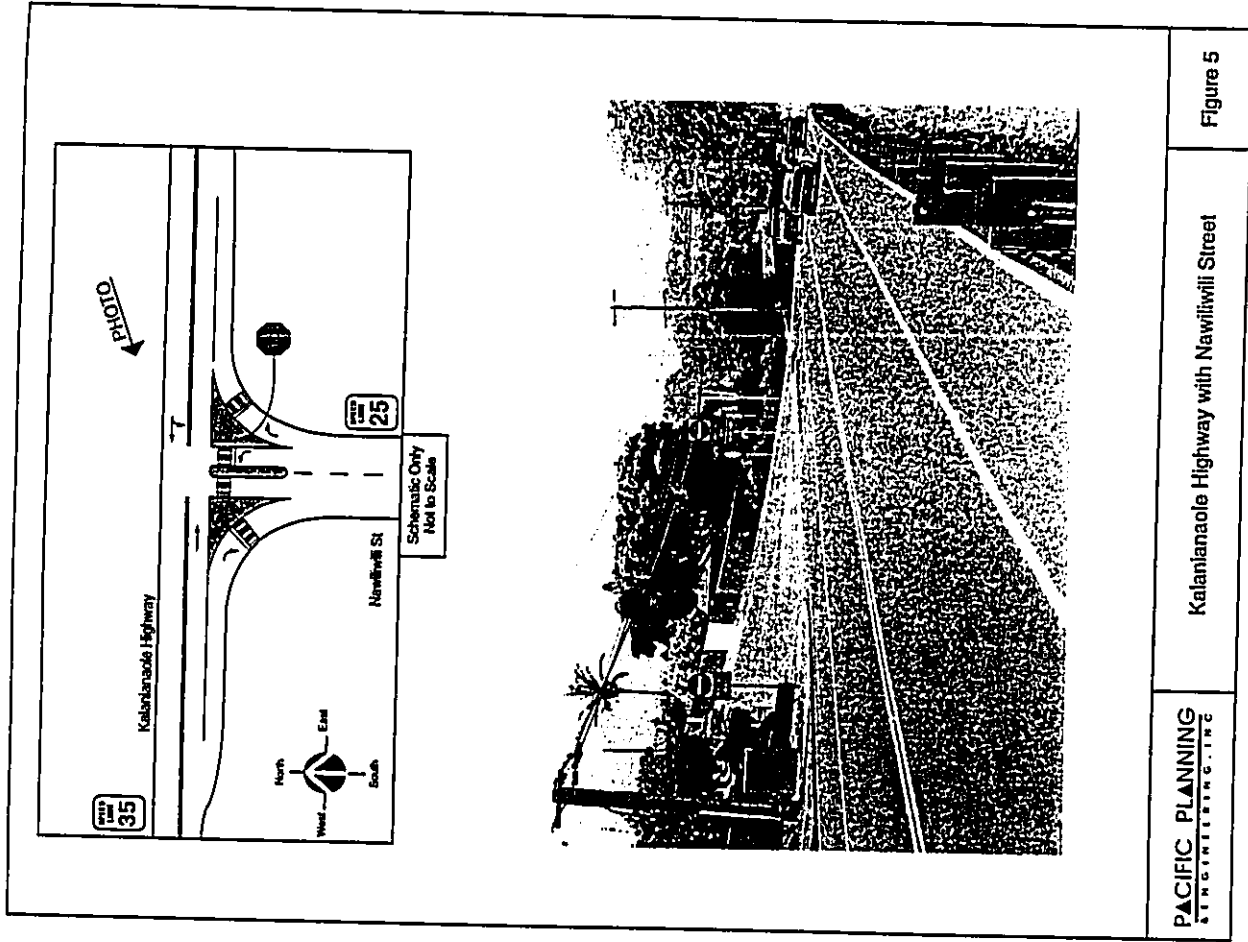


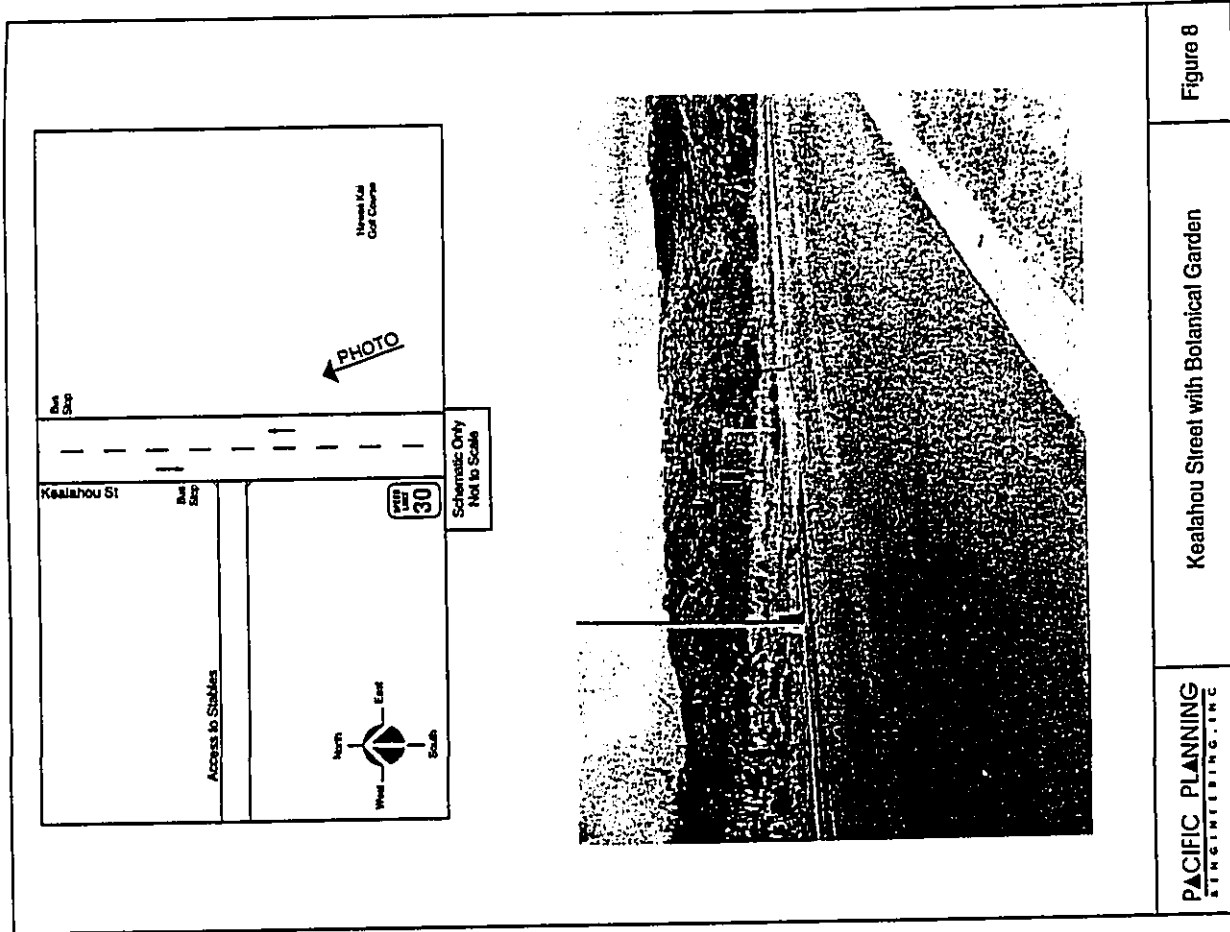
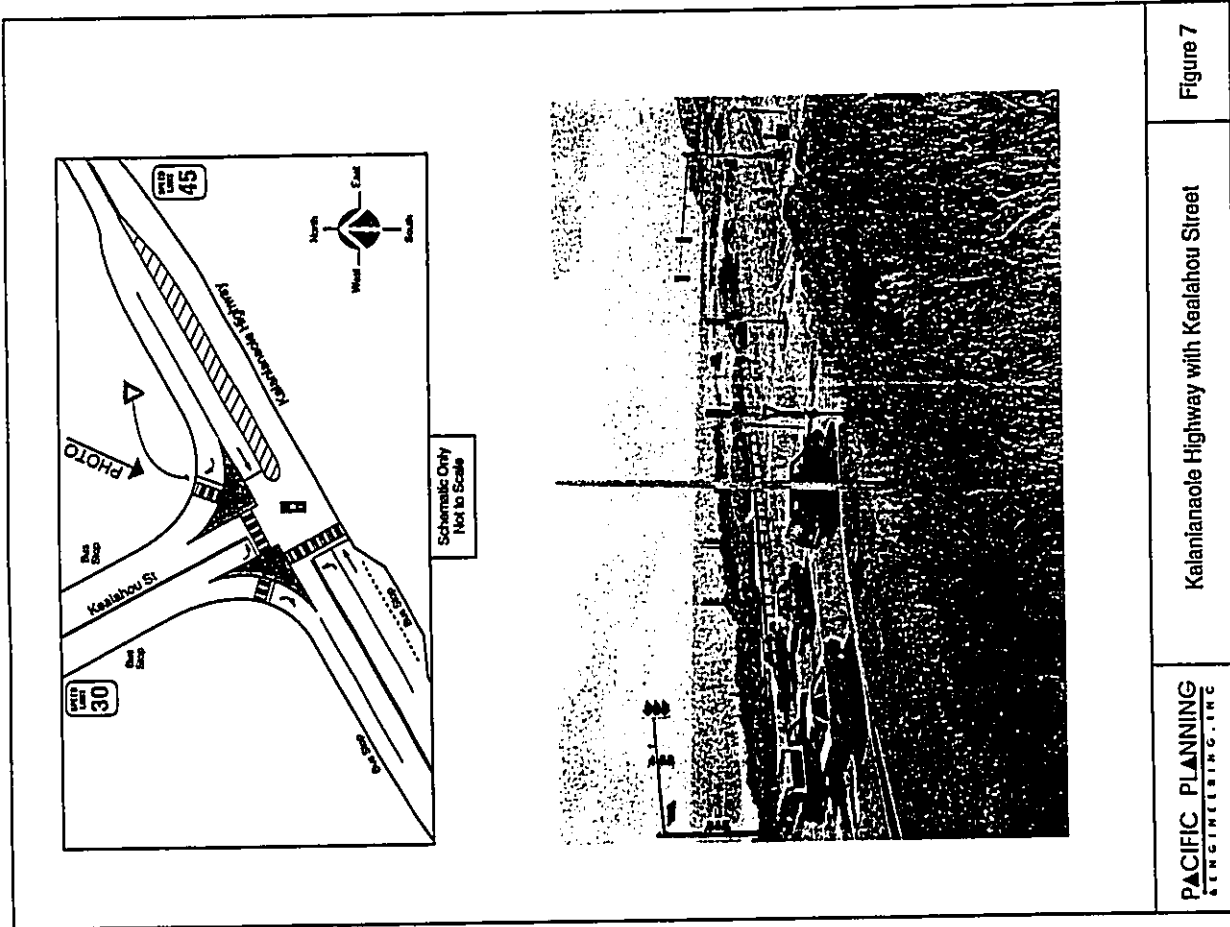
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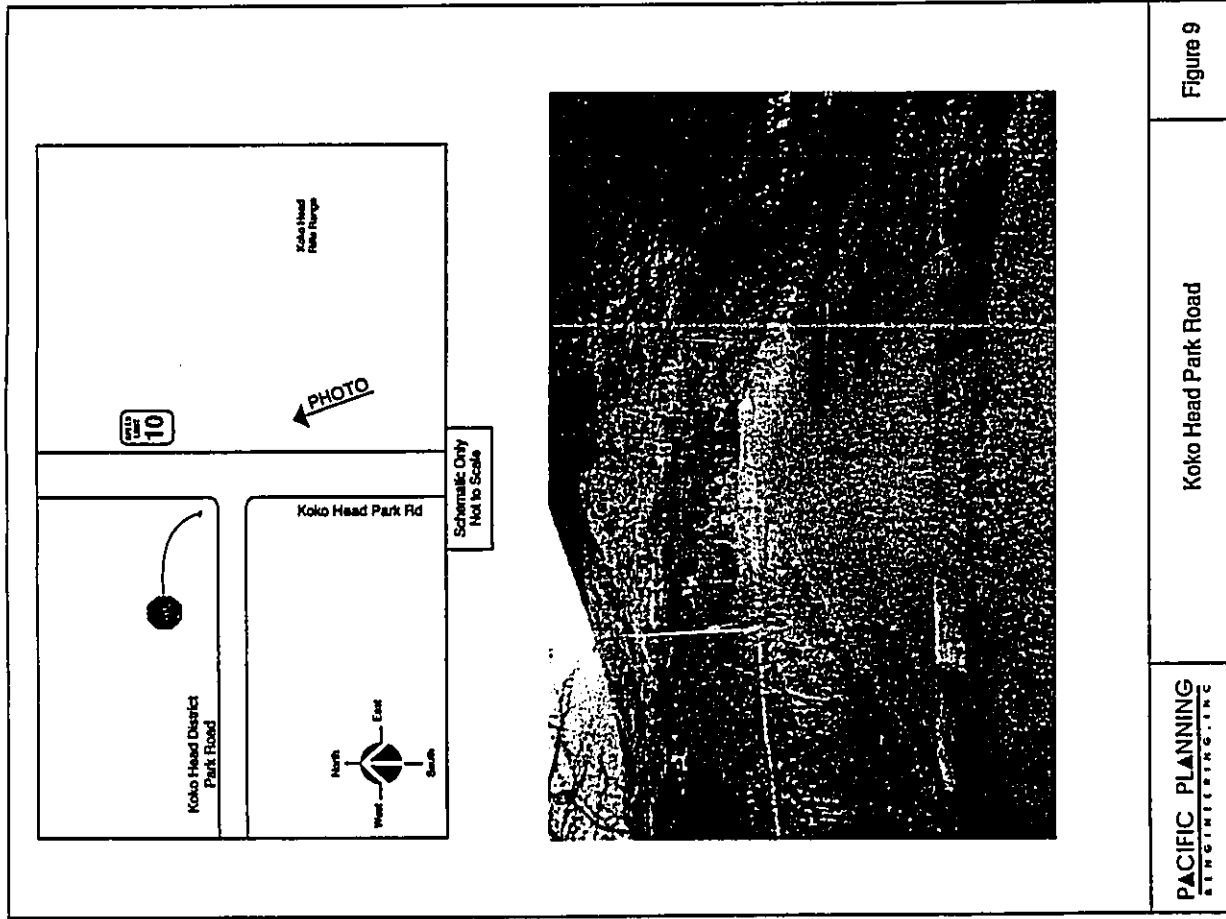
Kalanianaʻole Highway with Lunaliho Home Road

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Roadway Network and Study Locations







p.m. to 3:00 p.m. Manual traffic counts were taken at the study intersections during the above periods. This data was used as the baseline condition upon which estimated future traffic volumes were added. Data was collected at the following locations:

- Kalanianaʻole Highway with Lunalilo Home Road,
- Kalanianaʻole Highway with Nawiliwili Street,
- Kalanianaʻole Highway with Koko Head Park Road,
- Kalanianaʻole Highway with Hanauma Bay Road,
- Kalanianaʻole Highway with Kealahou Street and
- Kealahou Street with Botanic Garden/Koko Crater/Stables Access.

Manual counts consisted of passenger cars, trucks and buses by turning movements and approaches. During the study periods, the weather varied from clear and dry to rainy and wet conditions. Figures 10 through 12 show the present traffic volumes at the study intersections. The traffic count data is tabulated in Appendix A.

The following observations were made at the time of the survey:

- Kalanianaʻole Highway with Lunalilo Home Road  
Traffic appeared to flow smoothly during the study periods. During the morning peak hour, there is a significant right-turn volume from Lunalilo Home Road heading Honolulu-bound. Similarly, during the afternoon peak hour, there is a significant volume of left-turns from Kalanianaʻole Highway to Lunalilo Home Road.
- Kalanianaʻole Highway with Nawiliwili Street  
Traffic flowed smoothly during the study peak hours. There were very few vehicles entering and exiting Nawiliwili Street.

- **Kalanianaʻole Highway with Koko Head Park Road**

Traffic flowed smoothly during the study peak hours. It was observed that limousines parked at Koko Head District Park while waiting for passenger pick-up requests.

- **Kalanianaʻole Highway with Hanauma Bay Road**

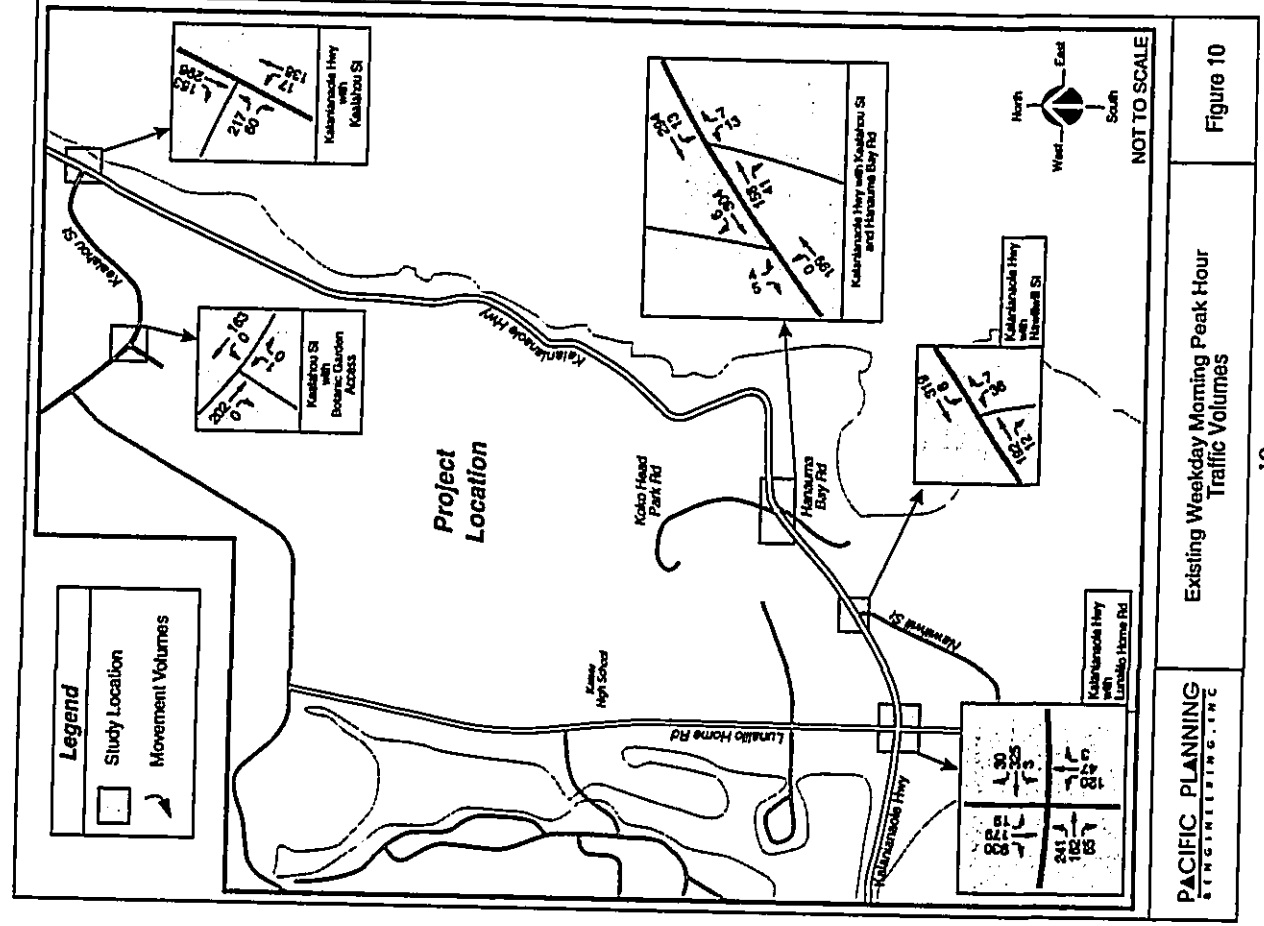
Several problems were noticed at this intersection; (1) at times, stacked vehicles turning left from Hanauma Bay Road onto Kalanianaʻole Highway would block vehicles making a left-turn from Kalanianaʻole Highway to Hanauma Bay Road, (2) vehicles turning left from Kalanianaʻole Highway to Hanauma Bay Road would sometimes enter the wrong access, (3) at times, vehicles making a left-turn out of Hanauma Bay Road would edge out onto Kalanianaʻole Highway before turning, blocking on-coming traffic.

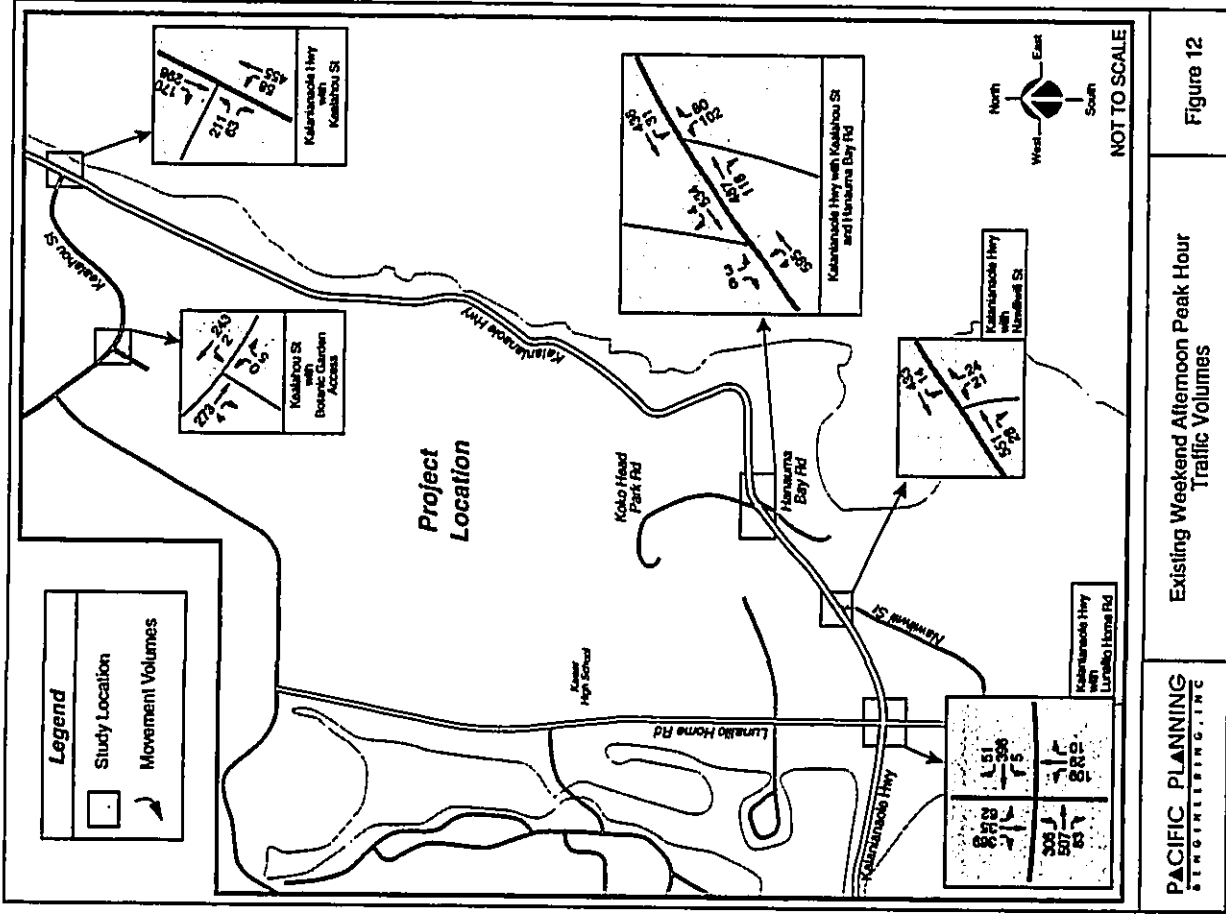
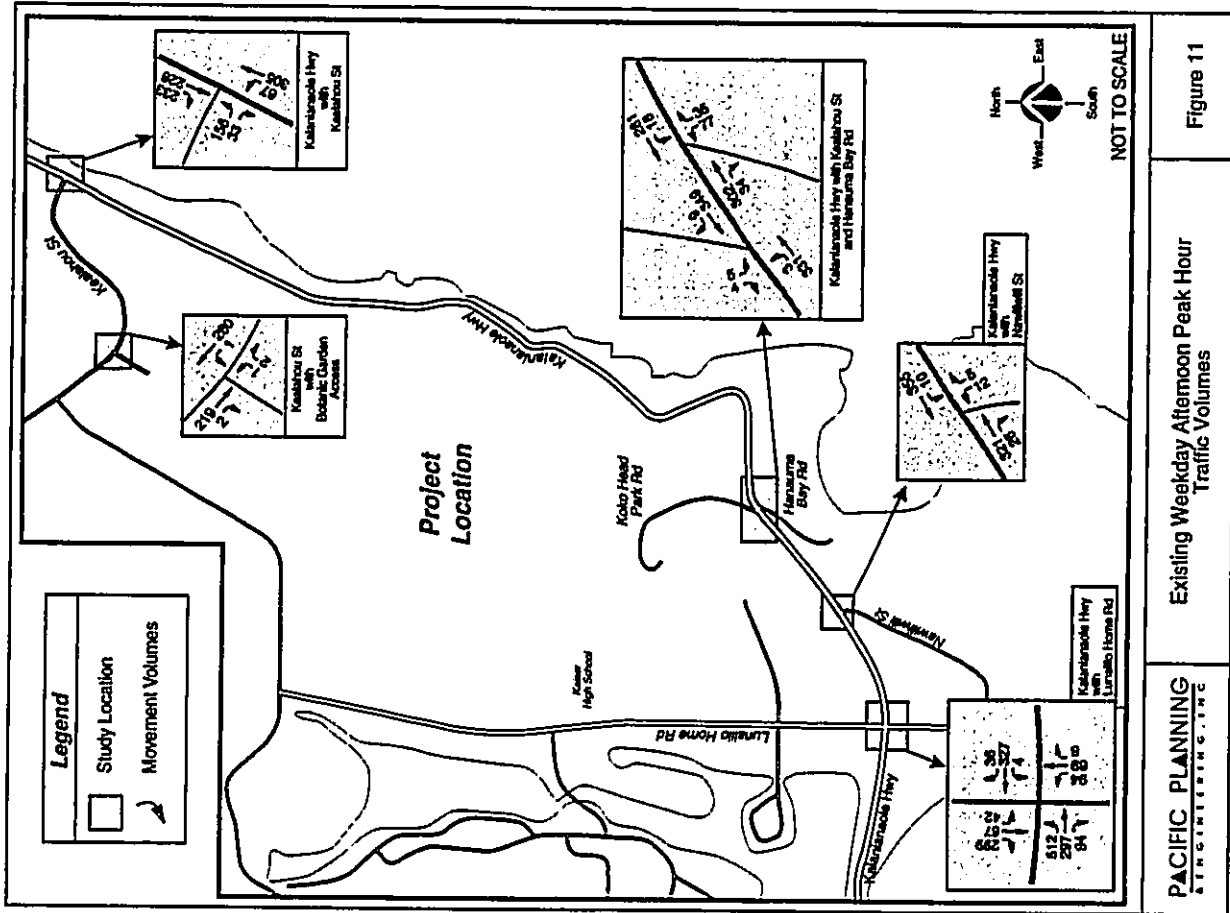
- **Kalanianaʻole Highway with Kealahou Street**

Traffic flowed smoothly during the study peak hours.

- **Kealahou Street with the Koko Crater Access**

Traffic flowed smoothly during the study peak hours. Very few vehicles entered or exited the access during the study periods.





## FUTURE CONDITIONS

A survey was conducted for approved planned developments in the immediate area for inclusion in the total future traffic conditions at the study intersections. Research was also done on future roadway conditions.

### Land Uses

The surrounding area of the project is not anticipated to grow significantly by the year 2001. Although no major developments are expected to occur, the Development Plan Annual Report<sup>1</sup> does indicate several projects which are currently ongoing or may occur in the future. A project which may affect the study intersections is the Na Pali Haweo development located near Kamehame Ridge. Other projects such as the Hawaii Kai Marina development, located across Kuapa Pond are still pending approval. Furthermore, traffic from this development would likely have more impact on areas west of the project.

### Roadway Facilities

There are no approved major roadway projects being planned in the vicinity of the study area in the project time frame.

<sup>1</sup> Development Plan Annual Report Fiscal Year 1997, Planning Department, City and County of Honolulu, September 1, 1997.

## PROJECTED TRAFFIC CONDITIONS

Future traffic was forecasted for the year 2001 without and with the proposed Koko Head Regional Park and Nature Preserve.

### Future Traffic Without Project

Future traffic without the Project was forecasted by evaluating and adding the following: (1) existing traffic volumes for the weekday morning, weekday afternoon and weekend afternoon peak periods, (2) the increase in through-traffic along Kalamanaole Highway and (3) traffic generated by nearby approved proposed developments. The peak hour traffic volume forecasts without the project for the year 2001 are shown in Figures 13 through 15.

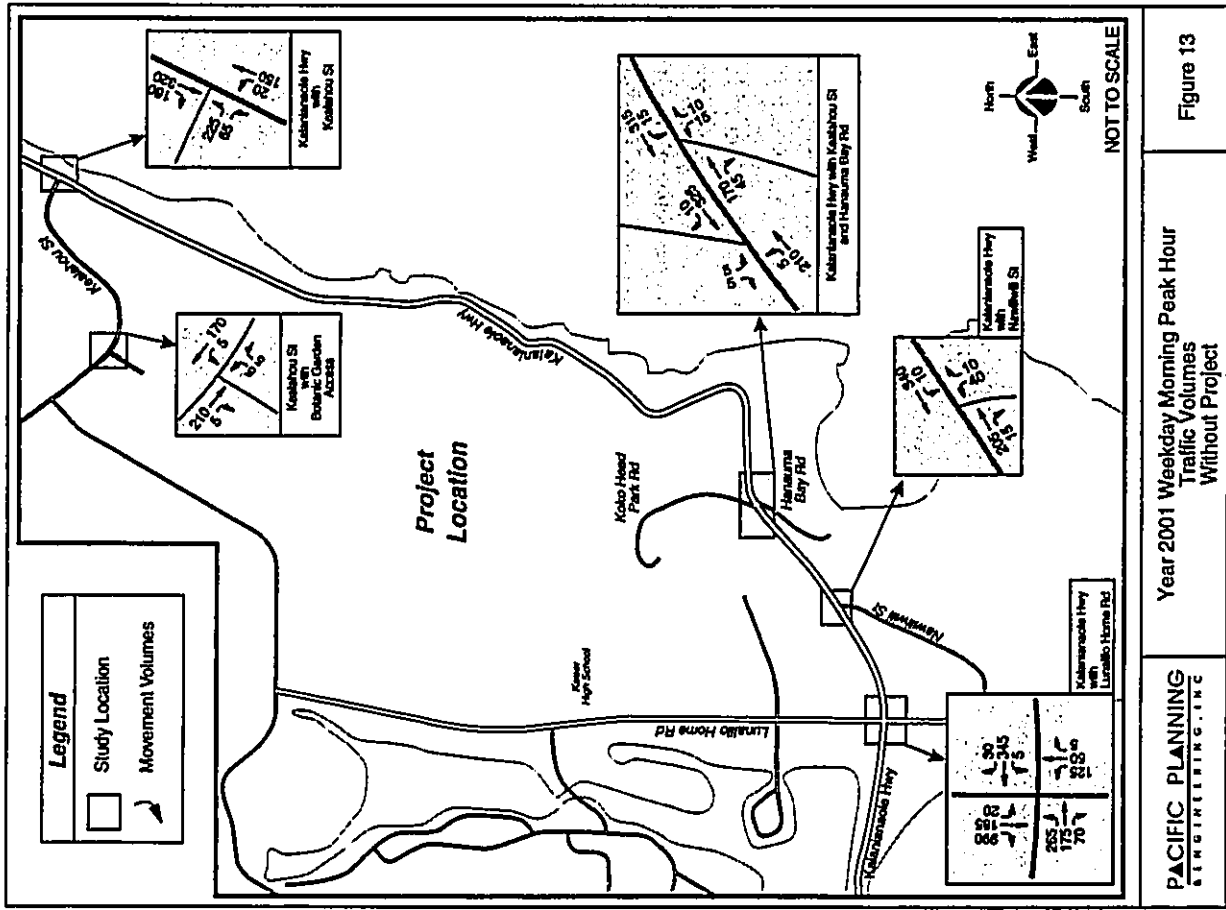
### Through-Traffic Growth

Through-traffic is defined as traffic that travels without a specific origin or destination near the project site. The growth in through-traffic was estimated using HDOT historical data as well as information from the Oahu Regional Transportation Plan (ORTP)<sup>2</sup>. The growth rate was calculated at approximately 1.6% per year. Accordingly, the existing through traffic was increased by  $\approx 5\%$  (1.6% x 3 years) on Kalamanaole Highway for the weekday morning, weekday afternoon and weekend afternoon peak periods. The growth rate is intended to account for future conditions such as other developments outside of the project study area and future projects which have not been clearly defined yet.

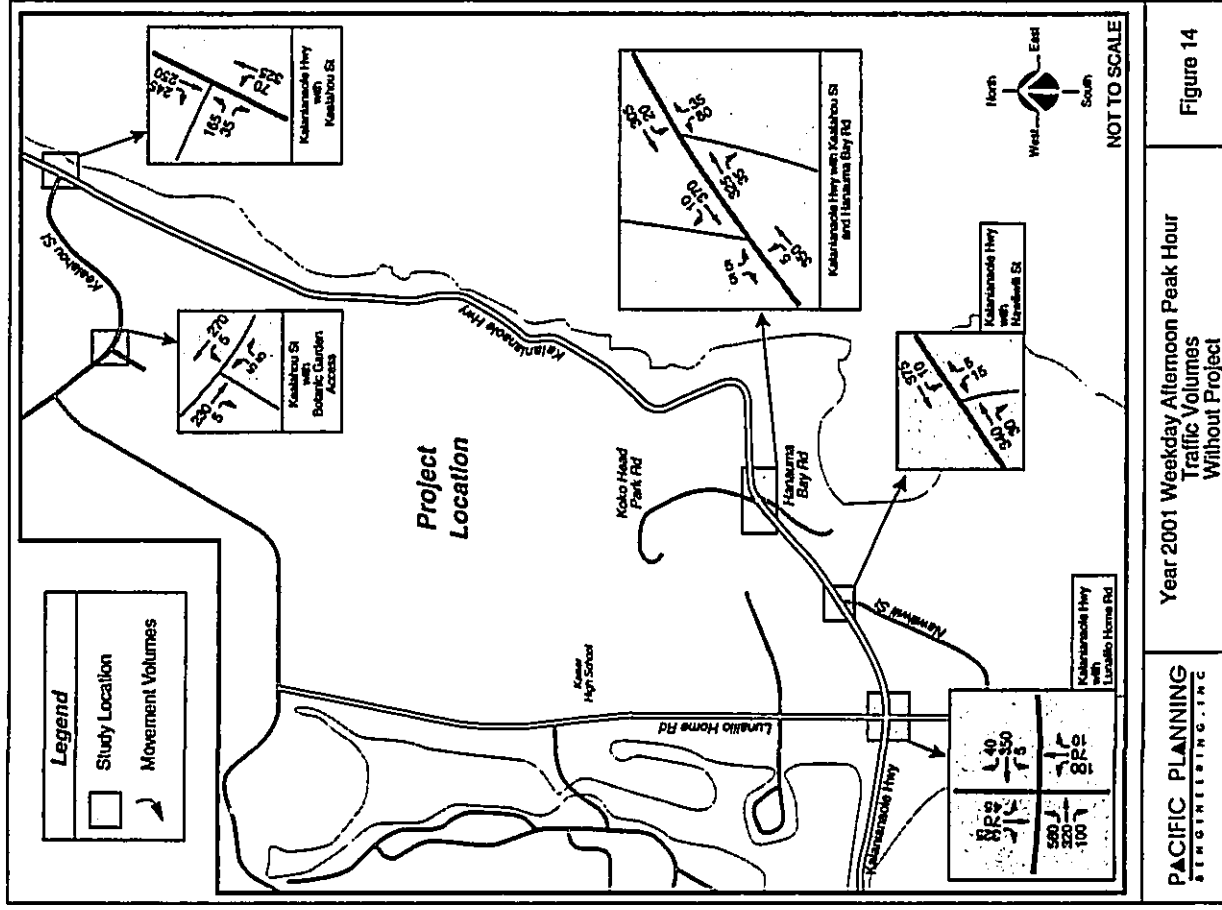
Growth on the side street traffic was estimated using the projected population growth in East Honolulu from the ORTP. This growth was estimated at 0.4% per year. Thus, side street traffic was increased by  $\approx 1.5\%$  (0.4% x 3 years).

<sup>2</sup> 2020 Oahu Regional Transportation Plan, by Kaku Associates, Inc., November 1995.

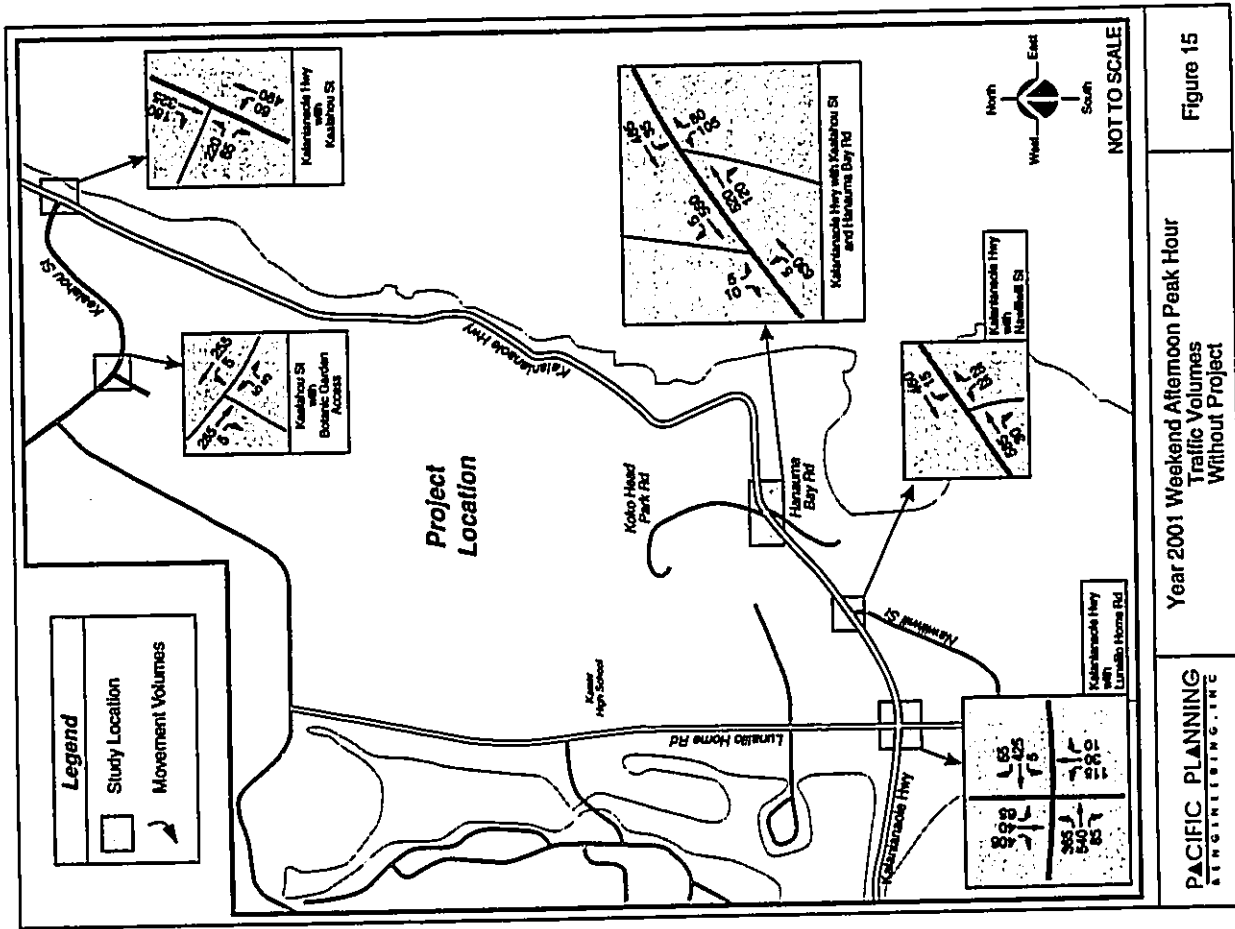




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**Traffic From Other Developments**

The three-step procedure of trip generation, trip distribution, and traffic assignment was used to forecast traffic from the Na Pali Haweco development.

The trip generation step estimates the number of trips that would be generated by the other developments in the area during the weekday morning and afternoon peak hours. Trip generation for this project was based on rates from the ITE Trip Generation Report<sup>3</sup>. Table 1 shows the generated trips from this development.

**Table 1. Trip Generation for Na Pali Haweco**

| Land Use                  | Morning |      | Afternoon |      | Sunday |      |
|---------------------------|---------|------|-----------|------|--------|------|
|                           | Enter   | Exit | Enter     | Exit | Enter  | Exit |
| Na Pali Haweco (91 units) | 18      | 50   | 60        | 32   | 49     | 44   |

The trip distribution step estimates the distribution of vehicle trips to their predicted destinations and origins. Trips were distributed based on projections of population and employment for the year 2001.

Future traffic from the Na Pali Haweco development was assigned to a specific route for each origin and destination based on available traffic studies and estimated shortest distance or travel time. Traffic was assigned to Hawaii Kai Drive, Lunaliu Home Road and Kealahou Street.

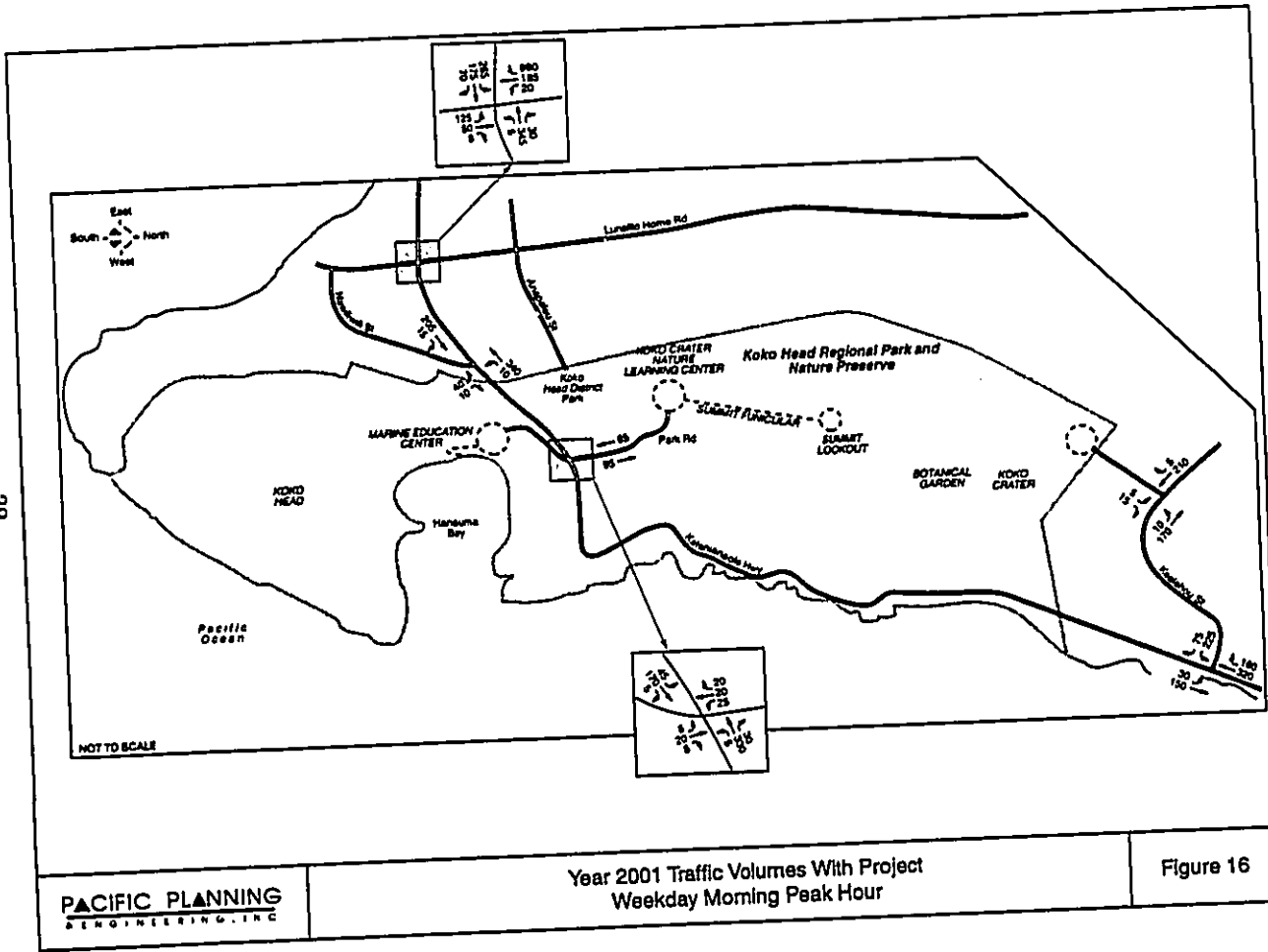
**Future Traffic With Project**

Future traffic with the Project was obtained by adding traffic generated by the project to the forecasted traffic without the project. The peak hour traffic

<sup>3</sup> Trip Generation Report, by the Institute of Transportation Engineers, Sixth Edition, 1997.

**Figure 15**  
Year 2001 Weekend Afternoon Peak Hour  
Traffic Volumes  
Without Project

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ENGINEERING, INC.



Year 2001 Traffic Volumes With Project  
Weekday Morning Peak Hour

Figure 16

PACIFIC PLANNING  
ENGINEERING, INC.

volume forecasts with the project for the year 2001 are shown in Figures 16 through 18.

The standard three step procedure of trip generation, trip distribution, and traffic assignment was used to estimate peak hour traffic from the proposed project.

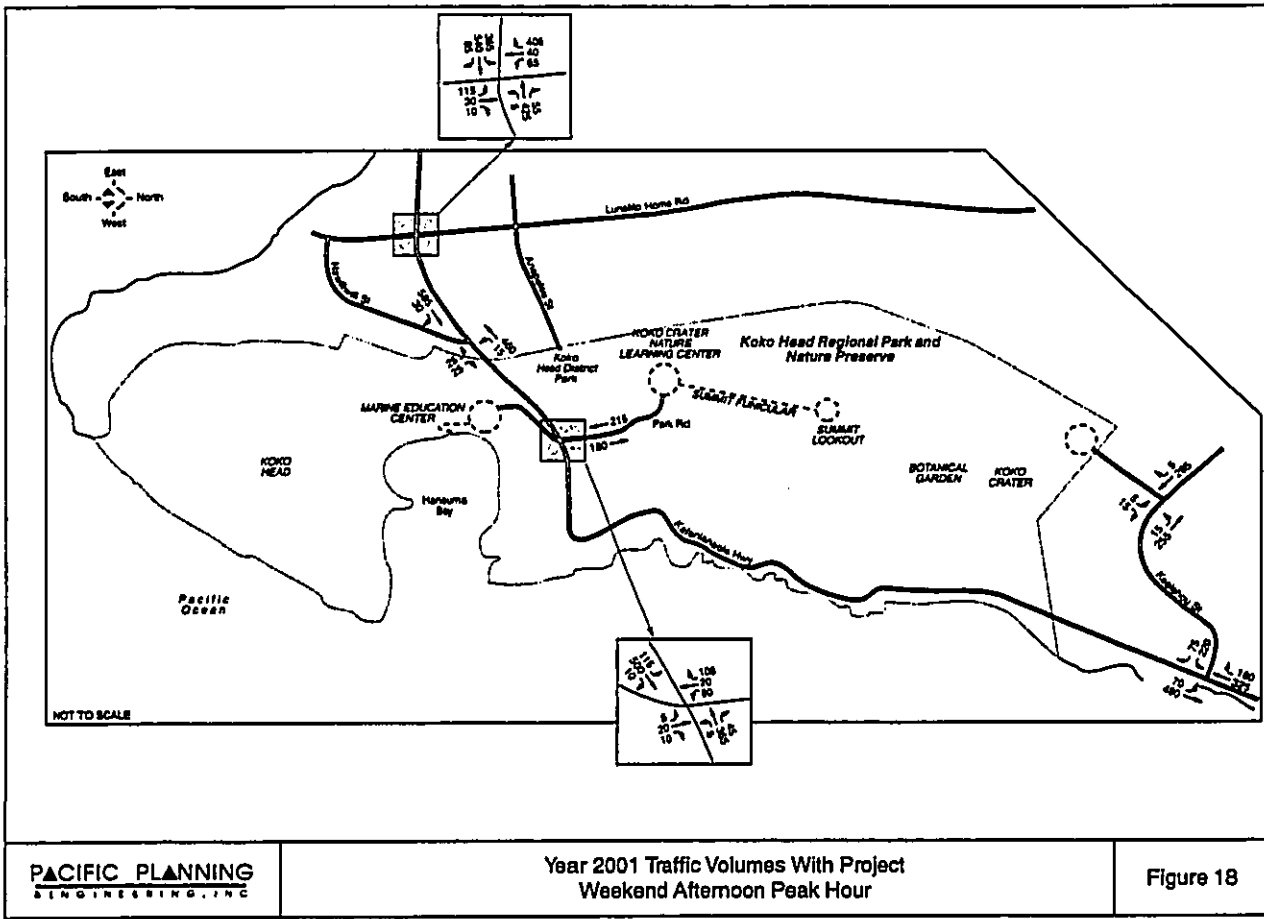
**Trip Generation**

Trips generated by the Koko Head Regional Park and Nature Preserve were obtained by using the estimated attendance projections for the project. Attendance at the Preserve is not expected to significantly increase. The primary difference from existing conditions is that visitors will park at a central parking area at the Koko Crater Nature Learning Center and then be transported via shuttle system to Hanauma Bay, Blowhole and Botanical Garden. Visitors arriving via bus or van who will just sightsee will still be able to go directly to Hanauma Bay, bypassing the Koko Crater Nature Learning Center.

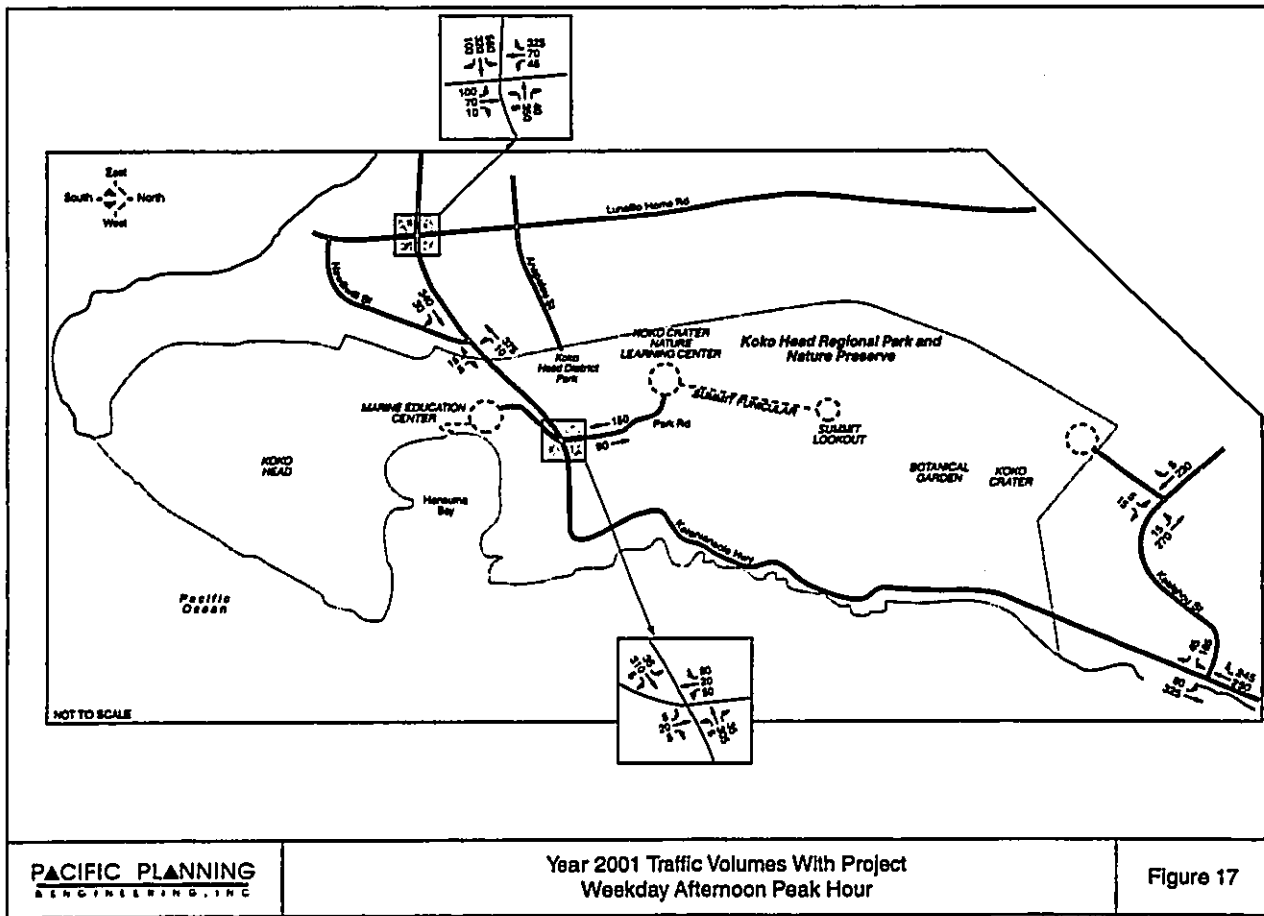
The number of trips generated during the study peak hours are shown in Table 2. The typical number of vehicular trips generated will essentially be similar to the number of trips currently being generated in 1998. Additional trips are generated by the shuttle service.

| Land Use    | Morning |      | Afternoon |      | Sunday |      |
|-------------|---------|------|-----------|------|--------|------|
|             | Enter   | Exit | Enter     | Exit | Enter  | Exit |
| Vehicles    | 60      | 35   | 65        | 125  | 165    | 200  |
| Shuttles    | 30      | 30   | 30        | 30   | 30     | 30   |
| Total Trips | 90      | 65   | 95        | 155  | 195    | 230  |

31



30



### Trip Distribution and Assignment

The trip distribution step estimates the distribution of vehicle trips to their predicted destinations and origins. Since the project is located on the extreme eastern side of the island, trips were generally distributed based on existing travel patterns.

The traffic assignment step assigns vehicle trips to specific routes on the roadway network that will take the driver from origin to destination. All traffic was assigned to Kalanianaʻōle Highway since it is the only access for the project.

### TRAFFIC ANALYSIS

Analyses were conducted on the study intersections to determine the relative impact of the proposed Koko Head Nature Preserve on the roadway system and to determine improvements to mitigate the impact of the project, if necessary.

#### Analysis Methods

The study intersections were analyzed using analysis procedures outlined in the Highway Capacity Manual (HCM), Special Report 209, 1994. The methodology for operational analysis measures traffic operations using the "level-of-service" (LOS) rating, which ranges from A to F. Appendix B provides detailed definitions of the LOS used in this study.

#### Signalized Intersection Analysis

The signalized intersections were analyzed using the HCM's operational analysis. This analysis is based on average stopped delay per vehicle to measure traffic operating conditions. The LOS for traffic movements at a signalized intersection is classified into six letter categories ranging from less than 5 seconds of average stopped delay per vehicle (LOS A) to over 60 seconds of average stopped delay per vehicle (LOS F).

#### Unsignalized Intersection Analysis

The LOS for unsignalized intersections is determined by total delay which is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line. This includes the time required for the vehicle to travel from the last-in-queue position. LOS for unsignalized intersections is classified into the six letter categories ranging

from less than 5 seconds of average total delay per vehicle (LOS A) to over 45 seconds of average total delay per vehicle (LOS F).

#### Analysis Results

The results of the analysis for each of the study intersections are shown in Figures 19 through 21 with highlights described below.

#### Kalaniana'ole Highway with Lanailio Home Road

- With the project, this intersection is expected to operate at essentially the same LOS as without the project..

#### Kalaniana'ole Highway with Nawiliwili Street

- With the project, this intersection is expected to operate at essentially the same LOS as without the project.

#### Kalaniana'ole Highway with Koko Head Park Road and Hanauma Bay Road

With the project, these intersections will be realigned to form a signalized 4-leg intersection.

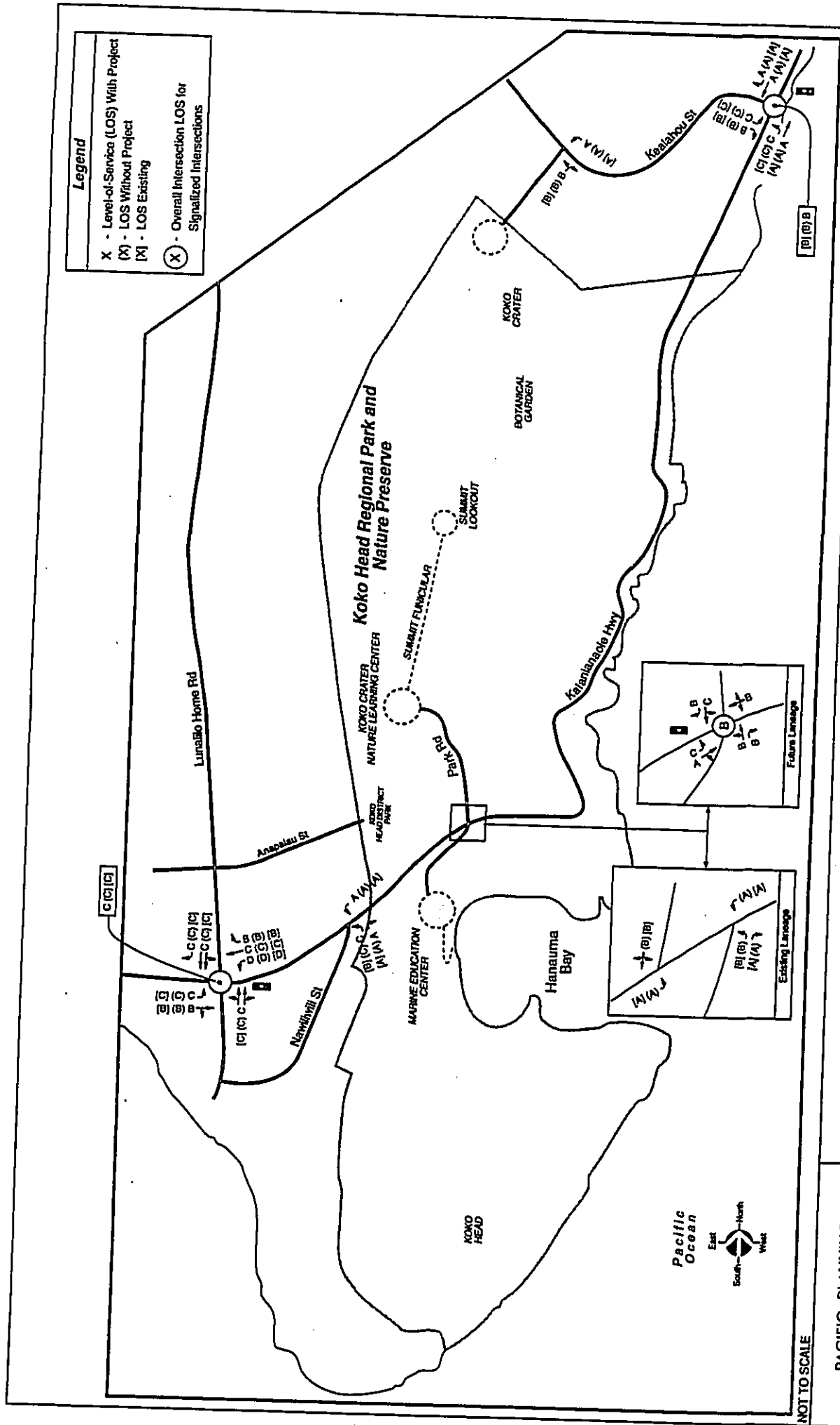
- With the project and the laneage shown in the Figure 19, the overall intersection is expected to operate at LOS B during the study peak hours. The turning movements into and out of this intersection are generally expected to operate at LOS C or better. The through movements on Kalaniana'ole Highway will operate at LOS B or better.

#### Kalaniana'ole Highway with Kealahou Street

- With the project, this intersection is expected to operate at essentially the same LOS as without the project.

#### Kealahou Street with Botanic Garden Access

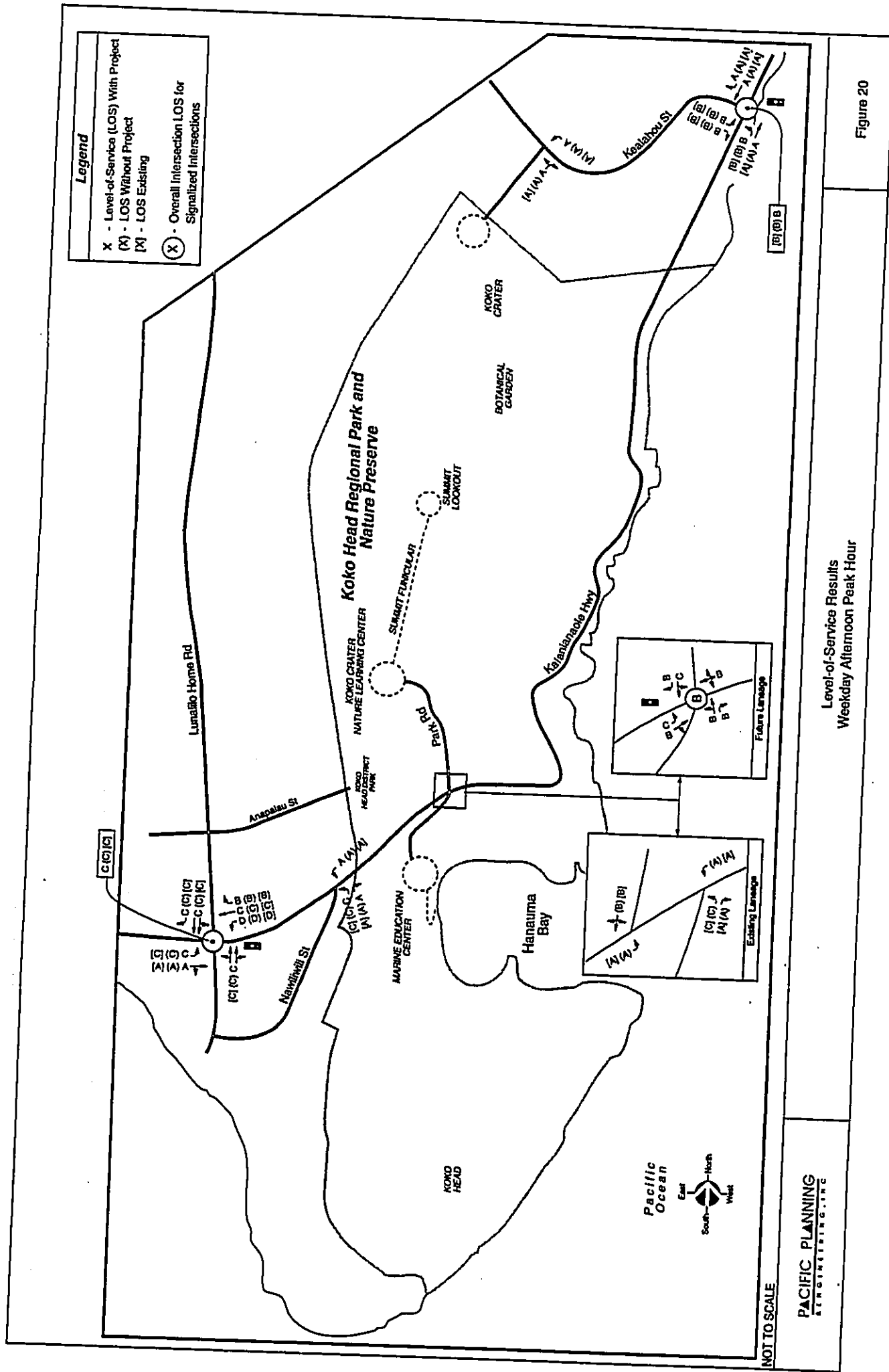
- With the project, this intersection is expected to operate at essentially the same LOS as without the project.



**PACIFIC PLANNING ENGINEERING, INC.**

Level-of-Service Results  
Weekday Morning Peak Hour

Figure 19



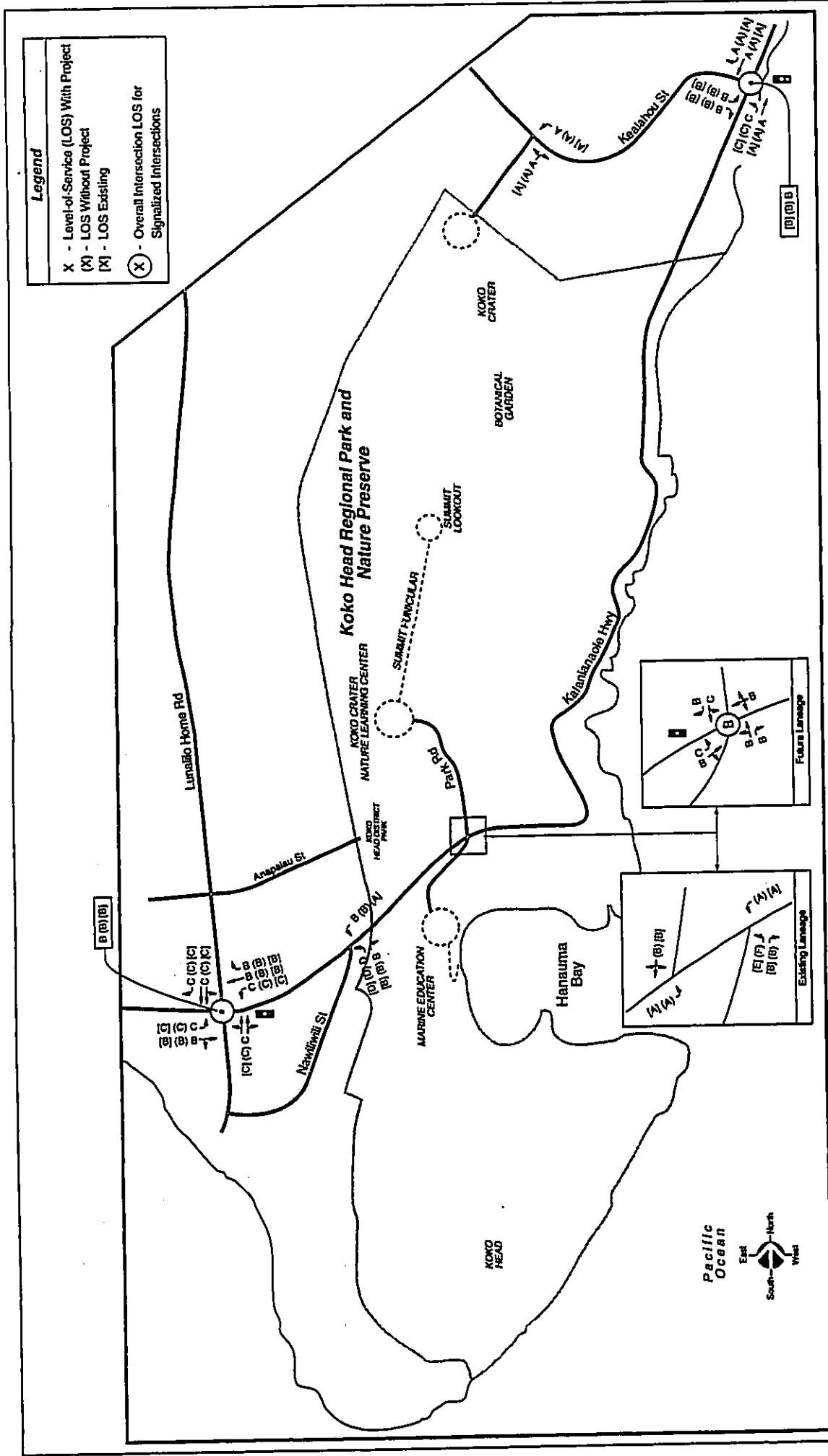
Level-of-Service Results  
Weekday Afternoon Peak Hour

Figure 20

NOT TO SCALE

PACIFIC PLANNING  
ARCHITECTURE





Level-of-Service Results  
Weekend Afternoon Peak Hour

Figure 21

NOT TO SCALE

PACIFIC PLANNING  
ENGINEERING, INC

### CONCLUSIONS AND RECOMMENDATIONS

The proposed Koko Head Regional Park and Nature Preserve, when completed by the year 2001, is not expected to have an impact at the study intersections except at the proposed Park entrance.

Impacts at the following intersections would be minimal, therefore, no mitigation measures are required:

- Kalanianaʻole Highway with Lunalilo Home Road
- Kalanianaʻole Highway with Nawiliwili Street
- Kalanianaʻole Highway with Kealahou Street
- Kealahou Street with Botanic Garden Access

The intersection of Kalanianaʻole Highway with Hanauma Bay Road and Koko Head Park Road will be realigned to form a signalized 4-leg intersection. As a signalized intersection, this intersection would operate at an acceptable Level-of-Service with the following minimum laneage requirements:

- Northbound approach (Hanauma Bay Road): shared left-turn/through-lane, exclusive right-turn lane.
- Southbound approach (Project Access): shared left-turn/through-lane, exclusive right-turn lane.
- Eastbound approach (Kalanianaʻole Highway): exclusive left-turn storage lane, single through-lane.
- Westbound approach (Kalanianaʻole Highway): shared left-turn/through/right-turn lane.

The project road leading to the Koko Crater Nature Learning Center should be at least a two-lane two-way roadway to accommodate the project traffic.

**APPENDIX A**

**TRAFFIC COUNT DATA**



Project : 94.0 Koko Head Park  
Date: 9/21/98

Direction NORTHBOUND  
North-South Road Lunasillo Rd  
Direction SOUTHBOUND

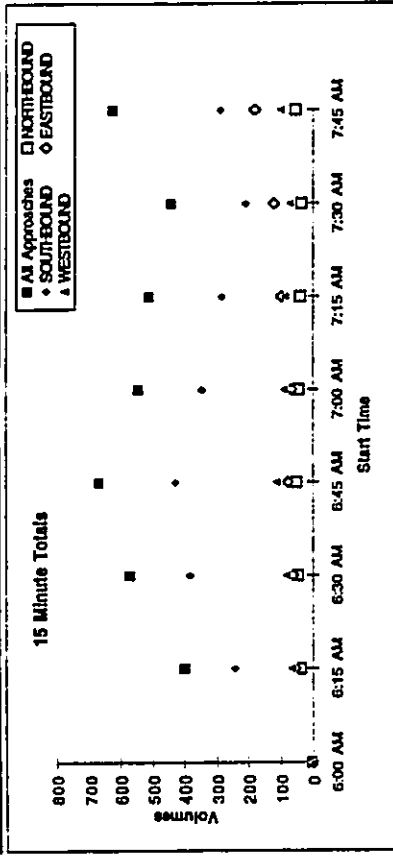
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:15 AM    | 36    | 1     | 1     | 0      | 0     | 3     | 3     | 235   | 0      | 2     |
| 6:30 AM    | 42    | 4     | 0     | 0      | 0     | 4     | 9     | 370   | 1      | 1     |
| 6:45 AM    | 46    | 5     | 0     | 1      | 0     | 5     | 10    | 411   | 0      | 4     |
| 7:00 AM    | 38    | 4     | 1     | 0      | 0     | 2     | 21    | 324   | 1      | 3     |
| 7:15 AM    | 25    | 14    | 0     | 0      | 0     | 1     | 35    | 249   | 0      | 2     |
| 7:30 AM    | 23    | 11    | 1     | 0      | 0     | 6     | 35    | 167   | 0      | 0     |
| 7:45 AM    | 34    | 18    | 1     | 0      | 0     | 10    | 88    | 180   | 2      | 2     |
| Totals     | 244   | 57    | 4     |        |       | 31    | 201   | 1946  |        |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 120   | 47    | 3     | 0      | 0     | 19    | 179   | 930   | 3      | 7     |
| 8:00 AM   | TOTAL | 170   | %HV   | 0.00%  |       | TOTAL | 1128  | %HV   | 0.89%  |       |

Direction EASTBOUND  
East-West Road Kalaransaque Hwy  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:15 AM    | 30    | 19    | 4     | 2      | 1     | 0     | 64    | 2     | 1      | 0     |
| 6:30 AM    | 22    | 30    | 8     | 1      | 2     | 0     | 82    | 2     | 1      | 0     |
| 6:45 AM    | 34    | 35    | 8     | 0      | 0     | 2     | 110   | 4     | 0      | 0     |
| 7:00 AM    | 27    | 30    | 8     | 0      | 1     | 1     | 89    | 2     | 0      | 0     |
| 7:15 AM    | 50    | 39    | 10    | 1      | 1     | 1     | 83    | 6     | 0      | 0     |
| 7:30 AM    | 64    | 41    | 19    | 3      | 2     | 0     | 64    | 9     | 2      | 0     |
| 7:45 AM    | 100   | 52    | 28    | 3      | 2     | 1     | 89    | 13    | 0      | 0     |
| Totals     | 327   | 248   | 85    |        |       | 5     | 581   | 38    |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 241   | 162   | 65    | 7      | 6     | 3     | 325   | 30    | 2      | 0     |
| 8:00 AM   | TOTAL | 468   | %HV   | 2.78%  |       | TOTAL | 358   | %HV   | 0.56%  |       |



Project : 94.0 Koko Head Park  
Date: 10/8/98

Direction NORTHBOUND  
North-South Road Newtwill St  
Direction SOUTHBOUND

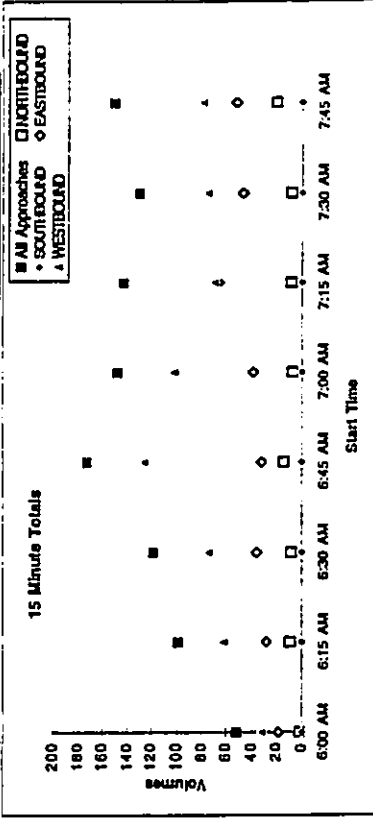
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    | 2     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| 6:15 AM    | 9     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| 6:30 AM    | 6     | 2     | 2     | 0      | 0     |       |       |       |        |       |
| 6:45 AM    | 12    | 2     | 2     | 0      | 0     |       |       |       |        |       |
| 7:00 AM    | 5     | 2     | 2     | 0      | 0     |       |       |       |        |       |
| 7:15 AM    | 7     | 1     | 1     | 0      | 0     |       |       |       |        |       |
| 7:30 AM    | 7     | 1     | 1     | 0      | 0     |       |       |       |        |       |
| 7:45 AM    | 17    | 3     | 3     | 0      | 0     |       |       |       |        |       |
| Totals     | 65    | 0     | 11    |        |       | 0     | 0     | 0     |        |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS  | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|---------|-------|
| 7:00 AM   | 36    | 0     | 7     | 0      | 0     |       |       |       |         |       |
| 8:00 AM   | TOTAL | 43    | %HV   | 0.00%  |       | TOTAL | 0     | %HV   | #DIV/0! |       |

Direction EASTBOUND  
East-West Road Kalaransaque Hwy  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    | 17    | 1     | 1     | 1      | 0     | 2     | 30    | 0     | 0      | 0     |
| 6:15 AM    | 28    | 0     | 0     | 0      | 0     | 0     | 62    | 1     | 1      | 0     |
| 6:30 AM    | 33    | 3     | 3     | 2      | 0     | 0     | 74    | 2     | 2      | 0     |
| 6:45 AM    | 28    | 4     | 4     | 2      | 1     | 1     | 125   | 1     | 1      | 0     |
| 7:00 AM    | 38    | 1     | 2     | 2      | 1     | 1     | 101   | 1     | 1      | 0     |
| 7:15 AM    | 62    | 4     | 4     | 3      | 0     | 3     | 66    | 0     | 0      | 0     |
| 7:30 AM    | 45    | 2     | 2     | 2      | 2     | 2     | 73    | 1     | 1      | 0     |
| 7:45 AM    | 47    | 5     | 5     | 3      | 3     | 0     | 79    | 2     | 2      | 0     |
| Totals     | 0     | 298   | 20    |        |       | 9     | 610   | 0     |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 0     | 192   | 12    | 10     | 0     | 6     | 319   | 0     | 4      | 0     |
| 8:00 AM   | TOTAL | 204   | %HV   | 4.90%  |       | TOTAL | 325   | %HV   | 1.23%  |       |



Project : 94.0 Koko Head Park  
Date: 9/21/98

Direction NORTHBOUND  
North-South Road Koko Head Park Road  
Direction SOUTHBOUND

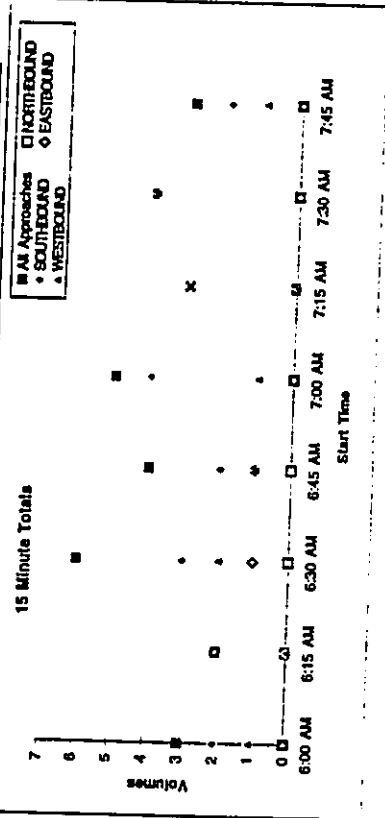
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    |       |       |       |        |       |       |       |       |        |       |
| 6:15 AM    |       |       |       |        |       | 2     |       |       |        |       |
| 6:30 AM    |       |       |       |        |       | 0     |       |       |        |       |
| 6:45 AM    |       |       |       |        |       | 3     |       |       |        |       |
| 7:00 AM    |       |       |       |        |       | 1     |       |       |        |       |
| 7:15 AM    |       |       |       |        |       | 1     |       |       |        |       |
| 7:30 AM    |       |       |       |        |       | 3     |       |       |        |       |
| 7:45 AM    |       |       |       |        |       | 0     |       |       |        |       |
| Totals     | 0     | 0     | 0     |        |       | 10    | 0     | 0     | 6      |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS  | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|---------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 0     | 0     | 0     |         |       | 4     | 0     | 0     | 5      | 0     |
| 8:00 AM   | TOTAL | 0     | 0     | #DIV/0! |       | TOTAL | 9     | 0     | 5      | 0.00% |

Direction EASTBOUND  
East-West Road Kalaniana'ole Hwy  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    | 0     |       |       |        |       |       |       |       |        |       |
| 6:15 AM    | 2     |       |       |        |       |       |       |       |        |       |
| 6:30 AM    | 1     |       |       |        |       |       |       |       |        |       |
| 6:45 AM    | 1     |       |       |        |       |       |       |       |        |       |
| 7:00 AM    | 0     |       |       |        |       |       |       |       |        |       |
| 7:15 AM    | 0     |       |       |        |       |       |       |       |        |       |
| 7:30 AM    | 0     |       |       |        |       |       |       |       |        |       |
| 7:45 AM    | 0     |       |       |        |       |       |       |       |        |       |
| Totals     | 4     | 0     | 0     |        |       | 0     | 0     | 0     | 10     |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS  | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|---------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 0     | 0     | 0     |         |       | 0     | 0     | 0     | 6      | 0     |
| 8:00 AM   | TOTAL | 0     | 0     | #DIV/0! |       | TOTAL | 6     | 0     | 6      | 0.00% |



Project : 94.0 Koko Head Park  
Date: 9/21/98

Direction NORTHBOUND  
North-South Road Hanalei Bay Rd  
Direction SOUTHBOUND

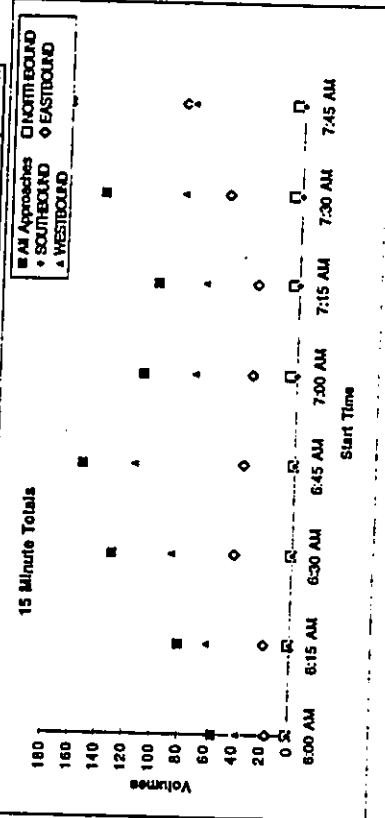
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    | 0     |       |       |        |       |       |       |       |        |       |
| 6:15 AM    | 1     |       |       |        |       |       |       |       |        |       |
| 6:30 AM    | 1     |       |       |        |       |       |       |       |        |       |
| 6:45 AM    | 1     |       |       |        |       |       |       |       |        |       |
| 7:00 AM    | 5     |       |       |        |       |       |       |       |        |       |
| 7:15 AM    | 2     |       |       |        |       |       |       |       |        |       |
| 7:30 AM    | 2     |       |       |        |       |       |       |       |        |       |
| 7:45 AM    | 4     |       |       |        |       |       |       |       |        |       |
| Totals     | 16    | 0     | 0     |        |       | 0     | 0     | 0     | 0      |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 13    | 0     | 0     |        |       | 0     | 0     | 0     | 0      | 0     |
| 8:00 AM   | TOTAL | 20    | 0     | 0.00%  |       | TOTAL | 0     | 0     | 0      | 0     |

Direction EASTBOUND  
East-West Road Kalaniana'ole Hwy  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 6:00 AM    | 12    | 4     |       |        |       | 0     |       |       | 38     |       |
| 6:15 AM    | 17    | 2     |       |        |       | 1     |       |       | 60     |       |
| 6:30 AM    | 38    | 6     |       |        |       | 1     |       |       | 87     |       |
| 6:45 AM    | 33    | 4     |       |        |       | 1     |       |       | 115    |       |
| 7:00 AM    | 25    | 7     |       |        |       | 4     |       |       | 70     |       |
| 7:15 AM    | 21    | 9     |       |        |       | 6     |       |       | 62     |       |
| 7:30 AM    | 43    | 8     |       |        |       | 2     |       |       | 83     |       |
| 7:45 AM    | 69    | 16    |       |        |       | 1     |       |       | 79     |       |
| Totals     | 0     | 266   | 57    |        |       | 16    | 594   | 0     |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 7:00 AM   | 0     | 158   | 41    |        |       | 0     | 13    | 294   | 0      | 0     |
| 8:00 AM   | TOTAL | 199   | 41    | 0.00%  |       | TOTAL | 307   | 294   | 0      | 0.00% |



Project : 84.0 Koko Head Park  
Date: 10/29/88

Direction NORTHBOUND  
North-South Road Kolanaracoe

Direction SOUTHBOUND  
North-South Road Kolanaracoe

| Start Time | NBLT | NB-TH | NB-RT | TRUCKS | BUSES | SBLT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|------|-------|-------|--------|-------|------|-------|-------|--------|-------|
| 6:00 AM    | 0    | 12    | 0     | 0      | 0     | 29   | 11    | 0     | 0      | 0     |
| 6:15 AM    | 0    | 14    | 0     | 0      | 0     | 57   | 10    | 0     | 0      | 0     |
| 6:30 AM    | 3    | 26    | 0     | 0      | 0     | 73   | 21    | 0     | 0      | 0     |
| 6:45 AM    | 1    | 26    | 0     | 0      | 0     | 89   | 21    | 0     | 0      | 0     |
| 7:00 AM    | 5    | 38    | 0     | 0      | 0     | 82   | 25    | 0     | 0      | 0     |
| 7:15 AM    | 3    | 30    | 0     | 0      | 0     | 65   | 33    | 0     | 0      | 0     |
| 7:30 AM    | 5    | 39    | 0     | 0      | 0     | 77   | 49    | 0     | 0      | 0     |
| 7:45 AM    | 4    | 37    | 0     | 0      | 0     | 72   | 46    | 0     | 0      | 0     |
| Totals     | 21   | 218   | 0     | 0      | 0     | 544  | 216   | 0     | 0      | 0     |

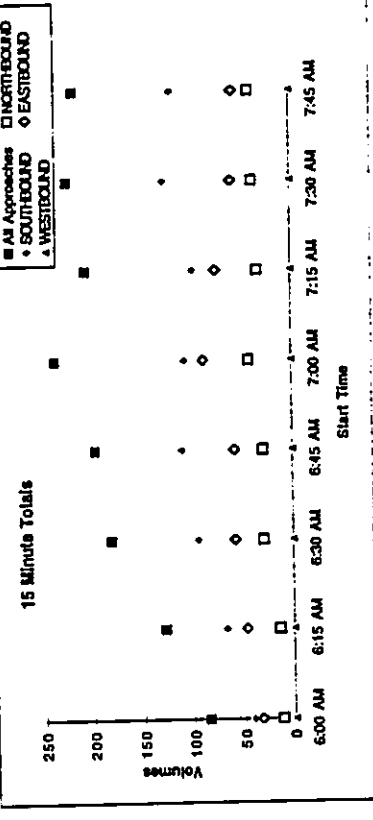
| PEAK HOUR | NBLT  | NB-TH | NB-RT | SBLT  | SB-TH | SB-RT | #DIV/0! |       |
|-----------|-------|-------|-------|-------|-------|-------|---------|-------|
| 7:00 AM   | 17    | 138   | 0     | 0     | 286   | 153   | 0       |       |
| 8:00 AM   | TOTAL | 155   | %HV   | 0.00% | TOTAL | 449   | %HV     | 0.00% |

Direction EASTBOUND  
East-West Road Kealahou

Direction WESTBOUND  
East-West Road Kealahou

| Start Time | EBLT | EB-TH | EB-RT | TRUCKS | BUSES | WBLT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|------|-------|-------|--------|-------|------|-------|-------|--------|-------|
| 6:00 AM    | 25   | 7     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:15 AM    | 27   | 20    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:30 AM    | 29   | 29    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:45 AM    | 38   | 20    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:00 AM    | 65   | 22    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:15 AM    | 62   | 12    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:30 AM    | 49   | 10    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:45 AM    | 41   | 16    | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| Totals     | 336  | 0     | 136   | 0      | 0     | 0    | 0     | 0     | 0      | 0     |

| PEAK HOUR | EBLT  | EB-TH | EB-RT | WBLT  | WB-TH | WB-RT | #DIV/0! |       |
|-----------|-------|-------|-------|-------|-------|-------|---------|-------|
| 7:00 AM   | 217   | 0     | 50    | 0     | 0     | 0     | 0       |       |
| 8:00 AM   | TOTAL | 277   | %HV   | 0.00% | TOTAL | 0     | %HV     | 0.00% |



Project : 84.0 Koko Head Park  
Date: 10/8/88

Direction NORTHBOUND  
North-South Road Stabile

Direction SOUTHBOUND  
North-South Road Stabile

| Start Time | NBLT | NB-TH | NB-RT | TRUCKS | BUSES | SBLT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|------|-------|-------|--------|-------|------|-------|-------|--------|-------|
| 6:00 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:15 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:30 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 6:45 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:00 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:15 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:30 AM    | 1    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| 7:45 AM    | 0    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |
| Totals     | 1    | 0     | 0     | 0      | 0     | 0    | 0     | 0     | 0      | 0     |

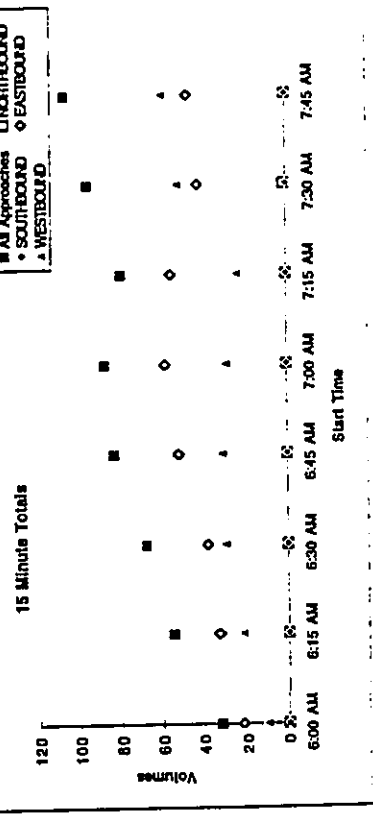
| PEAK HOUR | NBLT  | NB-TH | NB-RT | SBLT  | SB-TH | SB-RT | #DIV/0! |       |
|-----------|-------|-------|-------|-------|-------|-------|---------|-------|
| 7:00 AM   | 1     | 0     | 0     | 0     | 0     | 0     | 0       |       |
| 8:00 AM   | TOTAL | 1     | %HV   | 0.00% | TOTAL | 0     | %HV     | 0.00% |

Direction EASTBOUND  
East-West Road Kealahou

Direction WESTBOUND  
East-West Road Kealahou

| Start Time | EBLT | EB-TH | EB-RT | TRUCKS | BUSES | WBLT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|------|-------|-------|--------|-------|------|-------|-------|--------|-------|
| 6:00 AM    | 22   | 0     | 0     | 0      | 0     | 0    | 10    | 0     | 1      | 1     |
| 6:15 AM    | 33   | 0     | 0     | 0      | 0     | 0    | 22    | 0     | 0      | 0     |
| 6:30 AM    | 38   | 0     | 2     | 0      | 0     | 0    | 30    | 0     | 1      | 0     |
| 6:45 AM    | 52   | 0     | 1     | 0      | 0     | 0    | 31    | 0     | 1      | 1     |
| 7:00 AM    | 58   | 0     | 0     | 0      | 0     | 0    | 29    | 0     | 0      | 0     |
| 7:15 AM    | 55   | 0     | 2     | 0      | 0     | 0    | 24    | 0     | 0      | 0     |
| 7:30 AM    | 42   | 0     | 0     | 0      | 0     | 0    | 52    | 0     | 0      | 1     |
| 7:45 AM    | 47   | 0     | 0     | 0      | 1     | 1    | 58    | 0     | 3      | 1     |
| Totals     | 0    | 347   | 0     | 1      | 256   | 0    | 0     | 0     | 0      | 0     |

| PEAK HOUR | EBLT  | EB-TH | EB-RT | WBLT  | WB-TH | WB-RT | #DIV/0! |       |
|-----------|-------|-------|-------|-------|-------|-------|---------|-------|
| 7:00 AM   | 0     | 202   | 0     | 2     | 1     | 163   | 0       |       |
| 8:00 AM   | TOTAL | 202   | %HV   | 1.48% | TOTAL | 164   | %HV     | 3.05% |



Project : 94.0 Koko Head Park  
Date: 9/18/98

Direction NORTHBOUND  
North-South Road  
Lureaibo Rd SOUTHBOUND

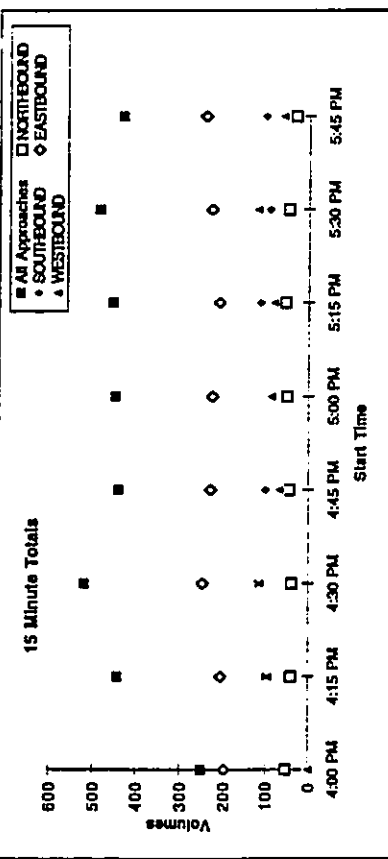
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM    | 24    | 16    | 0     | 0      | 0     | 8     | 15    | 79    | 1      | 1     |
| 4:30 PM    | 18    | 16    | 4     | 1      | 0     | 18    | 13    | 89    | 0      | 0     |
| 4:45 PM    | 18    | 24    | 2     | 0      | 0     | 9     | 22    | 69    | 0      | 1     |
| 5:00 PM    | 34    | 13    | 2     | 0      | 0     | 7     | 17    | 62    | 0      | 0     |
| 5:15 PM    | 25    | 24    | 4     | 1      | 0     | 9     | 17    | 86    | 1      | 2     |
| 5:30 PM    | 32    | 13    | 1     | 1      | 0     | 8     | 7     | 76    | 0      | 2     |
| 5:45 PM    | 20    | 8     | 2     | 0      | 0     | 9     | 22    | 70    | 0      | 0     |
| Totals     | 200   | 135   | 17    |        |       | 66    | 113   | 531   |        |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM   | 94    | 69    | 8     | 1      | 0     | 42    | 67    | 289   | 1      | 2     |
| 5:15 PM   | TOTAL | 171   | %HV   | 0.58%  |       | TOTAL | 408   | %HV   | 0.74%  |       |

Direction EASTBOUND  
East-West Road  
Kalaniamaole Hwy WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM    | 119   | 63    | 23    | 1      | 2     | 0     | 88    | 8     | 0      | 1     |
| 4:30 PM    | 151   | 72    | 23    | 0      | 4     | 4     | 100   | 11    | 0      | 2     |
| 4:45 PM    | 122   | 92    | 14    | 0      | 3     | 0     | 61    | 7     | 1      | 0     |
| 5:00 PM    | 120   | 70    | 34    | 0      | 2     | 0     | 78    | 10    | 1      | 0     |
| 5:15 PM    | 122   | 62    | 25    | 0      | 1     | 1     | 72    | 7     | 0      | 1     |
| 5:30 PM    | 143   | 61    | 23    | 0      | 4     | 1     | 96    | 23    | 0      | 0     |
| 5:45 PM    | 144   | 60    | 38    | 1      | 4     | 1     | 51    | 8     | 1      | 0     |
| Totals     | 1022  | 551   | 203   |        |       | 7     | 546   | 74    |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM   | 512   | 297   | 94    | 1      | 11    | 4     | 327   | 36    | 2      | 3     |
| 5:15 PM   | TOTAL | 803   | %HV   | 1.33%  |       | TOTAL | 387   | %HV   | 1.36%  |       |



Project : 94.0 Koko Head Park  
Date: 10/7/98

Direction NORTHBOUND  
North-South Road  
Hawthill St SOUTHBOUND

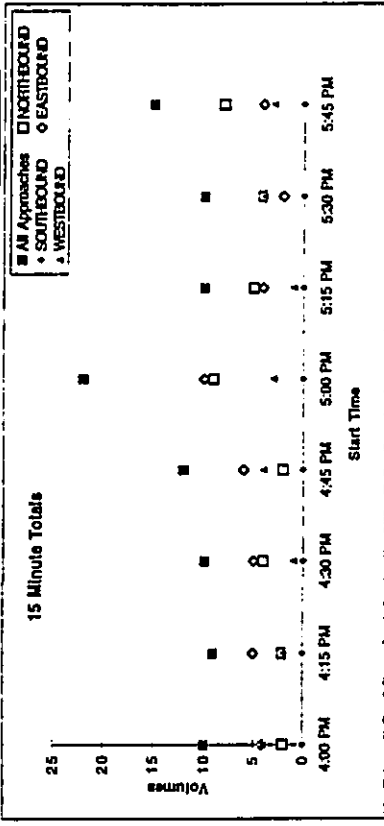
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:00 PM    | 1     |       | 1     |        |       |       |       |       |        |       |
| 4:15 PM    | 2     |       | 0     |        |       |       |       |       |        |       |
| 4:30 PM    | 3     |       | 1     |        |       |       |       |       |        |       |
| 4:45 PM    | 0     |       | 2     |        |       |       |       |       |        |       |
| 5:00 PM    | 7     |       | 2     |        |       |       |       |       |        |       |
| 5:15 PM    | 2     |       | 3     |        |       |       |       |       |        |       |
| 5:30 PM    | 3     |       | 1     |        |       |       |       |       |        |       |
| 5:45 PM    | 4     |       | 4     |        |       |       |       |       |        |       |
| Totals     | 22    | 0     | 14    |        |       | 0     | 0     | 0     |        |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM   | 12    | 0     | 5     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 5:15 PM   | TOTAL | 17    | %HV   | 0.00%  |       | TOTAL | 0     | %HV   | 0.00%  |       |

Direction EASTBOUND  
East-West Road  
Kalaniamaole Hwy WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:00 PM    |       |       | 4     |        |       |       |       |       |        |       |
| 4:15 PM    |       |       | 5     |        |       |       |       |       |        |       |
| 4:30 PM    |       |       | 6     |        |       |       |       |       |        |       |
| 4:45 PM    |       |       | 10    |        |       |       |       |       |        |       |
| 5:00 PM    |       |       | 4     |        |       |       |       |       |        |       |
| 5:15 PM    |       |       | 2     |        |       |       |       |       |        |       |
| 5:30 PM    |       |       | 4     |        |       |       |       |       |        |       |
| 5:45 PM    |       |       | 3     |        |       |       |       |       |        |       |
| Totals     | 0     | 0     | 40    |        |       | 22    | 0     | 0     |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 4:15 PM   | 0     | 0     | 26    | 0      | 0     | 10    | 0     | 0     | 0      | 0     |
| 5:15 PM   | TOTAL | 26    | %HV   | 0.00%  |       | TOTAL | 10    | %HV   | 0.00%  |       |



Project : 94.0 Koko Head Park  
Date: 8/18/98

Direction North-South Road Koko Head Park Road Direction NORTHBOUND SOUTHBOUND

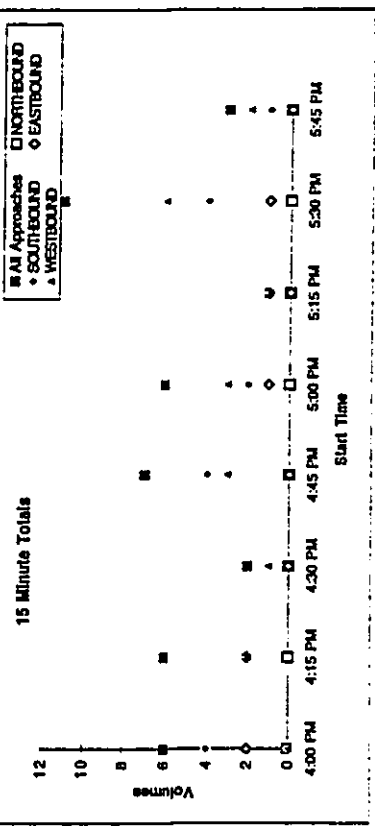
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:00 PM    |       |       |       |        |       | 4     |       |       |        |        |       |
| 4:15 PM    |       |       |       |        |       | 0     |       |       |        |        |       |
| 4:30 PM    |       |       |       |        |       | 1     |       |       |        |        |       |
| 4:45 PM    |       |       |       |        |       | 4     |       |       |        |        |       |
| 5:00 PM    |       |       |       |        |       | 0     |       |       |        |        |       |
| 5:15 PM    |       |       |       |        |       | 0     |       |       |        |        |       |
| 5:30 PM    |       |       |       |        |       | 0     |       |       |        |        |       |
| 5:45 PM    |       |       |       |        |       | 1     |       |       |        |        |       |
| Totals     | 0     | 0     | 0     | 0      | 0     | 10    | 0     | 0     | 0      | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:15 PM   | 0     | 0     | 0     | 0      | 0     | 5     | 0     | 4     | 0      | 0      | 0     |
| 5:15 PM   | TOTAL | 0     | 0     | 0      | 0     | TOTAL | 9     | 4     | 0      | 0      | 0.00% |

Direction East-West Road Kalamansole Hwy Direction EASTBOUND WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:00 PM    | 2     |       |       |        |       |       |       |       |        |        |       |
| 4:15 PM    | 2     |       |       |        |       |       |       |       |        |        |       |
| 4:30 PM    | 0     |       |       |        |       |       |       |       |        |        |       |
| 4:45 PM    | 0     |       |       |        |       |       |       |       |        |        |       |
| 5:00 PM    | 1     |       |       |        |       |       |       |       |        |        |       |
| 5:15 PM    | 1     |       |       |        |       |       |       |       |        |        |       |
| 5:30 PM    | 1     |       |       |        |       |       |       |       |        |        |       |
| 5:45 PM    | 0     |       |       |        |       |       |       |       |        |        |       |
| Totals     | 6     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 18    |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:15 PM   | 3     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0     |
| 5:15 PM   | TOTAL | 3     | 0     | 0      | 0     | TOTAL | 0     | 0     | 0      | 0      | 0.00% |



Project : 94.0 Koko Head Park  
Date: 8/18/98

Direction North-South Road Hanauma Bay Rd Direction NORTHBOUND SOUTHBOUND

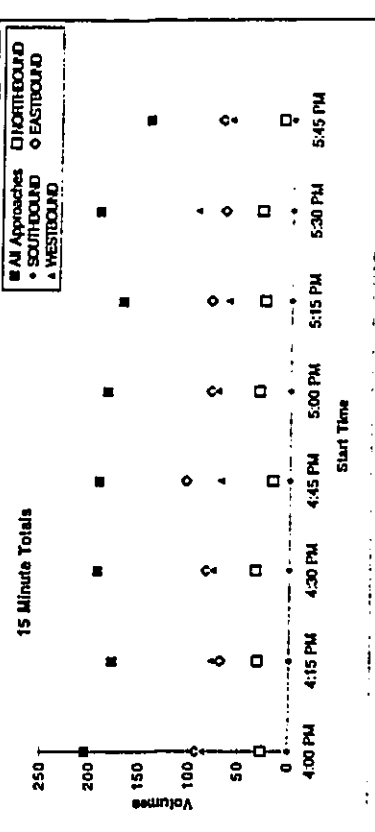
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:00 PM    | 22    |       |       |        |       | 4     |       |       |        |        |       |
| 4:15 PM    | 20    |       |       |        |       | 11    |       |       |        |        |       |
| 4:30 PM    | 25    |       |       |        |       | 8     |       |       |        |        |       |
| 4:45 PM    | 11    |       |       |        |       | 6     |       |       |        |        |       |
| 5:00 PM    | 21    |       |       |        |       | 10    |       |       |        |        |       |
| 5:15 PM    | 18    |       |       |        |       | 8     |       |       |        |        |       |
| 5:30 PM    | 24    |       |       |        |       | 6     |       |       |        |        |       |
| 5:45 PM    | 7     |       |       |        |       | 3     |       |       |        |        |       |
| Totals     | 148   | 0     | 56    |        |       | 0     | 0     | 0     | 0      | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:15 PM   | 77    | 0     | 35    | 0      | 0     | 0     | 0     | 0     | 0      | 0      | 0     |
| 5:15 PM   | TOTAL | 112   | 35    | 0      | 0.00% | TOTAL | 0     | 0     | 0      | 0      | 0     |

Direction East-West Road Kalamansole Hwy Direction EASTBOUND WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:00 PM    | 84    | 9     |       |        |       | 3     |       |       |        |        |       |
| 4:15 PM    | 63    | 6     |       |        |       | 4     |       |       |        |        |       |
| 4:30 PM    | 77    | 6     |       |        |       | 7     |       |       |        |        |       |
| 4:45 PM    | 89    | 18    |       |        |       | 3     |       |       |        |        |       |
| 5:00 PM    | 73    | 6     |       |        |       | 4     |       |       |        |        |       |
| 5:15 PM    | 73    | 7     |       |        |       | 4     |       |       |        |        |       |
| 5:30 PM    | 64    | 4     |       |        |       | 1     |       |       |        |        |       |
| 5:45 PM    | 65    | 6     |       |        |       | 4     |       |       |        |        |       |
| Totals     | 0     | 588   | 60    |        |       | 30    | 578   | 0     |        |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|--------|-------|
| 4:15 PM   | 0     | 302   | 34    | 0      | 0     | 18    | 281   | 0     | 0      | 0      | 0     |
| 5:15 PM   | TOTAL | 302   | 34    | 0      | 0.00% | TOTAL | 299   | 0     | 0      | 0      | 0.00% |





Project : 94.0 Kokko Head Park  
Date: 10/7/88

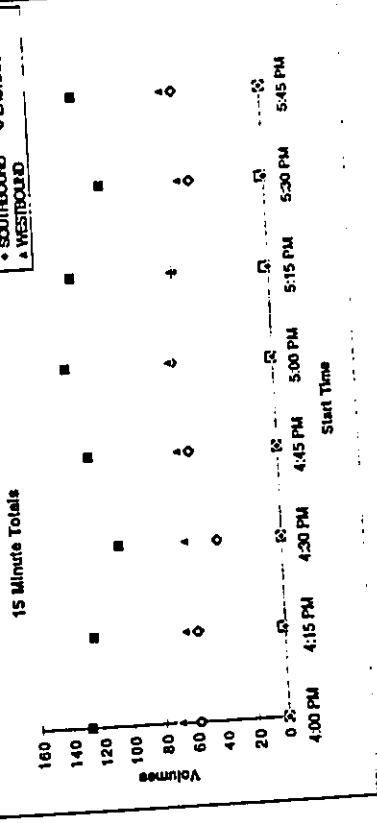
| Start Time | Direction NORTHBOUND |       |       |        | Direction SOUTHBOUND |       |       |        |
|------------|----------------------|-------|-------|--------|----------------------|-------|-------|--------|
|            | NB-LT                | NB-TH | NB-RT | TRUCKS | SB-LT                | SB-TH | SB-RT | TRUCKS |
| 4:00 PM    | 0                    | 0     | 0     | 0      | 0                    | 0     | 0     | 0      |
| 4:15 PM    | 0                    | 0     | 2     | 0      | 0                    | 0     | 0     | 0      |
| 4:30 PM    | 0                    | 0     | 0     | 0      | 0                    | 0     | 0     | 0      |
| 4:45 PM    | 1                    | 0     | 0     | 0      | 0                    | 0     | 0     | 0      |
| 5:00 PM    | 1                    | 0     | 2     | 1      | 0                    | 0     | 0     | 0      |
| 5:15 PM    | 1                    | 1     | 1     | 0      | 0                    | 0     | 0     | 0      |
| 5:30 PM    | 0                    | 0     | 0     | 0      | 0                    | 0     | 0     | 0      |
| 5:45 PM    | 0                    | 0     | 0     | 0      | 0                    | 0     | 0     | 0      |
| Totals     | 2                    | 0     | 5     | 0      | 0                    | 0     | 0     | 0      |

| PEAK HOUR | Direction EASTBOUND |       |       |       | Direction WESTBOUND |       |       |         |
|-----------|---------------------|-------|-------|-------|---------------------|-------|-------|---------|
|           | NB-LT               | NB-TH | NB-RT | %HV   | SB-LT               | SB-TH | SB-RT | #DIV/0! |
| 4:15 PM   | 1                   | 0     | 2     | 0.00% | 0                   | 0     | 0     | 0       |
| 5:15 PM   | 3                   | 3     | 0     | 0.00% | 0                   | 0     | 0     | 0       |
| TOTAL     | 4                   | 3     | 2     |       | 0                   | 0     | 0     | 0       |

East-West Road  
Koolahou

| Start Time | Direction EASTBOUND |       |       |        | Direction WESTBOUND |       |       |        |
|------------|---------------------|-------|-------|--------|---------------------|-------|-------|--------|
|            | EB-LT               | EB-TH | EB-RT | TRUCKS | WB-LT               | WB-TH | WB-RT | TRUCKS |
| 4:00 PM    | 0                   | 0     | 0     | 0      | 0                   | 0     | 0     | 0      |
| 4:15 PM    | 56                  | 1     | 1     | 0      | 0                   | 0     | 0     | 0      |
| 4:30 PM    | 42                  | 0     | 0     | 0      | 0                   | 0     | 0     | 0      |
| 4:45 PM    | 57                  | 0     | 0     | 0      | 0                   | 0     | 0     | 0      |
| 5:00 PM    | 64                  | 1     | 0     | 0      | 1                   | 1     | 1     | 1      |
| 5:15 PM    | 62                  | 0     | 0     | 0      | 1                   | 63    | 0     | 0      |
| 5:30 PM    | 47                  | 1     | 0     | 0      | 0                   | 55    | 0     | 0      |
| 5:45 PM    | 56                  | 1     | 0     | 0      | 0                   | 55    | 0     | 0      |
| Totals     | 0                   | 442   | 4     |        | 4                   | 512   | 0     | 0      |

| PEAK HOUR | Direction EASTBOUND |       |       |       | Direction WESTBOUND |       |       |       |
|-----------|---------------------|-------|-------|-------|---------------------|-------|-------|-------|
|           | EB-LT               | EB-TH | EB-RT | %HV   | WB-LT               | WB-TH | WB-RT | %HV   |
| 4:15 PM   | 0                   | 219   | 2     | 1.36% | 1                   | 260   | 0     | 2     |
| 5:15 PM   | 0                   | 221   | 2     | 1.36% | 1                   | 261   | 0     | 1.53% |
| TOTAL     | 0                   | 440   | 4     |       | 2                   | 521   | 0     | 2     |



Project : 94.0 Kokko Head Park  
Date: 10/28/88

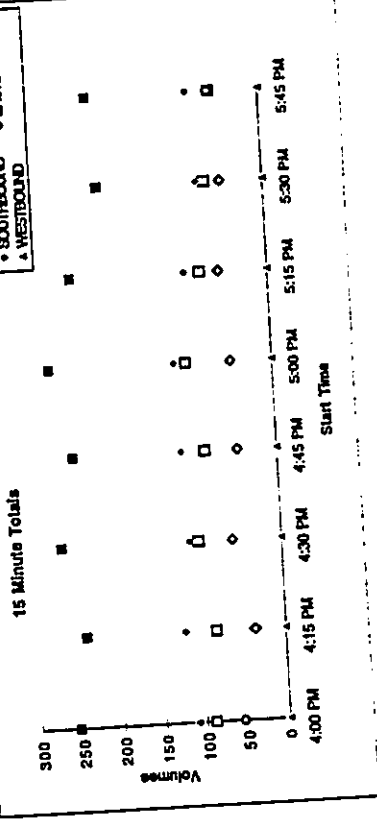
| Start Time | Direction NORTHBOUND |       |       |        | Direction SOUTHBOUND |       |       |        |
|------------|----------------------|-------|-------|--------|----------------------|-------|-------|--------|
|            | NB-LT                | NB-TH | NB-RT | TRUCKS | SB-LT                | SB-TH | SB-RT | TRUCKS |
| 4:00 PM    | 15                   | 76    | 0     | 1      | 66                   | 43    | 1     | 3      |
| 4:15 PM    | 10                   | 74    | 0     | 0      | 65                   | 55    | 0     | 2      |
| 4:30 PM    | 17                   | 82    | 1     | 0      | 47                   | 62    | 0     | 1      |
| 4:45 PM    | 19                   | 87    | 1     | 0      | 80                   | 54    | 0     | 2      |
| 5:00 PM    | 21                   | 82    | 1     | 1      | 58                   | 62    | 0     | 0      |
| 5:15 PM    | 14                   | 67    | 1     | 0      | 48                   | 50    | 1     | 0      |
| 5:30 PM    | 21                   | 49    | 1     | 0      | 43                   | 38    | 0     | 2      |
| 5:45 PM    | 8                    | 52    | 0     | 0      | 46                   | 41    | 0     | 1      |
| Totals     | 125                  | 548   | 0     |        | 432                  | 403   |       |        |

| PEAK HOUR | Direction EASTBOUND |       |       |     | Direction WESTBOUND |       |       |         |
|-----------|---------------------|-------|-------|-----|---------------------|-------|-------|---------|
|           | NB-LT               | NB-TH | NB-RT | %HV | SB-LT               | SB-TH | SB-RT | #DIV/0! |
| 4:15 PM   | 67                  | 305   | 0     | 2   | 0                   | 225   | 233   | 0       |
| 5:15 PM   | 372                 | 372   | 0.81% | 1   | 0                   | 461   | 349   | 1.30%   |
| TOTAL     | 439                 | 677   | 0.81% |     | 0                   | 686   | 582   |         |

East-West Road  
Koolahou

| Start Time | Direction EASTBOUND |       |       |        | Direction WESTBOUND |       |       |        |
|------------|---------------------|-------|-------|--------|---------------------|-------|-------|--------|
|            | EB-LT               | EB-TH | EB-RT | TRUCKS | WB-LT               | WB-TH | WB-RT | TRUCKS |
| 4:00 PM    | 44                  | 10    | 0     | 0      | 0                   | 0     | 0     | 0      |
| 4:15 PM    | 30                  | 6     | 1     | 1      | 0                   | 0     | 0     | 0      |
| 4:30 PM    | 51                  | 7     | 0     | 0      | 0                   | 0     | 0     | 0      |
| 4:45 PM    | 37                  | 8     | 1     | 1      | 0                   | 0     | 0     | 0      |
| 5:00 PM    | 38                  | 11    | 0     | 0      | 0                   | 0     | 0     | 0      |
| 5:15 PM    | 48                  | 13    | 0     | 0      | 0                   | 0     | 0     | 0      |
| 5:30 PM    | 41                  | 11    | 0     | 0      | 0                   | 0     | 0     | 0      |
| 5:45 PM    | 52                  | 10    | 0     | 0      | 0                   | 0     | 0     | 0      |
| Totals     | 339                 | 0     | 77    |        | 0                   | 0     | 0     | 0      |

| PEAK HOUR | Direction EASTBOUND |       |       |     | Direction WESTBOUND |       |       |         |
|-----------|---------------------|-------|-------|-----|---------------------|-------|-------|---------|
|           | EB-LT               | EB-TH | EB-RT | %HV | WB-LT               | WB-TH | WB-RT | #DIV/0! |
| 4:15 PM   | 155                 | 0     | 33    | 2   | 0                   | 0     | 0     | 0       |
| 5:15 PM   | 189                 | 189   | 2.12% | 2   | 0                   | 0     | 0     | 0       |
| TOTAL     | 344                 | 189   | 2.12% |     | 0                   | 0     | 0     | 0       |



Project : 84.0 Koko Head Park  
Date: 11/1/98

Direction NORTHBOUND  
North-South Road  
Newellville St

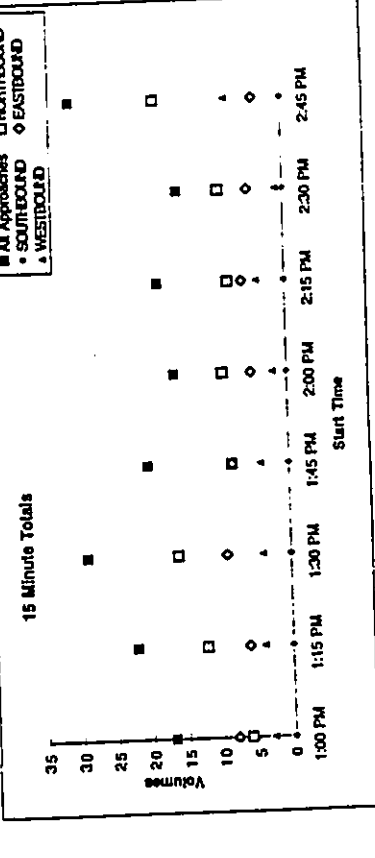
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 6     |       | 0     |        |       |       |       |       |        |       |
| 1:15 PM    | 4     |       | 8     |        |       |       |       |       |        |       |
| 1:30 PM    | 5     |       | 11    |        |       |       |       |       |        |       |
| 1:45 PM    | 5     |       | 3     |        |       |       |       |       |        |       |
| 2:00 PM    | 7     |       | 2     |        |       |       |       |       |        |       |
| 2:15 PM    | 4     |       | 4     |        |       |       |       |       |        |       |
| 2:30 PM    | 3     |       | 6     |        |       |       |       |       |        |       |
| 2:45 PM    | 9     |       | 9     |        |       |       |       |       |        |       |
| Totals     | 43    | 0     | 43    |        |       | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 21    | 0     | 24    | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM   | TOTAL | 45    | %HV   | 0.00%  |       | TOTAL | 0     | %HV   | 0.00%  | 0     |

Direction EASTBOUND  
East-West Road  
Kalaniana'ole Hwy

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    |       |       | 8     |        |       | 3     |       |       |        |       |
| 1:15 PM    |       |       | 6     |        |       | 4     |       |       |        |       |
| 1:30 PM    |       |       | 9     |        |       | 4     |       |       |        |       |
| 1:45 PM    |       |       | 8     |        |       | 4     |       |       |        |       |
| 2:00 PM    |       |       | 5     |        |       | 2     |       |       |        |       |
| 2:15 PM    |       |       | 6     |        |       | 1     |       |       |        |       |
| 2:30 PM    |       |       | 5     |        |       | 8     |       |       |        |       |
| 2:45 PM    |       |       | 4     |        |       | 8     |       |       |        |       |
| Totals     | 0     | 0     | 51    |        |       | 30    | 0     | 0     |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 0     | 0     | 28    | 0      | 0     | 14    | 0     | 0     | 0      | 0     |
| 2:15 PM   | TOTAL | 28    | %HV   | 0.00%  |       | TOTAL | 14    | %HV   | 0.00%  | 0     |



Project : 84.0 Koko Head Park  
Date: 11/1/98

Direction NORTHBOUND  
North-South Road  
Lumilo Rd

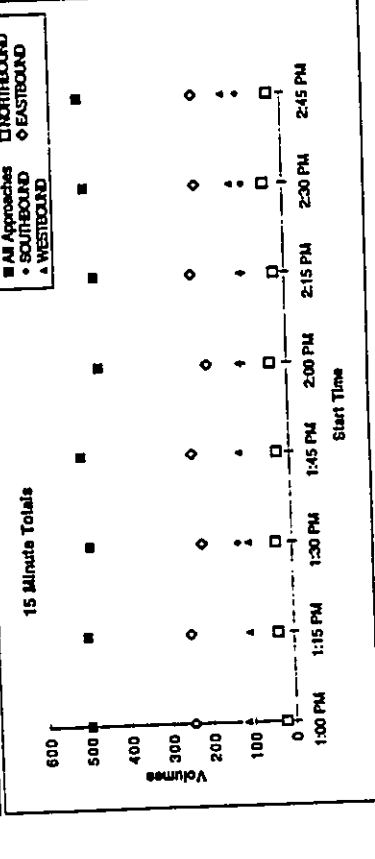
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 16    | 4     | 1     |        |       | 20    | 7     | 88    |        |       |
| 1:15 PM    | 29    | 5     | 4     |        |       | 17    | 7     | 85    |        |       |
| 1:30 PM    | 27    | 8     | 4     |        |       | 22    | 9     | 99    |        |       |
| 1:45 PM    | 23    | 6     | 1     |        |       | 16    | 8     | 97    |        |       |
| 2:00 PM    | 30    | 10    | 1     |        |       | 7     | 11    | 88    |        |       |
| 2:15 PM    | 22    | 4     | 1     |        |       | 15    | 8     | 78    |        |       |
| 2:30 PM    | 33    | 11    | 2     |        |       | 14    | 12    | 72    |        |       |
| 2:45 PM    | 26    | 4     | 1     |        |       | 14    | 18    | 73    |        |       |
| Totals     | 208   | 52    | 15    |        |       | 125   | 81    | 678   |        |       |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 109   | 29    | 10    | 0      | 0     | 62    | 35    | 369   | 0      | 0     |
| 2:15 PM   | TOTAL | 148   | %HV   | 0.00%  |       | TOTAL | 466   | %HV   | 0.00%  | 0     |

Direction EASTBOUND  
East-West Road  
Kalaniana'ole Hwy

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 64    | 137   | 24    |        |       | 3     | 101   | 14    |        |       |
| 1:15 PM    | 72    | 150   | 26    |        |       | 2     | 97    | 9     |        |       |
| 1:30 PM    | 79    | 120   | 19    |        |       | 0     | 97    | 8     |        |       |
| 1:45 PM    | 77    | 135   | 24    |        |       | 1     | 105   | 17    |        |       |
| 2:00 PM    | 78    | 102   | 14    |        |       | 2     | 99    | 18    |        |       |
| 2:15 PM    | 76    | 134   | 17    |        |       | 0     | 102   | 8     |        |       |
| 2:30 PM    | 72    | 123   | 17    |        |       | 2     | 124   | 4     |        |       |
| 2:45 PM    | 73    | 127   | 14    |        |       | 1     | 133   | 12    |        |       |
| Totals     | 611   | 1028  | 155   |        |       | 11    | 868   | 89    |        |       |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 306   | 507   | 83    | 0      | 0     | 5     | 398   | 51    | 0      | 0     |
| 2:15 PM   | TOTAL | 896   | %HV   | 0.00%  |       | TOTAL | 454   | %HV   | 0.00%  | 0     |



Project : 94.0 Koko Head Park  
Date: 11/1/98

Direction NORTHBOUND  
Koko Head Park Rd  
Direction SOUTHBOUND

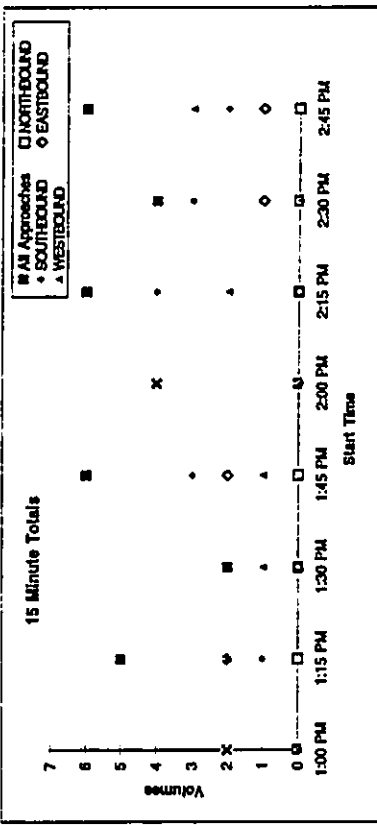
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 0     | 0     | 0     | 0      | 0     | 1     | 0     | 1     | 0      | 0     |
| 1:15 PM    | 0     | 0     | 0     | 0      | 0     | 1     | 0     | 1     | 0      | 0     |
| 1:30 PM    | 0     | 0     | 0     | 0      | 0     | 1     | 0     | 1     | 0      | 0     |
| 1:45 PM    | 0     | 0     | 0     | 0      | 0     | 1     | 0     | 1     | 0      | 0     |
| 2:00 PM    | 0     | 0     | 0     | 0      | 0     | 3     | 0     | 3     | 0      | 0     |
| 2:15 PM    | 0     | 0     | 0     | 0      | 0     | 2     | 0     | 2     | 0      | 0     |
| 2:30 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:45 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| Totals     | 0     | 0     | 0     | 0      | 0     | 12    | 0     | 12    | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES   | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|---------|-------|-------|-------|--------|-------|
| 1:15 PM   | 0     | 0     | 0     | 0      | 0       | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM   | 0     | 0     | 0     | 0      | 0       | 3     | 0     | 3     | 0      | 0     |
| TOTAL     | 0     | 0     | 0     | 0      | 0       | 3     | 0     | 3     | 0      | 0     |
|           |       |       |       | %HV    | #DIV/0! |       |       |       | %HV    | 0.00% |

Direction EASTBOUND  
East-West Road  
Kalaniana'ole Highway  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 1:15 PM    | 2     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 1:30 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 1:45 PM    | 2     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:00 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM    | 0     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:30 PM    | 1     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:45 PM    | 1     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| Totals     | 6     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 4     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM   | 4     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| TOTAL     | 4     | 0     | 0     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
|           |       |       |       | %HV    | 0.00% |       |       |       | %HV    | 0.00% |



Project : 94.0 Koko Head Park  
Date: 10/25/98

Direction NORTHBOUND  
Hanama Bay Rd  
Direction SOUTHBOUND

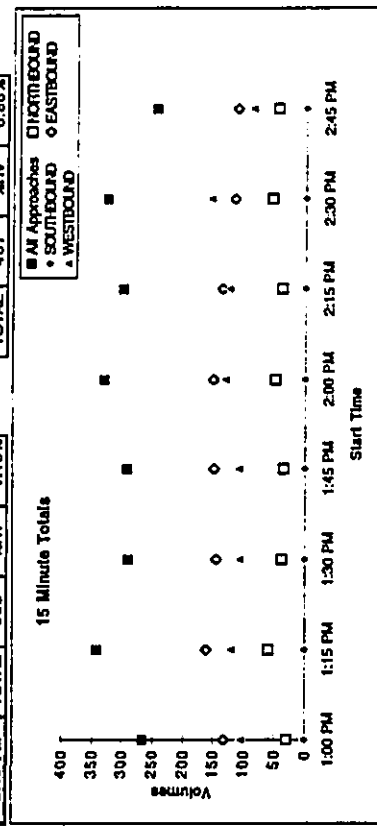
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 22    | 0     | 0     | 0      | 1     | 0     | 0     | 0     | 0      | 0     |
| 1:15 PM    | 28    | 0     | 32    | 0      | 3     | 0     | 0     | 0     | 0      | 0     |
| 1:30 PM    | 24    | 0     | 14    | 0      | 3     | 0     | 0     | 0     | 0      | 0     |
| 1:45 PM    | 19    | 0     | 16    | 0      | 1     | 0     | 0     | 0     | 0      | 0     |
| 2:00 PM    | 31    | 0     | 18    | 0      | 2     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM    | 29    | 0     | 9     | 0      | 1     | 0     | 0     | 0     | 0      | 0     |
| 2:30 PM    | 38    | 0     | 17    | 0      | 2     | 0     | 0     | 0     | 0      | 0     |
| 2:45 PM    | 34    | 0     | 12    | 0      | 3     | 0     | 0     | 0     | 0      | 0     |
| Totals     | 225   | 0     | 126   | 0      | 12    | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES   |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|---------|
| 1:15 PM   | 102   | 0     | 80    | 0      | 9     | 0     | 0     | 0     | 0      | 0       |
| 2:15 PM   | 182   | 0     | 80    | 0      | 9     | 0     | 0     | 0     | 0      | 0       |
| TOTAL     | 182   | 0     | 80    | 0      | 9     | 0     | 0     | 0     | 0      | 0       |
|           |       |       |       | %HV    | 4.95% |       |       |       | %HV    | #DIV/0! |

Direction EASTBOUND  
East-West Road  
Kalaniana'ole Hwy  
Direction WESTBOUND

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 103   | 29    | 2     | 2      | 1     | 5     | 100   | 0     | 0      | 0     |
| 1:15 PM    | 126   | 35    | 0     | 4      | 4     | 1     | 120   | 0     | 0      | 2     |
| 1:30 PM    | 119   | 26    | 0     | 0      | 0     | 9     | 98    | 0     | 0      | 0     |
| 1:45 PM    | 118   | 31    | 0     | 2      | 1     | 11    | 87    | 0     | 0      | 1     |
| 2:00 PM    | 124   | 26    | 0     | 1      | 1     | 10    | 121   | 0     | 0      | 0     |
| 2:15 PM    | 107   | 29    | 0     | 3      | 3     | 6     | 119   | 0     | 0      | 2     |
| 2:30 PM    | 85    | 31    | 0     | 3      | 4     | 4     | 151   | 0     | 0      | 0     |
| 2:45 PM    | 86    | 26    | 0     | 1      | 1     | 8     | 79    | 0     | 0      | 1     |
| Totals     | 0     | 868   | 233   | 0      | 54    | 865   | 0     | 0     | 0      | 0     |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 487   | 318   | 0     | 0      | 7     | 31    | 436   | 0     | 1      | 3     |
| 2:15 PM   | 605   | 318   | 0     | 0      | 7     | 31    | 436   | 0     | 1      | 3     |
| TOTAL     | 605   | 318   | 0     | 0      | 7     | 31    | 436   | 0     | 1      | 3     |
|           |       |       |       | %HV    | 1.16% |       |       |       | %HV    | 0.86% |



Project : 94.0 Koko Head Park  
Date: 11/1/88

Direction NORTHBOUND  
North-South Road  
Kalanian'ole Hwy

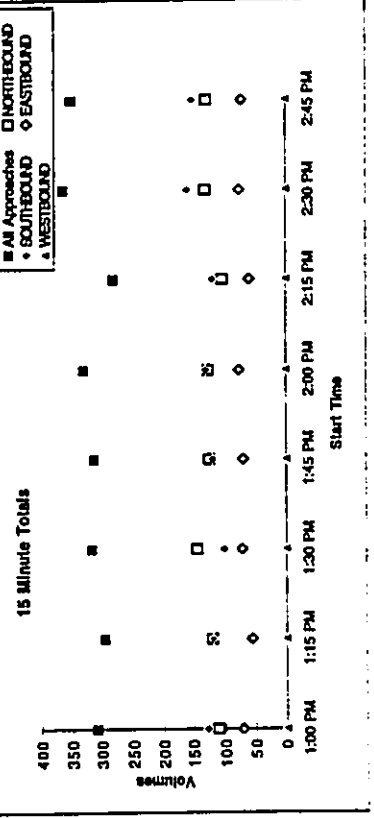
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 13    | 98    | 0     | 0      | 1     | 83    | 44    | 1     | 1      | 3     |
| 1:15 PM    | 11    | 109   | 0     | 0      | 0     | 72    | 47    | 0     | 0      | 1     |
| 1:30 PM    | 12    | 132   | 0     | 1      | 1     | 68    | 32    | 0     | 2      | 2     |
| 1:45 PM    | 21    | 103   | 1     | 1      | 1     | 75    | 44    | 0     | 1      | 1     |
| 2:00 PM    | 14    | 111   | 0     | 2      | 0     | 82    | 47    | 0     | 2      | 2     |
| 2:15 PM    | 15    | 88    | 0     | 1      | 0     | 88    | 30    | 1     | 0      | 0     |
| 2:30 PM    | 25    | 104   | 0     | 0      | 0     | 112   | 46    | 0     | 2      | 2     |
| 2:45 PM    | 20    | 108   | 0     | 0      | 2     | 100   | 50    | 0     | 0      | 1     |
| Totals     | 131   | 853   | 0     | 0      | 2     | 681   | 340   | 0     | 0      | 1     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 58    | 455   | 0     | 1      | 4     | 0     | 288   | 170   | 0      | 5     |
| 2:15 PM   | TOTAL | 513   | %HV   | 0.97%  |       | 468   | %HV   | 1.28% |        |       |

Direction EASTBOUND  
East-West Road  
Kealahou

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 50    | 21    | 12    | 0      | 1     |       |       |       |        |       |
| 1:15 PM    | 44    | 12    | 15    | 0      | 0     |       |       |       |        |       |
| 1:30 PM    | 57    | 15    | 15    | 0      | 0     |       |       |       |        |       |
| 1:45 PM    | 55    | 15    | 15    | 0      | 0     |       |       |       |        |       |
| 2:00 PM    | 55    | 21    | 0     | 1      | 0     |       |       |       |        |       |
| 2:15 PM    | 50    | 9     | 16    | 0      | 0     |       |       |       |        |       |
| 2:30 PM    | 59    | 16    | 0     | 0      | 0     |       |       |       |        |       |
| 2:45 PM    | 55    | 16    | 0     | 0      | 0     |       |       |       |        |       |
| Totals     | 425   | 0     | 125   | 0      | 0     | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 211   | 0     | 63    | 0      | 1     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM   | TOTAL | 274   | %HV   | 0.36%  |       | 0     | %HV   | 1.28% |        |       |



Project : 94.0 Koko Head Park  
Date: 11/1/88

Direction NORTHBOUND  
North-South Road  
Stable

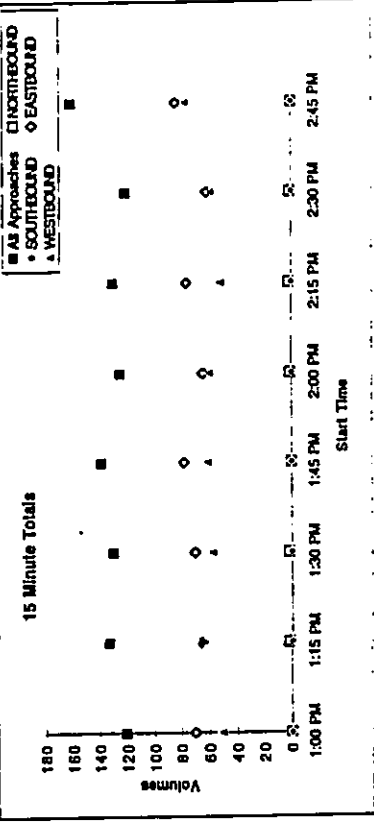
| Start Time | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 0     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| 1:15 PM    | 0     | 2     | 0     | 0      | 0     |       |       |       |        |       |
| 1:30 PM    | 0     | 2     | 0     | 0      | 0     |       |       |       |        |       |
| 1:45 PM    | 0     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| 2:00 PM    | 0     | 1     | 0     | 0      | 0     |       |       |       |        |       |
| 2:15 PM    | 1     | 1     | 0     | 0      | 0     |       |       |       |        |       |
| 2:30 PM    | 1     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| 2:45 PM    | 0     | 0     | 0     | 0      | 0     |       |       |       |        |       |
| Totals     | 2     | 0     | 6     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | NB-LT | NB-TH | NB-RT | TRUCKS | BUSES | SB-LT | SB-TH | SB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 0     | 0     | 5     | 0      | 0     | 0     | 0     | 0     | 0      | 0     |
| 2:15 PM   | TOTAL | 5     | %HV   | 0.00%  |       | 0     | %HV   | 0.00% |        |       |

Direction EASTBOUND  
East-West Road  
Kealahou

| Start Time | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|------------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:00 PM    | 70    | 0     | 0     | 0      | 1     | 1     | 50    | 0     | 0      | 1     |
| 1:15 PM    | 64    | 3     | 0     | 0      | 0     | 0     | 66    | 0     | 0      | 0     |
| 1:30 PM    | 67    | 3     | 0     | 0      | 0     | 0     | 58    | 1     | 0      | 0     |
| 1:45 PM    | 78    | 0     | 0     | 0      | 0     | 0     | 61    | 0     | 0      | 1     |
| 2:00 PM    | 64    | 0     | 0     | 1      | 0     | 2     | 58    | 0     | 0      | 0     |
| 2:15 PM    | 76    | 0     | 1     | 0      | 0     | 0     | 52    | 0     | 0      | 0     |
| 2:30 PM    | 60    | 1     | 0     | 0      | 0     | 1     | 58    | 0     | 0      | 0     |
| 2:45 PM    | 83    | 1     | 0     | 0      | 0     | 3     | 74    | 1     | 1      | 1     |
| Totals     | 0     | 562   | 6     | 7      | 477   | 0     | 0     | 0     | 0      | 0     |

| PEAK HOUR | EB-LT | EB-TH | EB-RT | TRUCKS | BUSES | WB-LT | WB-TH | WB-RT | TRUCKS | BUSES |
|-----------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|
| 1:15 PM   | 0     | 273   | 4     | 0      | 1     | 2     | 243   | 0     | 1      | 1     |
| 2:15 PM   | TOTAL | 277   | %HV   | 0.36%  |       | 245   | %HV   | 0.82% |        |       |



**APPENDIX B**

**LEVEL-OF-SERVICE DEFINITIONS**

**FOR**

**SIGNALIZED AND UNSIGNALIZED INTERSECTIONS**

REFERENCE: Highway Capacity Manual (Special Report 209, 1994)



**LEVEL-OF-SERVICE FOR SIGNALIZED INTERSECTIONS**

Level-of-service for signalized intersections is defined in terms of delay. Delay is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. Specifically, level-of-service criteria are stated in terms of the average stopped delay per vehicle for a 15-minute analysis period. The table to the right gives the Level-of-Service criteria.

| Level of Service | Stopped Delay Per Vehicle (sec/veh) |
|------------------|-------------------------------------|
| A                | ≤ 5                                 |
| B                | > 5 and ≤ 15                        |
| C                | > 15 and ≤ 25                       |
| D                | > 25 and ≤ 40                       |
| E                | <40 and ≤ 60                        |
| F                | >60                                 |

**Level-of-service A** describes operations with very low delay up to 5.0 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

**Level-of-service B** describes operations with delay in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths or both. More vehicles stop than for LOS A, causing higher levels of average delay.

**Level-of-service C** describes operations with delay in the range of 15.1 to 25.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

**Level-of-service D** describes operations with delay in the range of 25.1 to 40.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or a high v/c ratios (volume of cars to capacity of intersection). Individual cycle failures are noticeable.

**Level-of-service E** describes operations with delay in the range of 40.1 to 60.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

**Level-of-service F** describes operations with delay in excess of 60.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation, i.e., when arrival flow rates exceed the capacity of the intersection. It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

#### LEVEL-OF-SERVICE FOR UNSIGNALIZED INTERSECTIONS

| Level of Service | Average Total Delay (sec/veh) |
|------------------|-------------------------------|
| A                | ≤ 5                           |
| B                | > 5 and ≤ 10                  |
| C                | > 10 and ≤ 20                 |
| D                | > 20 and ≤ 30                 |
| E                | < 30 and ≤ 45                 |
| F                | > 45                          |

The level of service criteria are given in the table to the right. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position.

The proposed level of service 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 total delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection.

# APPENDIX K

Supplemental Report on Traffic Issues  
Koko Head Regional Park and Natural Preserve

Pacific Planning & Engineering, Inc.

July 28, 1999



**PACIFIC PLANNING**  
ENGINEERING, INC.

Mr. Ralph Portmore  
Koko Head Regional Park and Nature Preserve  
Traffic Issues

July 28, 1999  
Page 2 of 2

July 28, 1999

Mr. Ralph Portmore  
Group 70 International  
925 Bethel Street, Fifth Floor  
Honolulu, HI 96813

Subject: Koko Head Regional Park and Nature Preserve  
Traffic Issues

Dear Mr. Portmore:

As requested, this letter is in response to the recent changes regarding the Koko Head Regional Park and Nature Preserve project.

In our traffic report, dated February 15, 1999, we investigated the traffic impacts due to various proposed improvements to the park. The most significant impact was having visitors park at the Job Corps site and being shuttled across Kalaniana'ole Highway to Hanauma Bay. This would have resulted in the need to:

1. Realign the existing T-intersection into a 4-leg intersection with Koko Head Park Road.
2. Install a traffic signal.
3. Provide a left-turn storage lane on Kalaniana'ole Highway.

However, due to recent events, the only changes being considered now are the following:

1. Snack bar relocation.
2. Awareness training.
3. Beach Shuttle Bus modifications.

In addition, no increase in visitors are being projected. Therefore, the park improvements that are proposed under the revised project scope does not impact traffic and consequently will not result in a need for any roadway improvements within the Koko Head Regional Park and Nature Preserve or in the surrounding community.

If you have any questions, please call Benson Chow or myself at 596-0095.

Very truly yours,



Reed A. Matsuo, P.E.  
Senior Associate

**APPENDIX L**

**Koko Head Regional Park & Nature Preserve -  
Utility Requirements**

**SSFM Engineers, Inc.**

**February 1999**

**KOKO HEAD REGIONAL PARK &  
NATURE PRESERVE**

**Utility Requirements**

February 16, 1999

Prepared By:  
SSFM Engineers, Inc.

**1.0 HANAUMA BAY**

**1.1 Water**

**1.1.1 Existing Water System**

The existing water service to Hanauma Bay is provided through a utility tunnel located at the north side of the crater rim (2½" and 8" waterline) to Kalanianaʻole Highway. The water is distributed for domestic and irrigation use. The existing water usage for Hanauma Bay (Jan. 1996 to Oct. 1998) is shown in Table 1 (records from Board of Water Supply). Records indicate that water consumption increased during the summer months (50,000 gallons per day (gpd)) and decreased during the winter months (25,000gpd) with an average annual consumption of 37,000gpd. The existing demand is based on restroom and showers fixtures, food service, and irrigation within the Hanauma Bay upper and lower recreational areas.

**1.1.2 Proposed Water System**

The connection of the proposed water system will be located at the existing water meter. The approximate water demand for the proposed facility will be 34,000gpd (18,000gpd domestic, 16,000gpd irrigation/exhibits) as shown in Table 3. This is a net decrease of 3,000gpd (8%). The estimate was based on projected visitor counts and current water usage at Hanauma Bay. Fire protection will also be provided to the proposed facility at a flow rate of 2,000gpm.

**1.2 Drainage**

**1.2.1 Existing Drainage:**

The existing drainage system consists of approximately 6.5 acres of asphaltic pavement and 18.3 acres of grassed area. The total runoff for the site is approximately 51 cubic feet per second (cfs) for a 10-year recurrence storm as shown in Table 5. The runoff sheet flows toward inlets located in the southwest corner of the upper area. The runoff is conveyed through a system of subbasins and drain lines to the outlet located at the cliff of the upper area.

**1.2.2 Proposed Drainage**

The proposed drainage system will utilize the existing drain outlet over the cliff. Sheet flow will be directed to relocated inlets along the proposed garden and the roadway. The runoff is expected to decrease (from 51 cfs to 45 cfs) due to the reduction of asphaltic pavement area (3.4 acres) and an increase of grassed area (21.4 acres) as shown in Table 6.

### 1.3 Wastewater System

#### 1.3.1 Existing Wastewater

The wastewater system for this area is connected to the Hawaii Kai Wastewater System, which is privately owned and operated by American Waterworks Corporation.

#### 1.3.2 Proposed Wastewater

The proposed wastewater system will connect to the existing wastewater pump stations (WWPS) located on-site. Further investigation of the existing WWPS is required to determine the condition and carrying capacity. The projected wastewater design flow is 36,000gpd, which is based on 85% of the domestic water demand (see Table 7). It is anticipated to have a slight increase from the existing conditions due to the increased domestic water demand. Permission from American Waterworks Company will be required to connect to their system. No wastewater connection problems are anticipated.

#### 1.4 Site Grading

##### 1.4.1 Existing Site

The site is composed of an existing asphaltic parking lot and landscaped areas.

##### 1.4.2 Proposed Site

The proposed improvements will consist of removing the existing asphaltic parking lot and replacing with landscaping. Minor grading work will be required to maintain the drainage patterns and for the construction of the proposed Visitor Center.

### 2.0 KOKO CRATER MAIN VISITOR CENTER

#### 2.1 Water

##### 2.1.1 Existing Water System

An existing 4" water meter provides service to Hawaii Job Corps located at the entrance of the Koko Head District Park (intersection of Kaumakani and Ana Palau Street). The past water usage for Hawaii Job Corps was unavailable from the Board of Water Supply.

Another existing 4" water meter (located in the same area) provides service to Koko Head District Park and the Rifle Range. The existing water usage for this meter (Jan. 1996 to Oct. 1998) is shown in Table 2 (records from Board of Water Supply). Records indicate that water consumption increased during the summer months (67,000gpd) and decreased during the winter months (17,000gpd) with an average annual consumption of 46,000gpd.

##### 2.1.2 Proposed Water System

The proposed water system to the new facility will connect service to the existing water meter located at the entrance of Koko Head District Park. Due to the reduction of buildings and living areas (Job Corps), the water demand is anticipated to decrease from the past water usage. The approximate water demand for the proposed facility will be 25,000gpd (9,000gpd domestic, 16,000gpd irrigation) as shown in Table 4. This estimate was based on projected visitor counts. Fire protection will also be provided to the proposed facility at a flow rate of 2,000gpm.

#### 2.2 Drainage

##### 2.2.1 Existing Drainage

The existing drainage system encompasses the north area of Koko Head Regional Park. The perimeter of the basin includes the entrance road of Koko Head Regional Park, upper slopes of Hawaii Job Corps, and the concrete trapezoidal channel along the north side of the park near the residential district. The basin sheet flows northwesterly into the existing concrete channel.

##### 2.2.2 Proposed Drainage

The runoff within the north portion of Koko Head Regional Park will increase by approximately 6 cfs due to the increase of 4 acres of asphaltic concrete pavement for the visitor parking lot. The proposed runoff will sheet flow in a northwesterly direction toward the existing concrete trapezoidal channel. The concrete channel is adequate for handling the increased runoff. The drainage basin on the south side of the entrance road will not be affected.

### 2.3 Wastewater System

#### 2.3.1 Existing Wastewater

The wastewater system for this area is connected to the Hawaii Kai Wastewater System within the Koko Head District Park.

#### 2.3.2 Proposed Wastewater

The proposed wastewater system will use the existing wastewater connection point. The projected wastewater design flow is 24,000gpd, which is based on 85% of the domestic water demand (see Table 8). It is anticipated to have a decrease from the existing conditions due to the reduction of fixture units. Permission from American Waterworks Corporation will be required to connect to their system. No wastewater connection problems are anticipated.

#### 2.4 Site Grading

##### 2.4.1 Existing Site

The existing site is composed of structures and parking lots.

**2.4.2. Proposed Site**

The proposed improvements consist of removing the existing structures and parking lot. Site grading will be required for the proposed 450 car parking lot and the Visitor Center.

**3.0. KOKO HEAD INTERSECTION**

**3.1. Site Grading**

**3.1.1. Existing Site**

The existing paved roadway from Kalaniana'ole Highway to Hanauma Bay is approximately 24 feet wide with a 4 feet sidewalk. The existing paved roadway along Park Road (from Kalaniana'ole Highway to Koko Head Regional Park) is approximately 16 feet wide. The existing asphaltic pavement on Kalaniana'ole Highway is approximately 46 feet wide with 2 (two) 11 feet lanes.

**3.1.2. Proposed Site**

The proposed improvements to the intersection will align the roadways perpendicular to Kalaniana'ole Highway. The improvements consist of grading the intersection to align the two roadways. Improvements will be required for the widening and grading of Park Road (from the intersection to approximately 1000 feet to the Park).

Table 1 - Existing Water Usage at Hanauma Bay (Records from Board of Water Supply).

| Existing Water Usage           |                          |
|--------------------------------|--------------------------|
| Monthly Average gal/1000/month | Yearly Average gal/month |
| Jan-86                         | 699                      |
| Feb-86                         | 687                      |
| Mar-86                         | 838                      |
| Apr-86                         | 852                      |
| May-86                         | 834                      |
| Jun-86                         | 656                      |
| Jul-86                         | 1240                     |
| Aug-86                         | 1404                     |
| Sep-86                         | 1423                     |
| Oct-86                         | 1250                     |
| Nov-86                         | 751                      |
| Dec-86                         | 1003                     |
| Jan-87                         | 823                      |
| Feb-87                         | 648                      |
| Mar-87                         | 832                      |
| Apr-87                         | 719                      |
| May-87                         | 630                      |
| Jun-87                         | 792                      |
| Jul-87                         | 1099                     |
| Aug-87                         | 1544                     |
| Sep-87                         | 1437                     |
| Oct-87                         | 1472                     |
| Nov-87                         | 1047                     |
| Dec-87                         | 927                      |
| Jan-88                         | 758                      |
| Feb-88                         | 597                      |
| Mar-88                         | 1277                     |
| Apr-88                         | 1576                     |
| May-88                         | 1590                     |
| Jun-88                         | 1989                     |
| Jul-88                         | 1490                     |
| Aug-88                         | 1461                     |
| Sep-88                         | 1714                     |
| Oct-88                         | 1334                     |
| 3-yr Ave.                      | 1,099,697 gal/month      |
| 3-yr Ave.                      | 36,657 gal/day           |

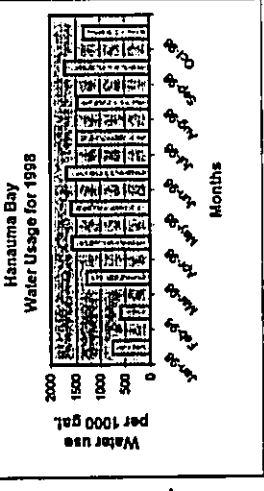
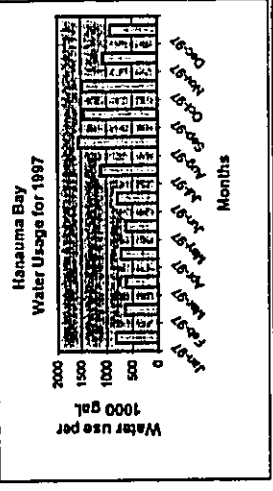
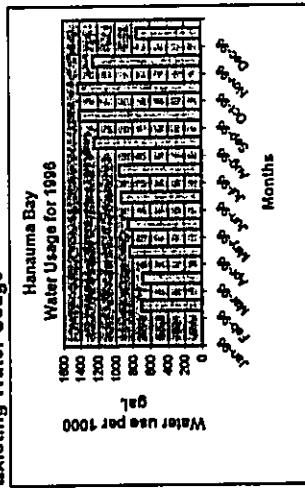


Table 2 - Existing Water Usage at Koko Head District Park (Records from Board of Water Supply).

| Month     | Yearly Average | Monthly Average |
|-----------|----------------|-----------------|
|           | gals/1000month | gals/1000month  |
| Jan-86    | 779            |                 |
| Feb-86    | 310            |                 |
| Mar-86    | 741            |                 |
| Apr-86    | 1177           |                 |
| May-86    | 1227           |                 |
| Jun-86    | 1092           |                 |
| Jul-86    | 1452           |                 |
| Aug-86    | 2099           |                 |
| Sep-86    | 1880           |                 |
| Oct-86    | 1451           |                 |
| Nov-86    | 883            | 1190            |
| Dec-86    |                |                 |
| Jan-87    | 391            |                 |
| Feb-87    | 309            |                 |
| Mar-87    | 612            |                 |
| Apr-87    | 649            |                 |
| May-87    | 683            |                 |
| Jun-87    | 694            |                 |
| Jul-87    | 2017           |                 |
| Aug-87    | 1786           |                 |
| Sep-87    | 2052           |                 |
| Oct-87    | 1657           | 1084            |
| Nov-87    |                |                 |
| Dec-87    |                |                 |
| Jan-88    |                |                 |
| Feb-88    |                |                 |
| Mar-88    | 1788           |                 |
| Apr-88    | 2414           |                 |
| May-88    | 2195           |                 |
| Jun-88    | 2031           |                 |
| Jul-88    | 1918           |                 |
| Aug-88    | 2501           |                 |
| Sep-88    | 1875           | 2117            |
| Oct-88    |                |                 |
| 3-yr Ave. | 1,383,964      | gal/month       |
| 3-yr Ave. | 46,132         | gal/day         |

Existing Water Usage

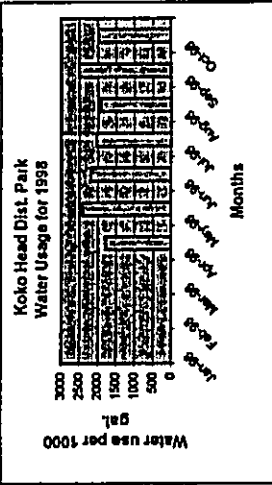
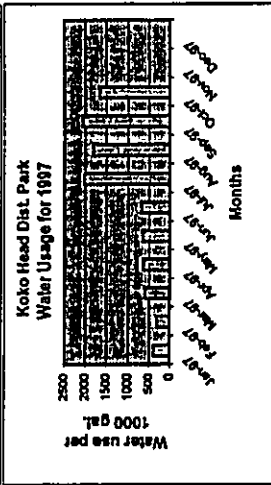
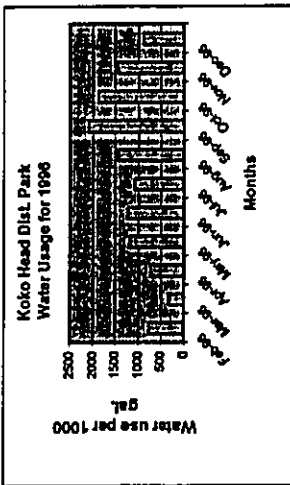


Table 3 - Projected Water Demand.

| HANAUMA BAY (PROJECTED WATER DEMAND) |      |         |           |  |
|--------------------------------------|------|---------|-----------|--|
|                                      | cap  | gpd     | gal/month | Note   |
| Visitors                             | 4384 | 2       | 263,040   | 8,768 (From Facilities Program estimates-Ave Daily Attendance) |
| Showers                              | 1185 | 5       | 177,750   | 5,925 (Projected from Parks and Recreation)                    |
| Snack Bar                            | 1700 | 2       | 102,000   | 3,400 (From Facilities Program estimates)                      |
| Average Domestic Demand              |      |         | 542,790   | 18,093 (Average Day)   |
| Max Domestic Demand                  |      |         | 27,140    | (Max Day = 1.5 x Ave. Day)                                     |
| Peak Domestic Demand                 |      |         | 64,279    | (Peak Hour = 3 x Ave. Day)                                     |
| Average Per Capita                   |      |         | 2.49      |  |
| Irrigation                           | acre | in/week |           |  |
|                                      | 3    | 1       | 325,853   | 10,862 (Estimate from Landscape Arch)                          |
| Exhibits                             | each | gpd     | 150,000   | 5,000 (Estimate based on Walkiki Aquarium)                     |
| Facility Demand                      | 1    | 5000    | 475,853   | 15,862   |
| Projected Average Water Deman        |      |         | 1,018,643 | 33,955   |

Table 4 - Projected Water Demand.

| KOKO CRATER MAIN VISITOR CENTER (PROJECTED WATER DEMAND) |      |         |           |  |
|--|------|---------|-----------|--|
|  | cap  | gpd     | gal/month | Note   |
| Visitors   | 3025 | 2       | 181,500   | 6,050 (From Facilities Program estimates-Ave Daily Attendance) |
| Snack Bar  | 1200 | 2       | 72,000    | 2,400 (From Facilities Program estimates)                      |
| Average Domestic Demand                                  |      |         | 253,500   | 8,450 (Average Day)  |
| Max Domestic Demand                                      |      |         | 12,675    | (Max Day = 1.5 x Ave. Day)                                     |
| Peak Domestic Demand                                     |      |         | 25,350    | (Peak Hour = 3 x Ave. Day)                                     |
| Average Per Capita                                       |      |         | 2.00      |  |
| Irrigation   | acre | in/week |           |  |
|  | 3    | 1.5     | 488,778   | 16,293 (Estimate from Landscape Arch)                          |
| Facility Demand  |      |         | 488,779   | 16,293   |
| Projected Average Water Deman                            |      |         | 742,279   | 24,743   |

Table 7 - Projected Wastewater Design Flow.

| HANAUMA BAY (PROJECTED WASTEWATER DESIGN FLOW) |                   |
|--|-------------------|
| Domestic Water Demand                          | gal/day<br>18,093 |
| Wastewater Flow                                | gal/day           |
| Average  | 15,379            |
| Maximum  | 76,895            |
| Dry Weather If                                 | 20,500            |
| Design Average                                 | 35,878            |
| Design Maximum                                 | 97,395            |
| Wet Weather If                                 | 6,250             |
| Design Peak                                    | 103,645           |

(85% of Domestic Water Demand)  
(5 times Average)  
(5 gpcd for sewer above GW)  
(Average + Dry Weather If)  
(Maximum + Dry Weather If)  
(1250 gpd for sewer above GW - 5 acres)  
(Design Maximum + Wet Weather If)

Table 8 - Projected Wastewater Design Flow.

| KOKO CRATER MAIN VISITOR CENTER<br>(PROJECTED WASTEWATER DESIGN FLOW) |                  |
|---|------------------|
| Domestic Water Demand   | gal/day<br>8,450 |
| Wastewater Flow   | gal/day          |
| Average   | 7,183            |
| Maximum   | 35,913           |
| Dry Weather If  | 18,500           |
| Design Average  | 23,683           |
| Design Maximum  | 52,413           |
| Wet Weather If  | 12,500           |
| Design Peak   | 64,913           |

(85% of Domestic Water Demand)  
(5 times Average)  
(5 gpcd for sewer above GW)  
(Average + Dry Weather If)  
(Maximum + Dry Weather If)  
(1250 gpd for sewer above GW - 10 acres)  
(Design Maximum + Wet Weather If)

Table 5 - Existing Drainage Conditions at Hanauma Bay.

| EXISTING CONDITIONS |      |      |      |      |                      |          |       |         |                  |      |     |     |           |       |       |       |       |  |
|---------------------|------|------|------|------|----------------------|----------|-------|---------|------------------|------|-----|-----|-----------|-------|-------|-------|-------|--|
| Basin               | Area | Coef | Cpvt | %pvt | Area(pvt)            | Coverage | L     | Elev    | Slope            | Tc   | I10 | I50 | Corr Fact | Int10 | Int50 | Q10   | Q50   |  |
| 1                   | 3.3  | 0.40 | 0.95 | 10%  | 0.33                 | 0.46     | 780   | 37      | 4.7%             | 15.5 | 2   | 2.8 | 2.0       | 4.0   | 5.60  | 6.01  | 8.41  |  |
| 2                   | 3.4  | 0.40 | 0.95 | 95%  | 3.23                 | 0.92     | 900   | 35      | 3.9%             | 19.1 | 2   | 2.8 | 1.8       | 3.8   | 5.04  | 11.29 | 15.81 |  |
| 3                   | 1.9  | 0.40 | 0.95 | 0%   | -                    | 0.40     | 450   | 11      | 2.4%             | 16.1 | 2   | 2.8 | 1.9       | 3.8   | 5.32  | 2.89  | 4.04  |  |
| 4                   | 1.0  | 0.40 | 0.95 | 0%   | -                    | 0.40     | 320   | 58      | 18.1%            | 9.4  | 2   | 2.8 | 2.3       | 4.6   | 8.44  | 1.64  | 2.58  |  |
| 5                   | 8.9  | 0.40 | 0.95 | 15%  | 1.34                 | 0.48     | 1380  | 95      | 8.9%             | 18   | 2   | 2.8 | 1.8       | 3.6   | 5.04  | 15.46 | 21.64 |  |
| 6                   | 3.2  | 0.40 | 0.95 | 5%   | 0.16                 | 0.43     | 380   | 12      | 3.2%             | 14.7 | 2   | 2.8 | 2.0       | 4.0   | 5.60  | 5.47  | 7.68  |  |
| 7                   | 3.1  | 0.40 | 0.95 | 45%  | 1.40                 | 0.85     | 620   | 67      | 10.6%            | 13.2 | 2   | 2.8 | 2.1       | 4.2   | 5.88  | 8.43  | 11.80 |  |
| Total               | 24.8 |      |      |      | 6.45 (Pvt)           |          |       |         |                  |      |     |     |           |       |       | 51.29 | 71.94 |  |
|                     |      |      |      |      | 18.35 (Grassed area) |          |       |         |                  |      |     |     |           |       |       |       |       |  |
| Irrigation Demand   |      |      |      |      | 1.5' (.125) per week | 2.29     | Ac-ft | 747,421 | gallons per week |      |     |     |           |       |       |       |       |  |
|                     |      |      |      |      |                      |          |       | 106,774 | gallons per day  |      |     |     |           |       |       |       |       |  |

Table 6 - Proposed Drainage Conditions at Hanauma Bay.

| PROPOSED CONDITIONS |      |      |      |      |                      |          |       |         |                  |      |     |     |           |       |                                   |       |       |  |
|---------------------|------|------|------|------|----------------------|----------|-------|---------|------------------|------|-----|-----|-----------|-------|-----------------------------------|-------|-------|--|
| Basin               | Area | Coef | Cpvt | %pvt | Area(pvt)            | Coverage | L     | Elev    | Slope            | Tc   | I10 | I50 | Corr Fact | Int10 | Int50                             | Q10   | Q50   |  |
| 1                   | 3.3  | 0.40 | 0.95 | 10%  | 0.33                 | 0.46     | 780   | 37      | 4.7%             | 15.5 | 2   | 2.8 | 2.0       | 4.0   | 5.60                              | 6.01  | 8.41  |  |
| 2                   | 3.4  | 0.40 | 0.95 | 5%   | 0.17                 | 0.43     | 900   | 35      | 3.9%             | 19.1 | 2   | 2.8 | 1.8       | 3.8   | 5.04                              | 5.23  | 7.33  |  |
| 3                   | 1.9  | 0.40 | 0.95 | 0%   | -                    | 0.40     | 450   | 11      | 2.4%             | 16.1 | 2   | 2.8 | 1.9       | 3.8   | 5.32                              | 2.89  | 4.04  |  |
| 4                   | 1.0  | 0.40 | 0.95 | 0%   | -                    | 0.40     | 320   | 58      | 18.1%            | 9.4  | 2   | 2.8 | 2.3       | 4.6   | 8.44                              | 1.64  | 2.58  |  |
| 5                   | 8.9  | 0.40 | 0.95 | 15%  | 1.34                 | 0.48     | 1380  | 95      | 8.9%             | 18   | 2   | 2.8 | 1.8       | 3.6   | 5.04                              | 15.46 | 21.64 |  |
| 6                   | 3.2  | 0.40 | 0.95 | 5%   | 0.16                 | 0.43     | 380   | 12      | 3.2%             | 14.7 | 2   | 2.8 | 2.0       | 4.0   | 5.60                              | 5.47  | 7.68  |  |
| 7                   | 3.1  | 0.40 | 0.95 | 45%  | 1.40                 | 0.85     | 620   | 67      | 10.6%            | 13.2 | 2   | 2.8 | 2.1       | 4.2   | 5.88                              | 8.43  | 11.80 |  |
| Total               | 24.8 |      |      |      | 3.39 (Pvt)           |          |       |         |                  |      |     |     |           |       |                                   | 48.33 | 63.48 |  |
|                     |      |      |      |      | 21.41 (Grassed Area) |          |       |         |                  |      |     |     |           |       |                                   |       |       |  |
| Irrigation Demand   |      |      |      |      | 1.5' (.125) per week | 2.68     | Ac-ft | 872,059 | gallons per week |      |     |     |           |       |                                   |       |       |  |
|                     |      |      |      |      |                      |          |       | 124,560 | gallons per day  |      |     |     |           |       |                                   |       |       |  |
|                     |      |      |      |      |                      |          |       |         |                  |      |     |     |           |       | 14% increase over existing demand |       |       |  |

**APPENDIX M**

**Koko Head Regional Park & Nature Preserve -  
Utility Requirements**

**Supplemental Report for Hanauma Bay Nature Preserve**

**SSFm Engineers, Inc.**

**August 7, 1999**



**KOKO HEAD REGIONAL PARK &  
NATURE PRESERVE**

**Utility Requirements**

(Supplemental Report for Hanauma Bay Nature Preserve)

August 7, 1999

Prepared By:  
SSFM Engineers, Inc.

**1.0 HANAUMA BAY**

**1.1 Water**

**1.1.1 Existing Water System**  
Water service to Hanauma Bay is currently provided through a utility tunnel located at the north side of the crater rim (2 1/2" and 8" waterline) to Kalaniana'ole Highway. The water is distributed for domestic and irrigation use. The existing water usage for Hanauma Bay (Jan. 1996 to Oct. 1998) is shown in Table 1 (records from Board of Water Supply). Records indicate that water consumption increased during the summer months (50,000 gallons per day (gpd)) and decreased during the winter months (25,000gpd) with an average annual consumption of 37,000gpd. The existing demand is based on restroom and shower facilities, food service, and irrigation within the Hanauma Bay upper and lower recreational areas.

**1.1.2 Proposed Water System**

The connection of the proposed water system will be made at the existing water meter. The approximate water demand for the proposed facility, as shown in Table 3A, will slightly increase by 1450gpd due to an increased irrigation area (approx. 0.25 acres) along the parking areas. Fire protection will also be provided to the proposed facility at a flow rate of 2,000gpm.

**1.2 Drainage**

**1.2.1 Existing Drainage:**

The existing site consists of approximately 6.5 acres of asphaltic concrete pavement and 18.3 acres of grassed area. The total runoff for the site is approximately 51 cubic feet per second (cfs) for a 10-year recurrence storm as shown in Table 5A. The runoff sheet flows toward retention basins located in the southwest corner of the upper area. It then overflows through a system of subbasins and drain lines to an outlet located at the cliff of the upper area.

**1.2.2 Proposed Drainage**

The proposed drainage system will relocate retention basins to the east and west of the proposed improvements. Sheet flow will be directed to these retention basins to capture runoff from the existing parking area and proposed improvements. The runoff is expected to increase slightly (from 51 cfs to 52 cfs) due to the increase of impervious area (0.3 acres) as shown in Table 6A.

**1.3 Wastewater System**

**1.3.1 Existing Wastewater**

The wastewater system for this area is connected to the Hawaii Kai Wastewater System, which is privately owned and operated by American Waterworks Corporation.

**1.3.2 Proposed Wastewater**

The proposed wastewater system consists of a new wastewater pump station (WWPS) located on-site, gravity sewer lines, and a force main connection at the existing utility tunnel. The projected wastewater average flow is 6,720gpd, which is based on 85% of the domestic water demand (see Table 7A). It is anticipated that there will be no change from the existing conditions. Permission from Hawaii-American Waterworks Company will be required to connect to their system, no wastewater connection problems are anticipated.

**1.4 Site Grading**

**1.4.1 Existing Site**

The site is composed of an existing asphaltic concrete parking lot and landscaped areas.

**1.4.2 Proposed Site**

The proposed improvements will consist of grading work to achieve drainage patterns toward the relocated retention basins and for the construction of the new Marine Education Center and Snack Bar.

Table 1 - Existing Water Usage at Hanauma Bay (Records from Board of Water Supply).

| Existing Water Usage |                |         |
|----------------------|----------------|---------|
| Monthly Average      | Yearly Average |         |
| gal/1000month        | gal/month      |         |
| Jan-88               | 688            |         |
| Feb-88               | 687            |         |
| Mar-88               | 838            |         |
| Apr-88               | 852            |         |
| May-88               | 834            |         |
| Jun-88               | 856            |         |
| Jul-88               | 1240           |         |
| Aug-88               | 1404           |         |
| Sep-88               | 1423           |         |
| Oct-88               | 1250           |         |
| Nov-88               | 751            |         |
| Dec-88               | 1003           |         |
| Jan-87               | 823            |         |
| Feb-87               | 648            |         |
| Mar-87               | 632            |         |
| Apr-87               | 719            |         |
| May-87               | 630            |         |
| Jun-87               | 702            |         |
| Jul-87               | 1099           |         |
| Aug-87               | 1544           |         |
| Sep-87               | 1437           |         |
| Oct-87               | 1472           |         |
| Nov-87               | 1047           |         |
| Dec-87               | 927            |         |
| Jan-88               | 758            |         |
| Feb-88               | 597            |         |
| Mar-88               | 1277           |         |
| Apr-88               | 1578           |         |
| May-88               | 1590           |         |
| Jun-88               | 1889           |         |
| Jul-88               | 1480           |         |
| Aug-88               | 1481           |         |
| Sep-88               | 1714           |         |
| Oct-88               | 1334           |         |
| 3-yr Ave.            | 1,099,697      |         |
| 3-yr Ave.            | 36,657         |         |
|                      | gal/month      | gal/day |

Table 5A - Existing Drainage Conditions for Hanauma Bay Nature Preserve.

| EXISTING CONDITIONS |               |       |       |       |                        |           |              |       |           |              |              |           |                |                |            |            |       |
|---------------------|---------------|-------|-------|-------|------------------------|-----------|--------------|-------|-----------|--------------|--------------|-----------|----------------|----------------|------------|------------|-------|
| Basin               | Area<br>acres | Csoil | Cpavt | %pavt | Area(pavt)<br>Coverage | L<br>feet | Elev<br>feet | Slope | Tc<br>min | I10<br>in/hr | I50<br>in/hr | Corr Fact | Int10<br>in/hr | Int50<br>in/hr | Q10<br>cfs | Q50<br>cfs |       |
| 1                   | 3.3           | 0.40  | 0.95  | 10%   | 0.33                   | 0.46      | 780          | 37    | 4.7%      | 15.5         | 2            | 2.8       | 2.0            | 4.0            | 5.60       | 6.01       | 8.41  |
| 2                   | 3.4           | 0.40  | 0.95  | 95%   | 3.23                   | 0.92      | 900          | 35    | 3.9%      | 19.1         | 2            | 2.8       | 1.8            | 3.6            | 5.04       | 11.29      | 15.81 |
| 3                   | 1.9           | 0.40  | 0.95  | 0%    | -                      | 0.40      | 450          | 11    | 2.4%      | 16.1         | 2            | 2.8       | 1.9            | 3.8            | 5.32       | 2.89       | 4.04  |
| 4                   | 1.0           | 0.40  | 0.95  | 0%    | -                      | 0.40      | 320          | 58    | 18.1%     | 9.4          | 2            | 2.8       | 2.3            | 4.6            | 6.44       | 1.84       | 2.58  |
| 5                   | 8.9           | 0.40  | 0.95  | 15%   | 1.34                   | 0.48      | 1380         | 95    | 8.9%      | 18           | 2            | 2.8       | 1.8            | 3.8            | 5.04       | 15.46      | 21.64 |
| 6                   | 3.2           | 0.40  | 0.95  | 5%    | 0.16                   | 0.43      | 380          | 12    | 3.2%      | 14.7         | 2            | 2.8       | 2.0            | 4.0            | 5.60       | 5.47       | 7.68  |
| 7                   | 3.1           | 0.40  | 0.95  | 45%   | 1.40                   | 0.65      | 620          | 67    | 10.8%     | 13.2         | 2            | 2.8       | 2.1            | 4.2            | 5.88       | 8.43       | 11.80 |
| Total               | 24.8          |       |       |       |                        |           |              |       |           |              |              |           |                |                |            |            |       |
|                     |               |       |       |       | 6.45 (Pavt)            |           |              |       |           |              |              |           |                |                |            |            |       |
|                     |               |       |       |       | 18.35 (Grassed area)   |           |              |       |           |              |              |           |                |                |            | 51.39      | 71.84 |

Table 6A - Proposed Drainage Conditions for Hanauma Bay Nature Preserve.

| PROPOSED CONDITIONS |               |       |       |       |                        |           |              |       |           |              |              |           |                |                |            |            |       |
|---------------------|---------------|-------|-------|-------|------------------------|-----------|--------------|-------|-----------|--------------|--------------|-----------|----------------|----------------|------------|------------|-------|
| Basin               | Area<br>acres | Csoil | Cpavt | %pavt | Area(pavt)<br>Coverage | L<br>feet | Elev<br>feet | Slope | Tc<br>min | I10<br>in/hr | I50<br>in/hr | Corr Fact | Int10<br>in/hr | Int50<br>in/hr | Q10<br>cfs | Q50<br>cfs |       |
| 1                   | 3.3           | 0.40  | 0.95  | 10%   | 0.33                   | 0.46      | 780          | 37    | 4.7%      | 15.5         | 2            | 2.8       | 2.0            | 4.0            | 5.60       | 6.01       | 8.41  |
| 2                   | 3.4           | 0.40  | 0.95  | 95%   | 3.23                   | 0.92      | 900          | 35    | 3.9%      | 19.1         | 2            | 2.8       | 1.8            | 3.6            | 5.04       | 11.29      | 15.81 |
| 3                   | 1.9           | 0.40  | 0.95  | 0%    | -                      | 0.40      | 450          | 11    | 2.4%      | 16.1         | 2            | 2.8       | 1.9            | 3.8            | 5.32       | 2.89       | 4.04  |
| 4                   | 1.0           | 0.40  | 0.95  | 0%    | -                      | 0.40      | 320          | 58    | 18.1%     | 9.4          | 2            | 2.8       | 2.3            | 4.6            | 6.44       | 1.84       | 2.58  |
| 5                   | 8.9           | 0.40  | 0.95  | 15%   | 1.34                   | 0.48      | 1380         | 95    | 8.9%      | 18           | 2            | 2.8       | 1.8            | 3.8            | 5.04       | 15.46      | 21.64 |
| 6                   | 3.2           | 0.40  | 0.95  | 15%   | 0.48                   | 0.48      | 380          | 12    | 3.2%      | 14.7         | 2            | 2.8       | 2.0            | 4.0            | 5.60       | 5.18       | 6.65  |
| 7                   | 3.1           | 0.40  | 0.95  | 45%   | 1.40                   | 0.65      | 620          | 67    | 10.8%     | 13.2         | 2            | 2.8       | 2.1            | 4.2            | 5.88       | 8.43       | 11.80 |
| Total               | 24.8          |       |       |       |                        |           |              |       |           |              |              |           |                |                |            |            |       |
|                     |               |       |       |       | 6.77 (Pavt)            |           |              |       |           |              |              |           |                |                |            |            |       |
|                     |               |       |       |       | 18.03 (Grassed Area)   |           |              |       |           |              |              |           |                |                |            | 52.09      | 72.93 |

Table 3A - Projected Water Demand.

| HANAUMA BAY (PROJECTED WATER DEMAND)    |       |         |         |                                      |  |
|---|-------|---------|---------|--------------------------------------|--|
| Item                                    | Acres | In/week | gal/day | Note                                 |  |
| Estimated Existing Irrigation Demand    | 5.00  | 1.5     | 29,094  | (Approx area of existing irrigation) |  |
| Estimated Existing Domestic Demand      |       |         | 7,908   |                                      |  |
| Current Existing Water Average (3-year) |       |         | 37,000  | (From Table 1 - BWS records)         |  |
| Net Change in Water Demand (Irrigation) | 0.25  | 1.5     | 1,455   | (Net increase of landscaped area)    |  |
| Projected Average Water Demand          |       |         | 38,455  |                                      |  |

Table 7A - Projected Wastewater Design Flow.

**HANAUMA BAY (PROJECTED WASTEWATER DESIGN FLOW)**

|                              |         |  |
|------------------------------|---------|--|
| <b>Domestic Water Demand</b> | gal/day | <b>7,906</b>                             |
| <b>Wastewater Flow</b>       | gal/day |  |
| Average                      | 6,720   | (85% of Domestic Water Demand)           |
| Maximum                      | 33,601  | (5 times Average)                        |
| Dry Weather <i>W</i>         | 20,600  | (5 gpcd for sewer above GW)              |
| Design Average               | 27,220  | (Average + Dry Weather <i>W</i> )        |
| Design Maximum               | 54,101  | (Maximum + Dry Weather <i>W</i> )        |
| Wet Weather <i>W</i>         | 6,250   | (1250 gpd for sewer above GW - 5 acres)  |
| Design Peak                  | 60,351  | (Design Maximum + Wet Weather <i>W</i> ) |