



WAYNE H. KIMURA
COMPTROLLER
MARY ALICE EVANS
DEPUTY COMPTROLLER

BENJAMIN J. CAYETANO
GOVERNOR

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

RECEIVED

LETTER NO. (P)1492.1

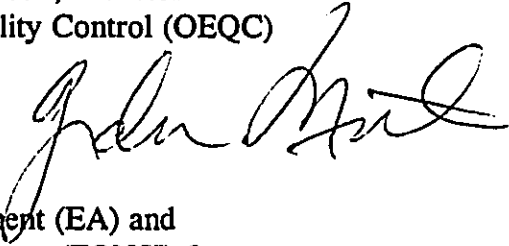
JUL 27 2001

01 JUL 27 P1:41

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

MEMORANDUM

TO: Ms. Genevieve K. Y. Salmonson, Director
Office of Environmental Quality Control (OEQC)

FROM: Gordon Matsuoka
Public Works Administrator 

SUBJECT: Final Environmental Assessment (EA) and
Finding of No Significant Impact (FONSI) for
Kapalama Facilities for Department of Agriculture and Food Distribution Center
TMK (1) 1-2-25: 11
Honolulu, Oahu, Hawaii

The Department of Accounting and General Services has responded to the comments received during the draft EA comment period for the subject project and has determined that this project will not create a significant environmental impact. We therefore wish to publish a FONSI determination. Please publish a notice for this project in the August 8, 2001, OEQC Environmental Notice. ✓

We have enclosed a completed OEQC Publication Form, four (4) copies of the Final EA, and the project summary on a computer disk.

If there are any questions, please have your staff call Mr. Brian Isa of the Planning Branch at 586-0484.

BI:mo
Attachments

107

AUG -- 8 2001

FILE COPY

Prepared in accordance with Chapter 343, Hawaii Revised Statutes

2001-08-08-0A-FEA-

FINAL ENVIRONMENTAL ASSESSMENT

**Kapalama Facilities for Department of Agriculture
and Food Distribution Center**

FORMER KAPALAMA MILITARY RESERVATION, OAHU, HAWAII
DAGS Job No. 12-11-7104

July 2001

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

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard Suite #206
Honolulu, Hawaii 96814



R. M. TOWILL CORPORATION
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941

1-19112-013

FINAL ENVIRONMENTAL ASSESSMENT

Kapalama Facilities for Department of Agriculture
and Food Distribution Center

DAGS Job No. 12-11-7104
Former Kapalama Military Reservation, Oahu, Hawaii
Tax Map Key: 1-2-25: 11

July 2001

Prepared for:

State of Hawaii
Department of Accounting and General Services
P.O. Box 119
Honolulu, HI 96810

and

Anbe, Aruga, & Ishizu Architects, Inc.
1441 Kapiolani Boulevard Suite #206
Honolulu, HI 96814

Prepared by:



R. M. TOWILL CORPORATION
420 Waiakamalo Road, Suite 411
Honolulu, Hawaii 96817-4941

Table of Contents

	Page
TABLE OF CONTENTS	i
PROJECT SUMMARY	iii
CHAPTER 1 - INTRODUCTION	
1.1 Introduction	1-1
1.2 Project Location	1-2
1.3 Need for Proposed Action	1-6
CHAPTER 2 - PROJECT DESCRIPTION	
2.1 Overview	2-1
2.2 DOA Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and Plant Quarantine Branch	2-1
2.2.1 Construction	2-5
2.3 Produce Center Development, Ltd.	2-6
2.4 Schedule and Cost	2-8
CHAPTER 3 - DESCRIPTION OF THE AFFECTED ENVIRONMENT	
3.1 Physical Environment	3-1
3.1.1 Climate	3-1
3.1.2 Topography, Geology, and Soils	3-1
3.1.3 Hydrology	3-1
3.1.4 Flora and Fauna	3-2
3.1.5 Air Quality	3-4
3.1.6 Noise Levels	3-5
3.2 Socio-economic Environment	3-5
3.2.1 Demographics	3-5
3.2.2 Landownership and Surrounding Land Use	3-7
3.2.3 Archaeological and Historic Resources	3-8
3.3 Natural Hazards	3-10
3.3.1 Flood Zones	3-10
3.3.2 Seismic Activity	3-10
3.4 Public Facilities and Services	3-10
3.4.1 Roadways and Traffic	3-10
3.4.2 Water	3-14
3.4.3 Sewage	3-14
3.4.4 Drainage	3-14
3.4.5 Electrical and Phone Service	3-15
3.4.6 Solid and Hazardous Waste	3-15
CHAPTER 4 - RELATIONSHIP TO STATE AND COUNTY LAND USE POLICIES AND CONTROLS	
4.1 Hawaii State Plan	4-1
4.2 State Functional Plans	4-2
4.3 State Land Use Law	4-2
4.4 City and County Zoning	4-2
4.5 CZM Assessment	4-4
CHAPTER 5 - ALTERNATIVES TO PROPOSED ACTION	
5.1 No Action	5-1
5.2 Alternate Sites	5-2

5.2.1	Site Selection Criteria	5-1
5.2.2	Alternative Sites	5-2
5.3	Delayed Action	5-3
5.4	Recommended Action	5-3
CHAPTER 6 - FINDINGS AND REASONS SUPPORTING DETERMINATION		6-1
CHAPTER 7 - RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY		7-1
CHAPTER 8 - NECESSARY PERMITS AND APPROVALS		8-1
8.1	State Agencies	8-1
8.2	City and County of Honolulu	8-1
CHAPTER 9 - CONSULTED AGENCIES AND PARTICIPANTS IN THE PREPARATION OF THE ENVIRONMENTAL ASSESSMENT		9-1
REFERENCES		
APPENDIX A- PHOTO DOCUMENTATION OF THE PROJECT SITE		
APPENDIX B- TRAFFIC IMPACT ASSESSMENT REPORT		
APPENDIX C- ENVIRONMENTAL SITE ASSESSMENT		

LIST OF FIGURES

FIGURE 1-1	LOCATION MAP	1-3
FIGURE 1-2	TAX MAP KEY	1-4
FIGURE 1-3	KAPALAMA MILITARY RESERVATION MAP	1-5
FIGURE 2-1	DOA FACILITY SITE MAP	2-3
FIGURE 2-2	DOA FACILITY SITE PLAN	2-4
FIGURE 2-3	FOOD DISTRIBUTION SITE MAP	2-7
FIGURE 3-1	VICINITY MAP	3-3
FIGURE 3-2	HIA NOISE EXPOSURE MAP	3-6
FIGURE 3-3	TAX MAP KEY	3-9
FIGURE 3-4	FIRM MAP	3-11
FIGURE 3-5	ACCESS AND CIRCULATION	3-13
FIGURE 4-1	ZONING MAP	4-3

PROJECT SUMMARY

PROJECT NAME: Kapalama Facilities for Department of Agriculture and Food Distribution Center

APPLICANT: State of Hawaii, Department of Accounting and General Services and Department of Agriculture
P.O. Box 119
Honolulu, HI 96810
Contact: Brian Isa
Phone: (808) 586-0484 Fax: (808) 586-0482

AGENT: R.M. Towill Corporation
420 Waiakamilo Road, Suite 411
Honolulu, Hawaii 96817-4941
Contact: Chester Koga, Project Manager
Phone: (808) 842-1133 Fax: (808) 842-1937

PROPERTY OWNER: State of Hawaii, Department of Land and Natural Resources. Managed by: Department of Transportation, Harbors Division

APPROVING AGENCY: State of Hawaii, Department of Accounting and General Services (DAGS)

TAX MAP KEY (TMK): 1-2-25: 11

LOCATION: Parcel located between Auiki Street and Sand Island Access Road

PROPERTY ACREAGE: ±31.822 acres: 14 acres for proposed project as follows: Department of Agriculture- 3.92 acres; and, Food Distribution Center - 10.09 acres

STATE LAND USE DISTRICT: Urban

ZONING: I-3 - Waterfront Industrial District

DEVELOPMENT PLAN
LAND USE DESIGNATION: Primary Urban Center Development Plan Area,
Industrial Use Designation

ANTICIPATED
DETERMINATION: Finding of No Significant Impact (FONSI)

Chapter 1 INTRODUCTION

1.1 INTRODUCTION

The proposed action involves the development of two facilities on a portion of the former Kapalama Military Reservation (KMR) as follows:

- A. Department of Agriculture's (DOA) Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and Plant Quarantine Branch facilities; and
- B. Food Distribution Center.

The current location of DOA's and Produce Center Development, Ltd.'s (PCDL) facilities are in Kakaako on lands under the jurisdiction of the Hawaii Community Development Authority (HCDA). The existing users are to vacate their facilities by September 1, 2002 to accommodate the Kakaako Community Development District (KCDD) re-development plans. The Kakaako re-development plans are being coordinated by HCDA.

The existing DOA Measurement Standards Branch is located at 725 Ilalo Street and is responsible for the establishment and enforcement of measurement standards laws found in Chapter 486, Hawaii Revised Statutes (HRS). These laws ensure equity, discourage unfair competition and promote consumer confidence in the market economy. The enforcement of these laws insures that goods imported to and exported from Hawaii are within federal regulations involving measurement and quality standards.

The DOA Plant Quarantine Branch is currently located at 701 Ilalo in Kakaako and serves as the "First Line of Defense" to prevent the introduction and spread of harmful insects and plant diseases into and out of the state. This is accomplished through the enforcement of the State's plant quarantine law, Chapter 150A (HRS). The operations of the Plant Quarantine Program include the inspection of various items from single-celled organisms used in laboratories, to exotic animals. Flowers, fruit, vegetables, and animal products are also inspected by the Branch to ensure freedom from inadvertent plant, pests and diseases.

PCDL is a private service accepting produce and other food items globally. Approximately fifty percent of Oahu's fresh produce is provided by PCDL, of which seventy-five percent arrives via maritime freight. The current location of PCDL at 651 Ilalo Street is in close proximity to Honolulu Harbor which accommodates PCDL's fresh produce importers and distributors. The State of Hawaii is proposing to create a Food Distribution Center (FDC) site at the former KMR, which will be adjacent to the DOA site and encompass 10.09 acres. PCDL would accommodate FDC and other fresh produce importers, distributors, and maritime related users as space permits. The relocation of PCDL to the FDC is anticipated but not a requirement for the development of the DOA's facilities. If the PCDL does not relocate to the FDC, the State's alternative would be to assign the site for waterfront industrial uses (as it is currently zoned) with operations not to exceed that which is expected for the FDC.

The collocation of the DOA Measurement Standards Branch and Plant Quarantine facilities, and FDC currently serves to ensure that inspection of produce and products arriving to Oahu can be completed in a timely manner. This serves to ensure the quality of goods being delivered to consumers. The proposed collocation of these facilities will therefore be implemented at the proposed project site.

1.2 PROJECT LOCATION

The project site is located on former KMR which is located on the southeastern coastline of Oahu approximately 2 miles due north of Honolulu Harbor (See **Figure 1-1**). KMR is located between Auiki Street and Sand Island Access Road, TMK: 1-2-25:11 (See **Figure 1-2**). The total acreage of KMR is 31.822 acres with 21 buildings currently located on site. Of the 21 warehouses located on the property, 5 have been allocated to this project. In **Figure 1-3** the five warehouses are identified as 905, 906, 908, 909, and 910. The project site area comprises approximately 14 acres of the northeastern portion of the reservation. The DOA facilities will use 3.92 acres and the FDC will utilize 10.09 acres.

The DOA facilities will utilize the area in which warehouses 908 and 909 are currently located. These two warehouses will be demolished and construction of two new buildings will provide accommodations for the DOA facilities. The DOA facilities will be accessed from Mokauea Street and Auiki Street. The FDC will accommodate PCDL and others at three warehouses which have

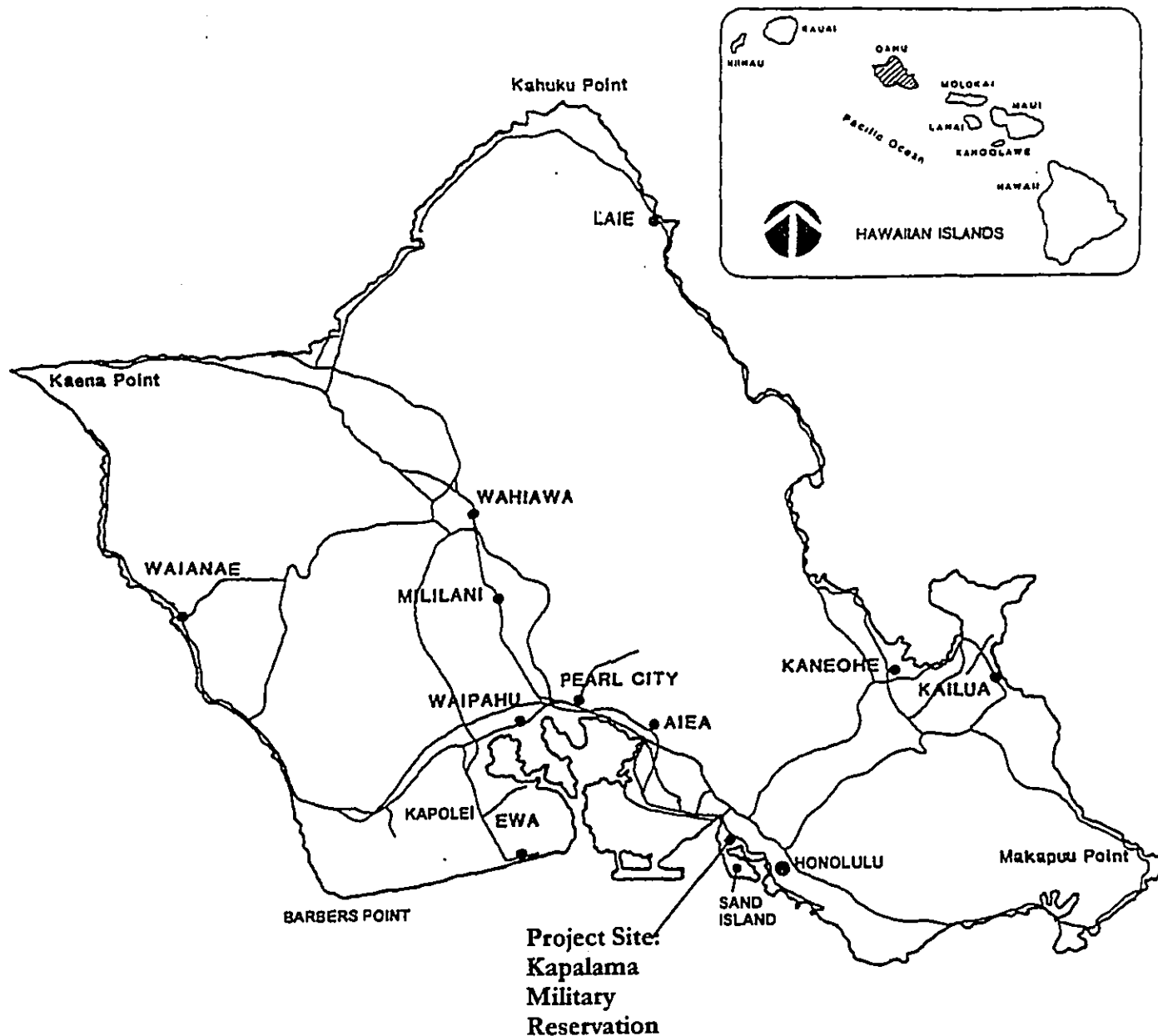
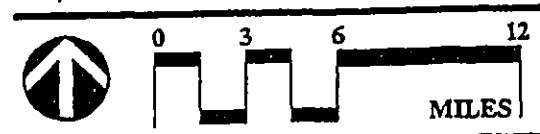


Figure 1-1
Project Location



DOA and FDC Relocation
Former Kapalama Military Reservation
Oahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

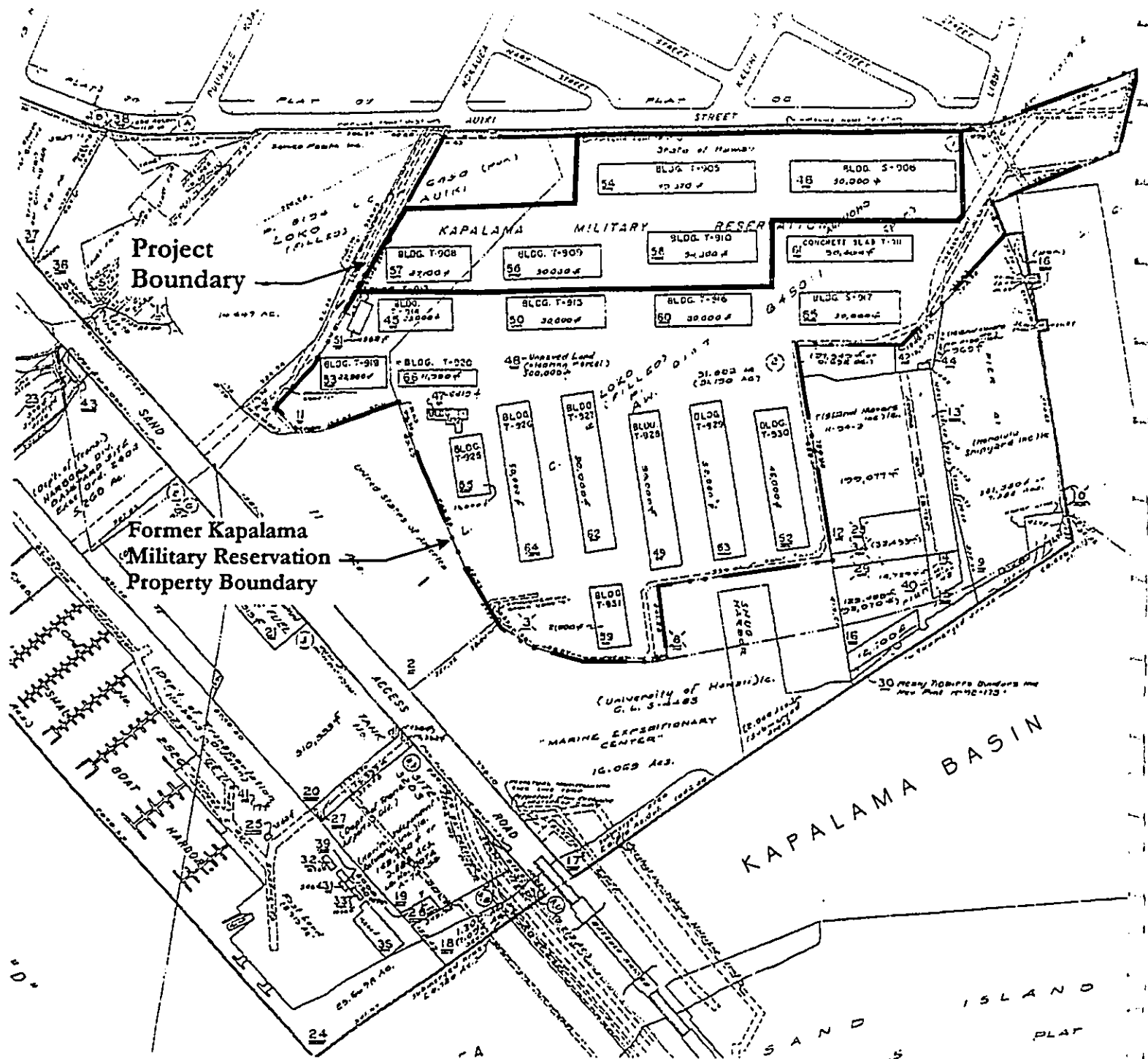
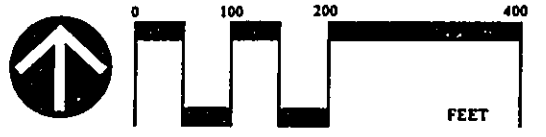
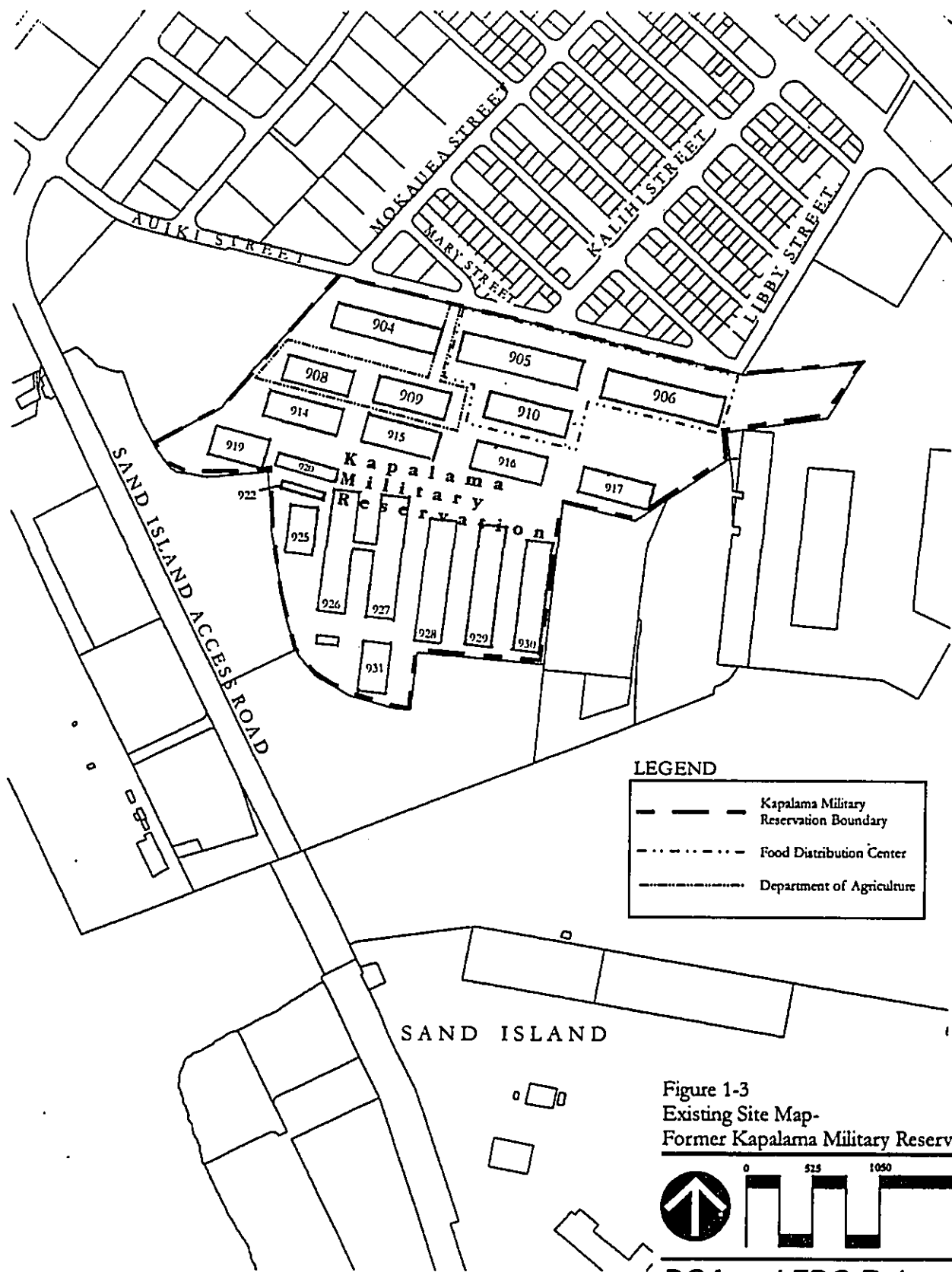


Figure 1-2
Tax Map Key



DOA and FDC Relocation
Former Kapalama Military Reservation
Oahu, Hawaii

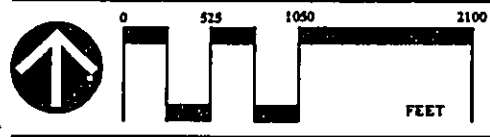
R. M. TOWILL CORPORATION
May 2011



LEGEND

- — — — — Kapalama Military Reservation Boundary
- - - - - Food Distribution Center
- Department of Agriculture

Figure 1-3
Existing Site Map-
Former Kapalama Military Reservation



DOA and FDC Relocation
Former Kapalama Military Reservation
Oahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

TMK	Owner/ Management	Addresses
1-2-25-11	State of Hawaii- Department of Land and Natural Resources Managed by: State Department of Transportation Harbors Division	DLNR: 1151 Punchbowl Street Ste. 130 Honolulu, HI 96813 DOT: 79 South Nimitz Highway Honolulu, HI 96813

been allocated: 905, 906, and 910. These warehouses will be accessed from Kalihi Street and Auiki Street.

1.3 NEED FOR PROPOSED ACTION

This environmental assessment (EA) is prepared in accordance with Chapter 343 (HRS) and Chapter 200, Hawaii Administrative Rules, for the purpose of public disclosure and to assess the potential for environmental impacts due to the use of State funds and lands for the proposed project.

The proposed action is required because of the current plans for redevelopment of the KCDD from existing commercial and warehousing uses to high technology and medical-education related facilities. The planned relocation of DOA and PCDL facilities will facilitate the achievement of this objective.

DOA Measurement Standards Branch and Plant Quarantine are currently located at 651 Ilalo Street. PCDL is currently located at 701 Ilalo Street and is currently in the twenty-seventh year of its fifty-five year long lease from the Hawaii Community Development Authority (HCDA), which is scheduled to terminate on July 18, 2029. The redevelopment of KCDD involves the construction of the University of Hawaii biomedical research facility, which is scheduled to begin construction in the fall of 2002. The DOA (General Lease #S-4405) and PCDL must therefore relocate by September 1, 2002.

The planned use of former KMR would be consistent with the proposed project based on the following:

DOA Measurement Standards:

- A majority of existing operations take place in the urban and commercial core of the city thereby making metropolitan Honolulu an ideal location.
- A central location accessible to taxi drivers.
- Close proximity to FDC is desired for practical and logistical reasons, but not a requirement for DOA's operations.

DOA Commodities:

- Collocation is desired based on fresh fruit and vegetable certification performed at FDC but not a requirement for DOA's operations.
- Feed inspection and sampling activities are conducted at Matson Piers.
- Fresh fruit and vegetable labeling and documentation enforcement are conducted at Young Brothers piers.
- Resident egg grading is conducted in Kalihi Kai on a daily basis.

DOA Plant Quarantine:

- A central location is required for public export inspection of agricultural items.
- A central location is required for inter-island inspections for businesses.
- The KMR location will accommodate a fast response to Honolulu International Airport for assistance with pest calls.
- Close proximity to Honolulu Harbor for operations by Matson, CSX, and Young Brothers will accommodate full container inspections and the majority of domestic freight forwarders (for mixed freight container inspections).

Food Distribution Center:

- Close proximity to Honolulu Harbor will accommodate PCDL's fresh produce importers and distributors.
- The site can accommodate all three facilities in the same location.
- The Kapalama site is currently available, subject to required renovations of the existing buildings.

Chapter 2
PROJECT DESCRIPTION

2.1 OVERVIEW

The proposed action will consist of two parts:

- Construction of Measurement Standards and Commodities building and Plant Quarantine building; and
- Renovations to existing structures allowing the relocation of the PCDL.

DOA will utilize 3.92 acres to construct two facilities that will house its Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and its Plant Quarantine Branch. The current space requirements of these facilities including corridors, stairwells, restrooms, electrical rooms, and communication rooms totals 31,365 gross square feet.

2.2 DOA QUALITY ASSURANCE DIVISION / MEASUREMENT STANDARDS BRANCH, COMMODITIES BRANCH, DIVISION ADMINISTRATION AND PLANT QUARANTINE BRANCH

The purpose of the proposed project is to accommodate the DOA's Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and Plant Quarantine Branch. The existing buildings allocated to DOA for relocation at KMR will require demolition and construction of two new single story buildings as follows:

Quality Assurance Division / Measurement Standards Branch, Commodities Branch, Division Administration And Plant Quarantine Branch		
Activity	Building Numbers	Space Requirements
Demolition of existing buildings and construction of two single-floored buildings	908 and 909	31,365 square feet (two ±15,000 square foot buildings)

The current DOA Measurement Standards and Plant Quarantine facilities at 701 and 725 Ilalo Street are located adjacent to PCDL. The existing Quality Assurance Division Administration

Commodities Branch are located at 1428 South King Street. The Quality Assurance Division assists in the marketing of quality agricultural commodities and promotion of fair trade. There is a Division office and two branches in the Quality Assurance Division: Commodities Branch and the Measurement Standards Branch.

- The Commodities Branch certifies agricultural commodities for grade and condition, establishes and enforces grade standards, registers and samples animal feed, licenses product dealers, and oversees milk production and prices paid to producers. The facility includes laboratories, office space, storage, and a milk control section at its current location at 1428 South King Street.
- The Measurement Standards Branch serves to enforce the measurement standards laws found in Chapter 486 HRS. They assure the accuracy of measurement, packaging, labeling and pricing of *commercial goods* to prevent unfair practices. The facility is located at 725 Ilalo Street.

The Plant Quarantine Branch prevents the introduction and spread of harmful pests and diseases into the state, as well as certifying plants for export out of the state. The existing facility is located at 701 Ilalo Street. This facility includes office space, laboratories, an animal holding room, computer room, public inspection and certification area, loading dock, quarantine house, and greenhouse.

The proposed project will require the demolition of building numbers 908 and 909, with construction of two single floor buildings to accommodate the DOA Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and Plant Quarantine Branch. See **Figure 2-1**.

The number of employees that will be accommodated at any one time is anticipated to be approximately 47. Additional buildings to be constructed include: a carport of 2,200 square feet, truck parking and storage of 700 square feet, workshop and engineering room of 864 square feet, weight storage at 250 square feet, green house of 640 square feet, and two quarantine houses each 1,600 square feet. The construction plan for these DOA facilities is provided in **Figure 2-2**.

Existing infrastructure including water, power, sewerage and drainage, is anticipated to be sufficient

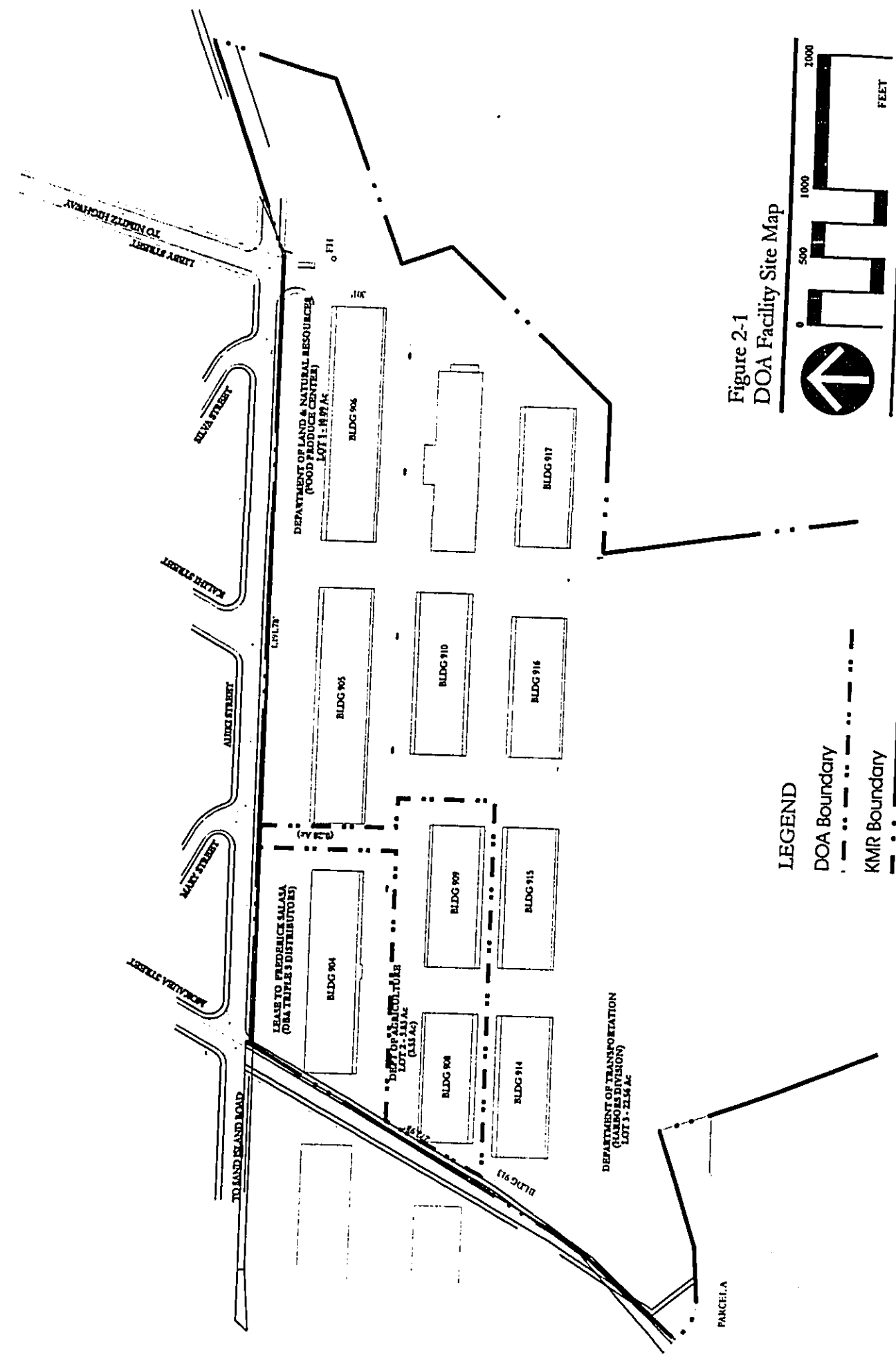
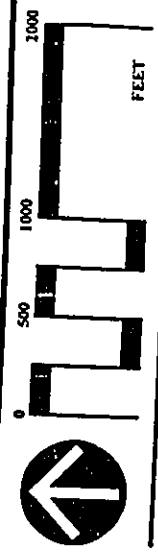


Figure 2-1
DOA Facility Site Map



LEGEND

- DOA Boundary
- KMR Boundary

DOA and FDC Relocation
Former Kapalama Military Reservation
O'ahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

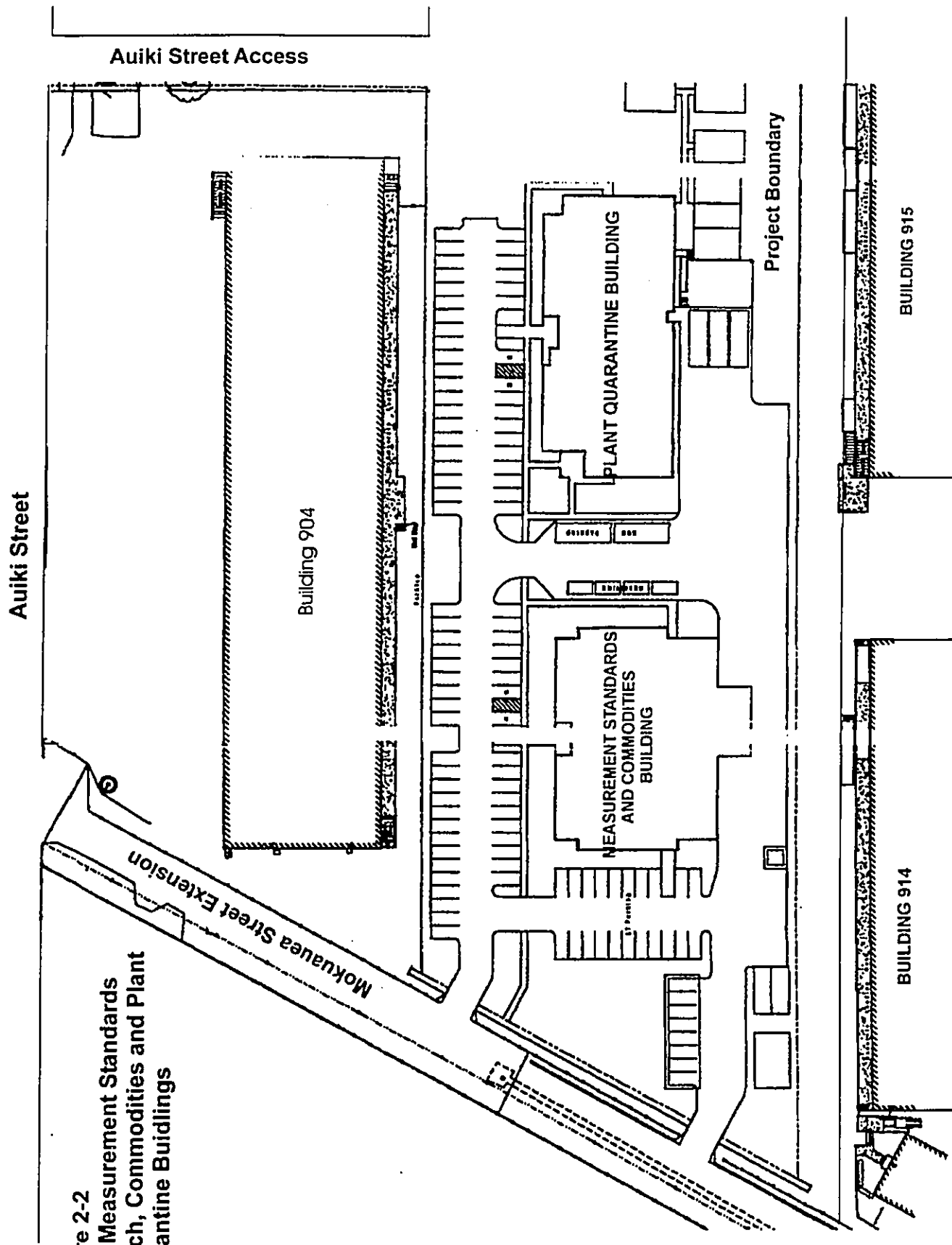


Figure 2-2
 DOA Measurement Standards
 Branch, Commodities and Plant
 Quarantine Buildings

for the proposed project. Should any additional connections be required, coordination will be made with the appropriate service providers.

2.2.1 CONSTRUCTION

A. Demolition

The demolition of buildings 908 and 909 on KMR will be in accordance with Federal, State and County regulations. The portion of the building from the existing grade and above will be demolished.

The demolition work will include the following actions:

- Disconnect infrastructure including power, water and sewage;
- Cordon off the area from traffic and pedestrians to ensure safety;
- Mobilize heavy construction equipment according to a scheduled plan by an engineer otherwise known as a demolition plan;
- Hazardous/toxic waste material that have been identified will be removed and handled in accordance with State and Federal regulations; and,
- Demolished materials will be disposed at an appropriate disposal facility.

B. Environmental Site Assessment

A Phase II Environmental Site Assessment with site sample testing will be conducted to verify locations of known asbestos and lead paint. Locations associated with storage of Petroleum, Oils and Lubricants (POLs), will also be identified prior to demolition. Portions of the project site involving toxic or hazardous materials disposal will be carried out in accordance with a Asbestos and Lead Paint Demolition Plan.

C. Construction

Two single-floored ±15,000 square foot buildings will be constructed to standards that permit resistance to seismic and hurricane force wind disturbances. Existing utilities including power, water, and wastewater service are anticipated to be sufficient. Any additional service needs will be obtained from service providers as appropriate. The building lighting, parking, handicapped access, security fencing, and fire flow requirements, will also be designed in accordance with applicable rules and regulations of the State, City and County

of Honolulu, and federal government.

2.3 PRODUCE CENTER DEVELOPMENT, LTD.

The purpose of the proposed project is to accommodate PCDL tenants to be relocated from Kakaako. The proposed FDC will utilize 10.09 acres and includes the rehabilitation of three existing buildings or construction of new facilities that will accommodate the tenants of PCDL and other fresh produce importers, distributors, and maritime related users. There are currently seven tenants at the Kakaako location: Armstrong Produce; Y. Fukunaga Products; Dole Distribution; Japan Foods; Manson Products; Aloha Products; and, Yamauchi, within 8.468 acres, located at 651 Ilalo Street, between the south ends of Keawe Street and Cooke Street. Identified as TMK:2-1-60: 9, the facility is located within KCDD at approximately four feet above road grade. The current facility is comprised of two multi-tenant, steel-frame warehouse buildings constructed in 1974 and 1975. The two buildings total 100,000 square feet with four-foot high loading docks on the north and south boundaries of the buildings. The proposed project site will provide two 60,000 square foot buildings and one 35,000 square foot building. Prior to the relocation of the existing tenants, the existing building will be evaluated to determine if the space provided are adequate.

The existing buildings will require rehabilitation to meet space requirements for tenants and will involve the following:

Food Distribution Center			
Purpose	Activity	Building Numbers	Space Requirements
Relocation of PCDL and its tenants	Rehabilitation of existing buildings (single- floored buildings)	905, 906, and 910	155,000 square feet (two 60,000 square foot buildings and one 35,000 square foot building)

The facility will be relocated to buildings 905, 906 and 910 on KMR with a total of 10.09 acres. See **Figure 2-3**. Reconstruction of these three warehouses will produce two 60,000 square foot buildings and one 35,000 square foot building. These buildings are single story with loading docks and office loft space. The facility will accommodate approximately 300 people at any time, of which 50-60% will be offsite.

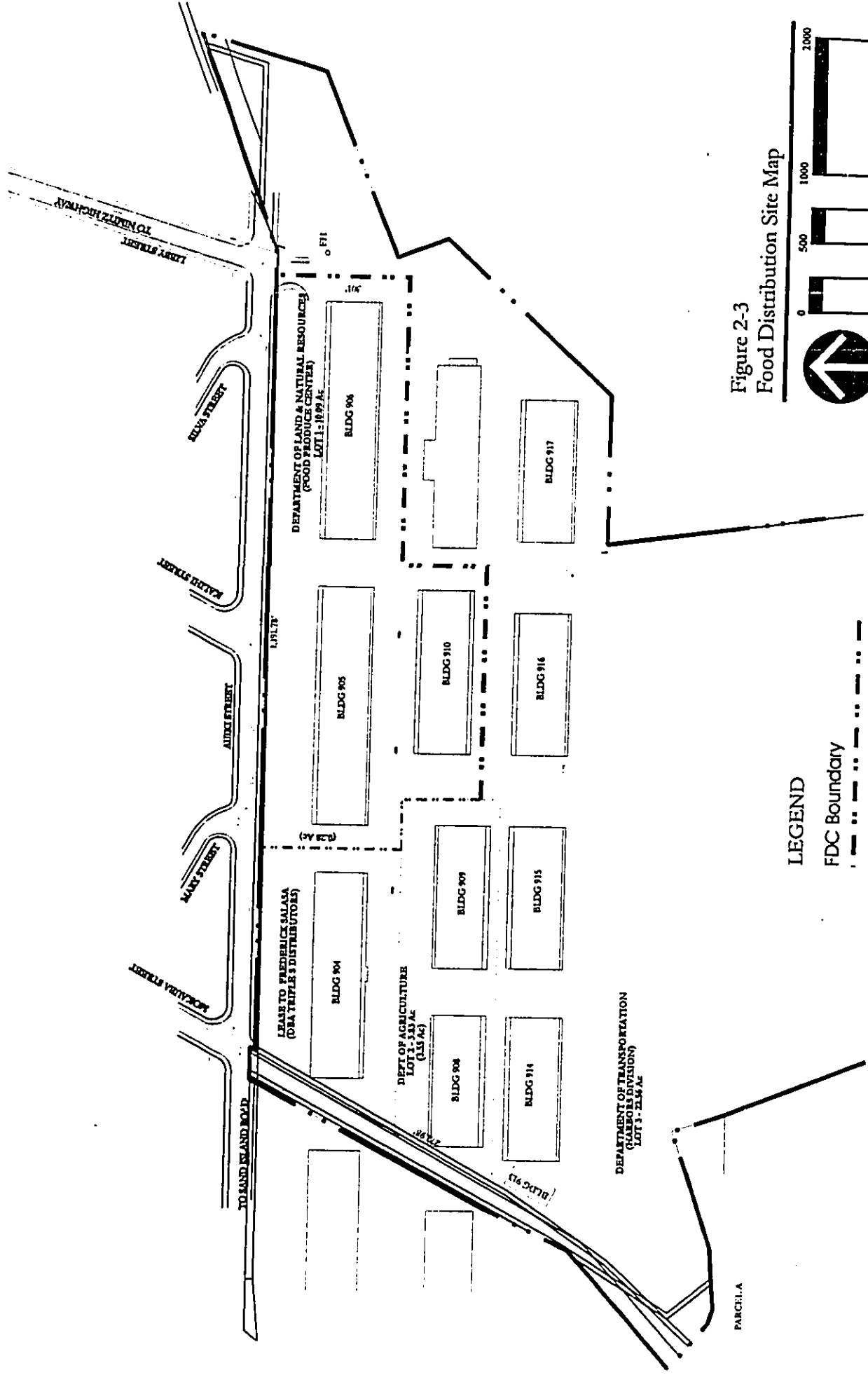
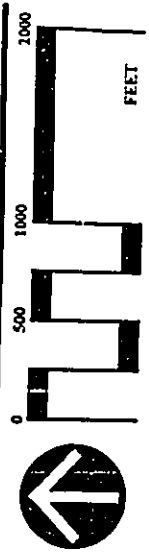


Figure 2-3
Food Distribution Site Map



LEGEND

FDC Boundary

KMR Boundary

DOA and FDC Relocation
Former Kapalama Military Reservation
O'ahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

Existing infrastructure including water, power, sewerage and drainage, is anticipated to be sufficient for the proposed project. Should any additional connections be required, coordination will be made with the appropriate service providers.

2.3.1 CONSTRUCTION ACTIVITIES

Buildings will be rehabilitated by the new tenants to fulfill their needs. This would comprise interior renovations to the current warehouses to create the FDC and related facilities. If the new tenants find that the interior spaces does not meet their requirements, then the tenants will be allowed to construct new facilities to accommodate their needs at their cost. Infrastructure requirements of the tenants will be accommodated by this project.

2.4 SCHEDULE AND COST

Demolition and construction of new DOA buildings are tentatively scheduled to start in October 2001 and is expected to continue to July 30, 2002. The general contractor will schedule general work activities between 7:00 am and 3:00 pm, weekdays. Work that is required beyond regular scheduled hours and on weekends will be coordinated with the State Department of Health, to ensure that all conditions of the Community Noise Permit and Community Noise Variance are met.

The estimated construction, planning, and design costs for each of the facilities are as follows:

Facility Buildings:	Estimated Cost:
Measurement Standards and Commodities	\$6.8 million
Plant Quarantine	\$7.0 million
Food Distribution Center *	\$1.5-2 million

* Infrastructure improvements only.

The total estimate of cost is approximately \$15.5 million and will be paid for by the State Legislature, Capital Improvements Program budget.

Chapter 3
DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 PHYSICAL ENVIRONMENT

3.1.1 CLIMATE

The climate throughout Honolulu is characterized as warm and dry. Temperatures range from 74°F in March to 80°F in September with highs in the mid 90s. Tradewinds are prevalent throughout most of the year with higher frequency during the summer months. Annual rainfall at the project site ranges between 20 and 30 inches (Atlas of Hawaii, 1998).

3.1.2 GEOLOGY, TOPOGRAPHY, AND SOILS

The island of Oahu is a result of the growth of two shield volcanoes which now comprise the Waianae and Koolau mountain ranges. The Waianae range was the first to form, followed by the Koolau range whose volcanic activity continued beyond the dormancy of the Waianae system. The Koolau volcano continued to fill the region between the two volcanoes, creating one island as lava flows continued westward forming the Leeward areas of what is now Honolulu. The project site area is located on the southeastern coastline of Oahu.

The coastline geology is identified as man made fill land within the site area of Kapalama Military Reservation, however, the coastline is also described as a composition of volcanic deposition, coral reefs, and alluvial sediments.

The topography of the site is relatively flat and between 5 and 10 feet above mean sea level. Due to the man made fill land composition of the site, the soil is classified as Lualualei-filled Land-Ewa Association (U.S. Department of Agricultural Soil Conservation Service, 1971).

3.1.3 HYDROLOGY

A. Groundwater Hydrology

Oahu is divided by the Board of Water Supply into seven water use districts for administrative and planning purposes: Honolulu, Windward, Waialua-Kahuku, Wahiawa, Pearl Harbor, Ewa, and Waianae. The Honolulu water use district includes the coastal plain of southeastern Oahu, upon which the Honolulu Primary Urban Center is located, and

stretches from Makapu'u Point at its eastern extremity to the western boundary of the Moanalua drainage divide. The area comprises a total of 88 square miles and is coextensive with Census Tracts 1 through 72, the Honolulu Judicial District, and the Honolulu Water Management Area (BWS, 1995). The site of Kapalama Military Reservation resides on the southern outskirts of the Honolulu District.

B. Surface Water Hydrology

Three quarters of the surrounding area of the site is bordered by water. East of KMR is Kapalama Basin, to which Kapalama Stream flows, and Honolulu Harbor, to which Nuuanu Stream flows. West of KMR is Keehi Lagoon and Boat Harbor to which Kalihi Stream flows (Hawaii Stream Assessment, 1990). The project area falls within the boundaries of the Kalihi Aquifer System, which is a section of the larger Honolulu Aquifer Sector and has an estimated sustainable yield of 9 million gallons per day. Refer to **Figure 3-1** to view the location of the streams in relation to the project site area.

POTENTIAL IMPACTS AND MITIGATION MEASURES

The project has no anticipated negative impacts on the groundwater or the three surface waters: Kalihi Stream, Kapalama Stream, and Nuuanu Stream.

3.1.4 FLORA AND FAUNA

The proposed project is located in a significantly disturbed area (i.e., the site is entirely paved and existing vegetation is limited to a few primarily introduced species). Little to no vegetation exists to be impacted. Consequently, no rare, threatened or endangered flora or fauna species have been observed to exist at the project site. Species most commonly frequented at the site include introduced and exotic flora and fauna. Mammals such as stray cats, rats and mice have also been observed in the vicinity.

POTENTIAL IMPACTS AND MITIGATION MEASURES

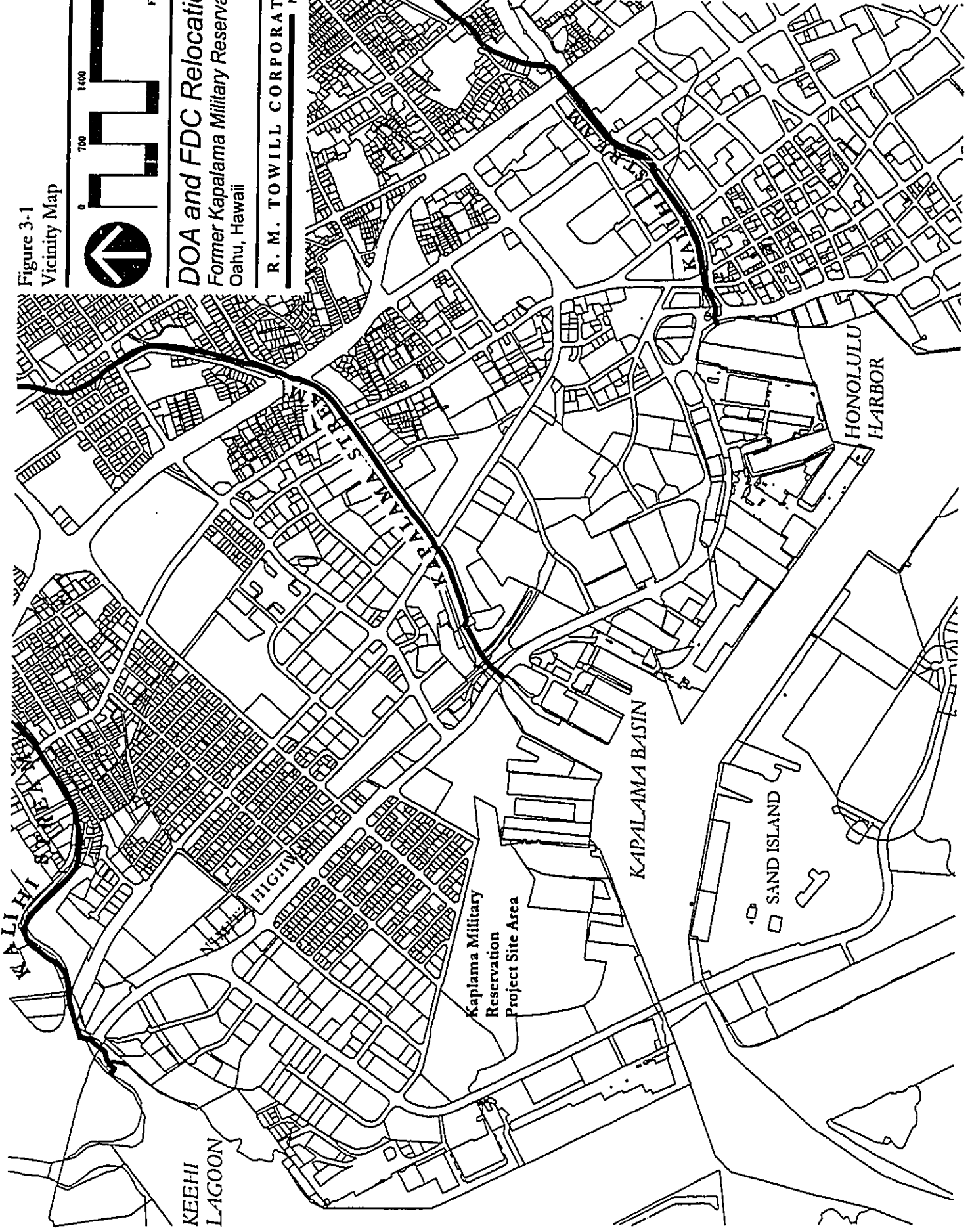
The proposed project will not have a significant negative impact on botanical or faunal resources. None of the existing facilities are within areas identified as significant habitat for threatened, endangered, or rare species. Project activities might alter the local distribution and abundance of birds presently using the land, but will not impact the overall abundance

Figure 3-1
Vicinity Map



DOA and FDC Relocation
Former Kapalama Military Reservation
Oahu, Hawaii

R. M. TOWILL CORPORATION
May 2001



of these species on Oahu. There are no reasons to impose restrictions, conditions, or impediments based on conditions of natural biological resources at the site.

3.1.5 AIR QUALITY

Hawaii lies within the Northern Hemisphere Hadley Cell, which is responsible for persistent northeast trade winds. Consequently, air quality is relatively good with the exception of occasional Kona or leeward storms that produce a low pressure system that brings southerly winds and precipitation. The Sand Island area is located within an industrial area that generally receives favorable trades.

Dust and emissions will be generated from construction activity and construction vehicles and equipment including backhoes, trucks, etc., during construction. Fugitive dust and vehicle and equipment emissions will be sources of air pollution.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Mitigation of fugitive dust generated during construction will be handled through the use of periodic site watering and applicable on-site Best Management Practices (BMPs). Additional measures as provided in Hawaii Administrative Rules (HAR) Chapter 11-60.1 - Air Pollution Control will also be followed and will include, but not be limited to, the following:

- The planning of project construction phasing should focus on: minimizing the amount of dust-generating materials and activities; centralizing material transfer points and on-site vehicular traffic routes; and, locating potentially dusty equipment in areas of least impact;
- An adequate water source at the site should be provided prior to start-up of construction activities;
- The project site should be landscaped with rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Dust should be controlled from shoulders, project entrances, and access roads; and,
- Adequate dust control measures should be provided on weekends, after hours, and prior to daily start-up of construction activities which will include dust barriers and other controls to minimize dust and paint migration.

Vehicle and construction equipment exhausts will be a source of air pollution. Mitigation of potential adverse impacts associated with use of construction equipment, fuel tanks, and vehicle exhausts will be handled through adherence to applicable Federal, State and County regulations. As required, all machinery and vehicles will be required to be in proper working order with appropriate use of mufflers.

3.1.6 NOISE LEVELS

Remote noise from aircraft traveling to and from Honolulu International Airport combined with harbor traffic is expected to generate relatively low background noise. (See **Figure 3-2**). Ambient noise at and around the project site is generally steady and low-level, resulting primarily from vehicular traffic on Auiki Street, Sand Island Access Road, Nimitz Highway and KMR.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Noise impacts will likewise result from clearing, grading, and heavy equipment operations. Nearby residential units north of the project site will likely be affected by potential construction associated noise. However, there will be no noise impacts after the construction is completed. All levels of noise will be consistent with existing rules and standards of the State and County, including HAR, Chapter 11-46, Community Noise Control, which provides for the prevention, abatement and control of noise pollution in the State from stationary, agricultural, and industrial activities.

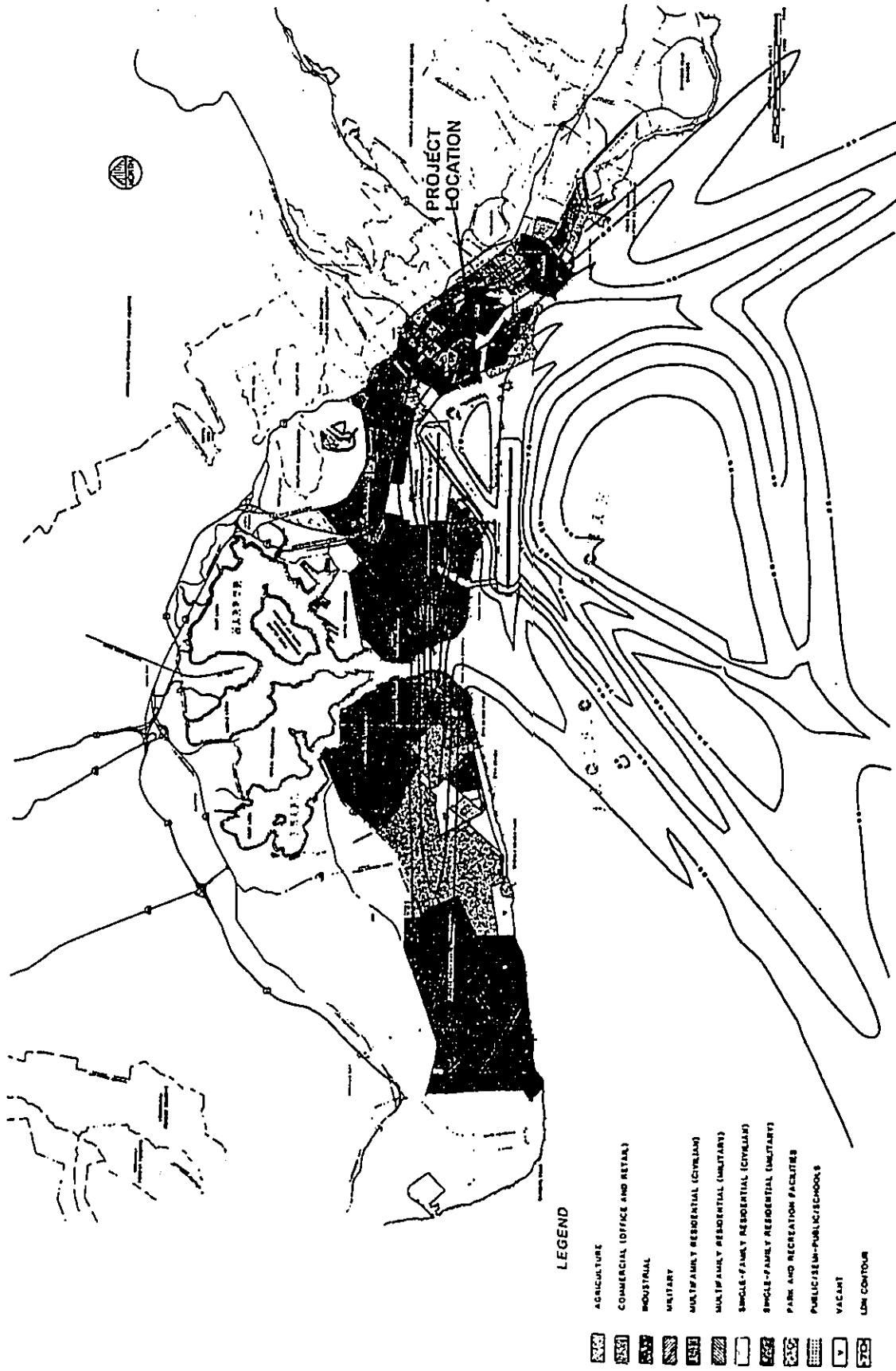
3.2 SOCIO-ECONOMIC ENVIRONMENT

3.2.1 DEMOGRAPHICS

A. Population and Housing

Kapalama Military Reservation is located in Census Tract 59, which in 1990 had a population of 3,570 persons, representing 0.4% of Hawaii's state population of 1,112,646. Census Tract 59 includes the area south of Dillingham Boulevard between Middle Street and Waiakamilo Road. The number of residential household units in 1990 was 782 persons, or 0.2% of the total number of City and County of Honolulu households (265,304) (Hawaii State Data Book, 1996).

The immediate surrounding area of the project site is comprised of industrial and



LEGEND

- AGRICULTURE
- COMMERCIAL OFFICE AND RETAIL
- INDUSTRIAL
- MILITARY
- MULTIFAMILY RESIDENTIAL (CIVILIAN)
- MULTIFAMILY RESIDENTIAL (MILITARY)
- SINGLE-FAMILY RESIDENTIAL (CIVILIAN)
- SINGLE-FAMILY RESIDENTIAL (MILITARY)
- PARK AND RECREATION FACILITIES
- PUBLIC USE - PUBLIC SCHOOLS
- VACANT
- LDM CONTOUR



Airports Division
DEPARTMENT OF TRANSPORTATION
STATE OF HAWAII

HONOLULU INTERNATIONAL AIRPORT
MASTER PLAN - 2010
AUGUST, 1994



FIGURE 3-2
AIRCRAFT NOISE
EXPOSURE MAP

Puuhale Elementary School, Kalihi Elementary School, Oahu Community Correction Center, and Dillingham Plaza, which serves to diversify the employment base of the area to teaching, service and administrative jobs.

POTENTIAL IMPACTS AND MITIGATION MEASURES

There are no anticipated impacts regarding population, housing, or employment of the immediate area.

3.2.2 LANDOWNERSHIP AND SURROUNDING LAND USE

The property is currently owned by the State of Hawaii, and under the jurisdiction of the Department of Land and Natural Resources and managed by Department of Transportation Harbors Division. It is anticipated that an Executive Order set aside of DOA and DOT will be issued by DLNR for its respective sites once subdivision of the former KMR site is completed.

The proposed subdivision impacts TMKs: 1-2-25: 11, 46, 54, 56, 57, and 58. Three new parcels will be created from this proposed subdivision: parcel 11 will be managed by DOT, parcels 56 and 57 will be managed by DOA, parcels 46, 54, 58 will be managed by DOT or DOA for the FDC site, and building 904 will be managed by DOT (Salassa).

The square footage and current tenants of buildings allocated to the project are as follows:

Building No./ TMK No.	Square Footage* (approximate)	Year of Construction*	Current Tenants
905 1-2-25:54	49,370 sq. ft.	1943	Vacant
906 1-2-25: 46	50,000 sq. ft.	1944	Dependable Hawaiian Express Building, Kano Trucking, Kenneth Tokunaga, Don Makiki
908 1-2-25: 57	30,000 sq. ft.	1944	Taiyo Inc., Walashek Industries
909 1-2-25: 56	27,100 sq. ft.	1944	Royal Hawaiian Movers
910 1-2-25: 58	34,300 sq. ft.	1944	Fuelman, Kona Crane, Convention Set Builders, Uni-Tek Technical Service, Clean-N-Rooter Plumbing, NBK Trading, United Equipment

* Source: Negative Determination For Acquisition of Land and Improvements Kapalama Military Reservation, Honolulu Harbor, Oahu May, 1990

Current tenants listed in the table above are on a month to month revocable permit and will be required to vacate within 30 days of notice by DLNR and DOT Harbors Division. Buildings 908 and 909 are anticipated to be vacated by September 1, 2001.

Two adjacent parcels located east of the site (TMK:1-2-25:12 and TMK 1-2-25:17) are owned by the State of Hawaii and currently leased to Island Movers and the University of Hawaii, respectively. A parcel southwest of the project site, TMK: 1-2-25:2, is owned by the United States of America; and, a parcel located west of the project site, TMK: 1-2-25:36, is owned by Servco Pacific (see Figure 3-3). All parcels surrounding the project site with the exception of three residential units located between Mokauea Street and Mary Street on the north side of Auiki Street are categorized as commercial or industrial establishments.

POTENTIAL IMPACTS AND MITIGATION MEASURES

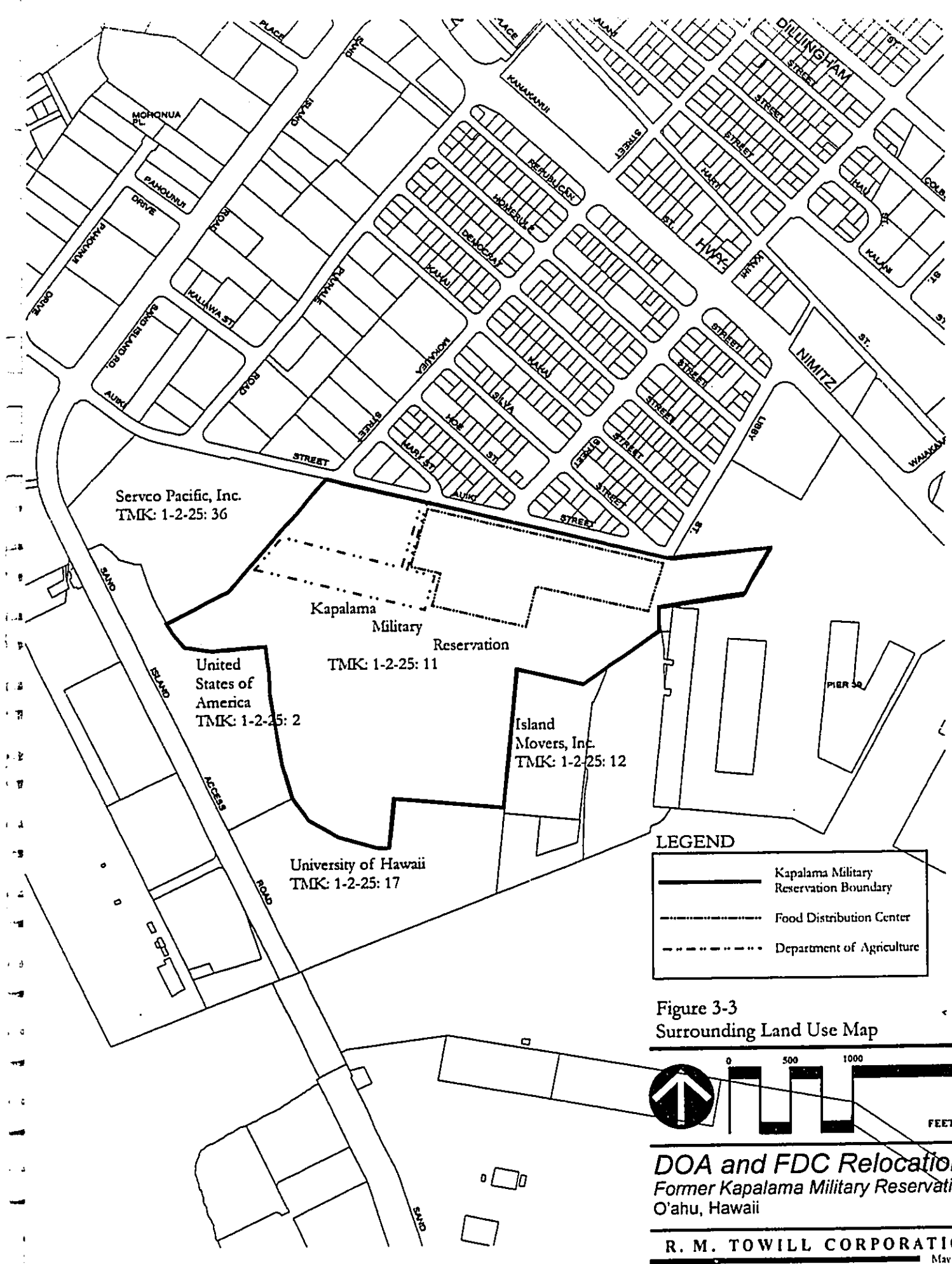
There are currently sixteen tenants leasing buildings 905, 906, 908, 909, and 910. The tenants in buildings 908 and 909 will have to vacate the premises before the start of the bidding and construction for the DOA facilities. The Department of Transportation, Harbors Division (DOT-HD) is providing assistance to tenants by identifying alternative DOT-HD controlled sites for relocation. The DOA facilities are projected to house four tenants described earlier. The proposed FDC does not yet have an anticipated number of tenants. There are no anticipated impacts on the surrounding land use.

3.2.3 ARCHAEOLOGICAL AND HISTORIC RESOURCES

There are no known archaeological sites. Based on a review of Sites of O'ahu by Sterling and Summers, the site was once known as Nihuelewai. It is most likely that major portions of the site were once filled to develop the area. The prior use involving fill and construction negate possibilities of any existing archaeological sites in the project area.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Although archaeological and historic resources are not anticipated nor expected to be encountered, the contractor will be instructed that in the unlikely event that such resources are found, that all work in the area is to cease and DLNR, State Historic Preservation Division, notified at (808) 692-8020, to determine significance and treatment of any findings.



3.3 NATURAL HAZARDS

3.3.1 FLOOD ZONES

The Federal Emergency Management Agency Flood Insurance Rate Map (FIRM) of July 31, 1998, identifies the primary project site as lying within "Zone X", an area determined to be outside of the 500-year flood plain (Figure 3-4). This designation indicates the site is not subject to floods which would impact the design or location of the project. (National Flood Insurance Program, 1987)

POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential for negative adverse impacts due to flooding are neither anticipated nor expected.

3.3.2 SEISMIC ACTIVITY

The Uniform Building Code (UBC) provides minimum design criteria to address potential for damages due to seismic disturbances. The UBC scale is rated from Seismic Zone 1 through Zone 4, with 1 the lowest level for potential seismic induced ground movement. Oahu has been designated within Seismic Zone 2A.

POTENTIAL IMPACTS AND MITIGATION MEASURES

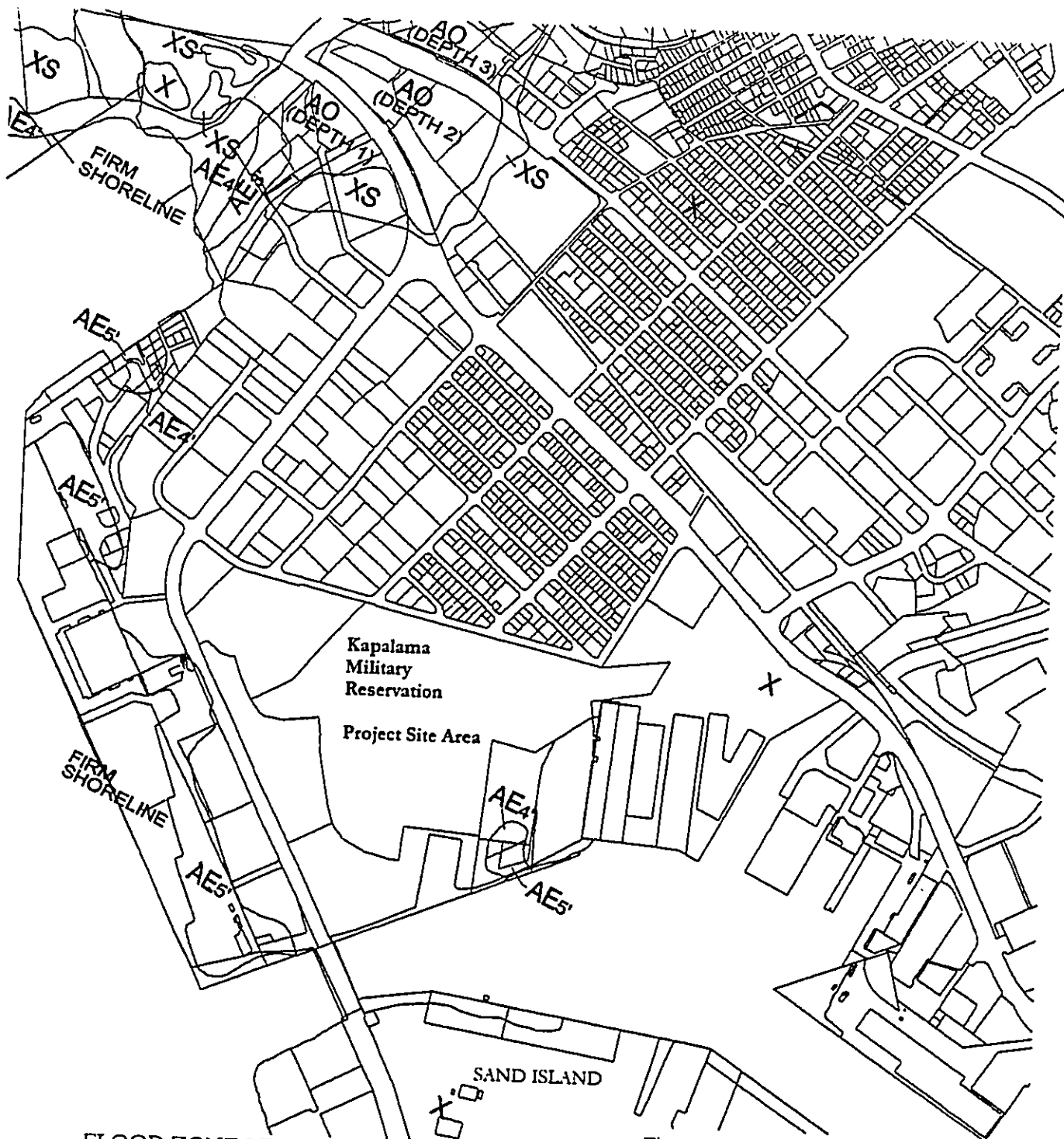
Seismic risk at the project site is minimal and the proposed project is not likely to be affected by seismic activity.

3.4 PUBLIC FACILITIES AND SERVICES

3.4.1 ROADWAYS AND TRAFFIC

A. Roadways

Major roadways in the vicinity include Auiki Street and Sand Island Access Road. Nimitz Highway lies approximately 0.4 miles north of the project site and there are various streets that provide access from Nimitz Highway to Auiki Street: (west to east) Puuhale Road, Mokauea Street, Kalihi Street, and Libby Street.



FLOOD ZONE LEGEND

Special Flood Hazard Areas Inundated by 100-Year Flood	
ZONE A	No base flood elevations determined.
ZONE AE	Base flood elevations determined.
ZONE VE	Coastal flood with velocity hazard (wave action); base flood elevation determined.
Other Flood Areas	
ZONE X	Areas of 500-year flood; areas of 100-year flood average depths of less than 1 foot or with drainage areas less than 1 sq. Mile; and areas protected by levees from 100-year.
Other Areas	
ZONE X	Areas determined to be outside 500-year flood plain.
ZONE D	Areas in which flood hazards are undetermined.

Source: National Flood Insurance Program, Flood Insurance Rate Map

Figure 3-4
FIRM Map



DOA and FDC Relocation
Former Kapalama Military Reservation
Oahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

various streets that provide access from Nimitz Highway to Auiki Street: (west to east) Puuhale Road, Mokauea Street, Kalihi Street, and Libby Street.

B. Site Access

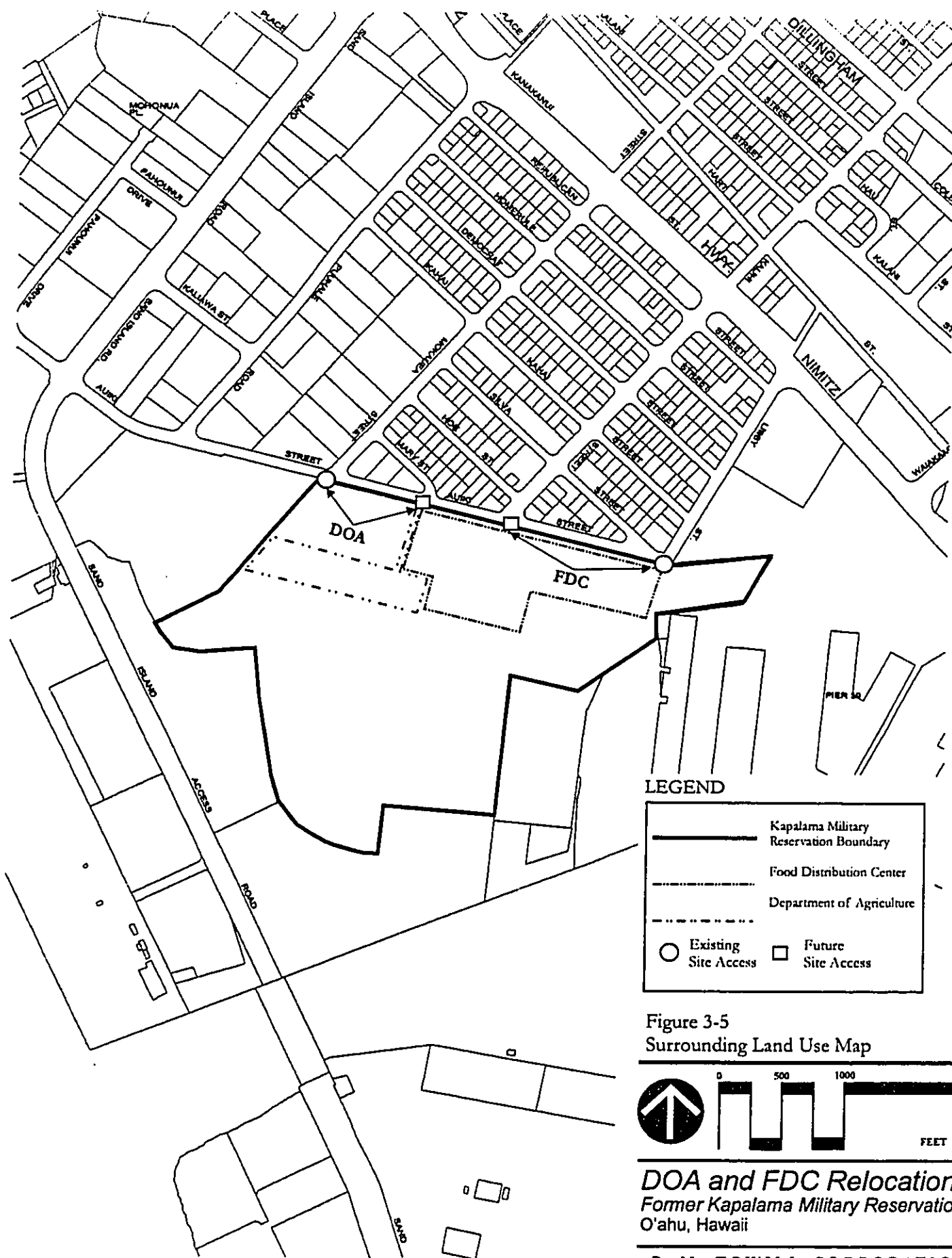
Access points to both sites will be along Auiki Street, which borders KMR to the north (See **Figure 3-5**). The DOA will be accessed from a permanent access point at Mokauea Street and Auiki Street. The FDC will have a temporary access point along Auiki Street and Libby Street; future access is anticipated to be located on Kalihi Street and Auiki Street.

Roadway improvements are not currently planned into the site other than the creation of driveways. Further, the intersection is not currently planned for signalization. An alternative access into the property from Sand Island Access Road was examined, but was not implemented with this project pending completion of a forthcoming traffic report.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Construction Impacts. The streets fronting and providing access to the project site will be impacted by the movement of construction vehicles during the construction period. Further, with the creation of new access points into the project area on-street parking will be restricted.

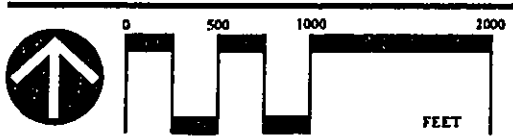
Project Related Impacts. The traffic volume on Auiki Street may increase with the proposed project. *Appendix B: Traffic Assessment Report* has been prepared to determine the level of service which will be available to adjoining roadways.



LEGEND

	Kapalama Military Reservation Boundary
	Food Distribution Center
	Department of Agriculture
	Existing Site Access
	Future Site Access

Figure 3-5
Surrounding Land Use Map



DOA and FDC Relocation
Former Kapalama Military Reservation
O'ahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

The report will be distributed to the State DOT and City and County of Honolulu, Department of Transportation Services (DTS) for coordination. Appropriate standards and warrants requiring traffic controls will be reviewed. If required, traffic controls will be provided and may include use of signalization at key intersections affected by the project along Kalihi Street, Auiki Street, Sand Island Access Road, and Nimitz Highway. Should widening be required on Auiki Street, on-street parking on both sides of the street may be reduced to parking only on one side to accommodate a new traffic lane.

All proposed traffic improvements will be developed to ensure public safety and to maintain the efficient entry and transit of vehicles.

3.4.2 WATER

There are existing water mains provided on Auiki Street and Sand Island Access Road. Steps will be taken to provide the project site with a connection to water main services. Capacity requirements for water service will be coordinated with the Board of Water Supply (BWS) and/or the Department of Design and Construction, City and County of Honolulu (DDC).

POTENTIAL IMPACTS AND MITIGATION MEASURES

The proposed project is not anticipated to result in potential for negative adverse impacts to the continued provision of water service. Any addition or major upgrades to the water lines will be coordinated with BWS and DDC. It is expected that existing facilities which have already been constructed will continue to be used to support the facilities in the project site area. This would primarily involve use of the existing water lines providing connection to the administrative and service buildings at the site.

3.4.3 SEWAGE

There are existing sewer mains on Auiki Street and Sand Island Access Road. Capacity requirements for sewer service will be coordinated with the Department of Environmental Services and/or the Department of Design and Construction, City and County of Honolulu.

3.4.4 DRAINAGE

The site is relatively flat and the existing drainage system at KMR is anticipated to be sufficient for

the proposed project.

3.4.5 ELECTRICAL AND PHONE SERVICE

There are plans to connect with existing electrical and communication services provided by HECO and Verizon Hawaii.

3.4.6 SOLID AND HAZARDOUS WASTE

The proposed project area includes five buildings on the former KMR site which are comprised of materials subject to further assessment regarding solid and hazardous waste. The immediate surrounding area of the proposed project site have a prior land use history which is of concern regarding solid and hazardous waste.

- In 1988 the United States Army prepared an Environmental Assessment (EA) for the sale and replacement of KMR lands. Building 917 was used during a period of time as a storage facility for hazardous and toxic materials. The report found that available geological evidence indicated no offpost migration of contaminants, either surface or subsurface.
- On site surveys which were conducted for the 1988 EA indicated a number of buildings which contained "transite", a corrugated siding of non-friable asbestos containing material.
- The presence of underground fuel storage tanks were assumed due to visible vent pipes. A subsurface investigation did not reveal contamination from underground storage tanks, however it did not confirm the absence of underground storage tanks.

An Phase II Environmental Site Assessment (ESA) was performed by Muranaka Environmental Consultants, Inc. to quantify impacts regarding the issues listed above has been executed in accordance with the American Society for Testing and Materials (ASTM) Standards (manual number guide: E1903-97 Standard Guide for ESA: Phase II ESA Process). The ESA provides specifications regarding the demolition and renovation of the proposed project site buildings and is included in this EA as *Appendix C*.

The findings of the Phase II ESA with correspondence and discussion as of July 24, 2001 with the Department of Health Solid and Hazardous Waste Branch confirmed that the soil and groundwater can remain on site and they will not require removal.

Chapter 4
RELATIONSHIP TO STATE AND COUNTY LAND USE

4.1 THE HAWAII STATE PLAN

The Hawaii State Plan, Chapter 226, Hawaii Revised Statutes (HRS), serves as a written guide for the future long range development of the State. The plan identifies goals, objectives, policies, and priorities for the State. The proposed project is generally consistent with the Hawaii State Plan and would fulfill the policies related to public health and welfare. The following objectives of the State Plan are relevant to the proposed project:

Section 226.6 (b) 6-7:

"(6) Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.

(7) Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawaii's small scale producers, manufacturers, and distributors."

Section 226.7 (b) 3,4, & 7:

"(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.

(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawaii's producers and consumer markets locally, on the continental United States, and internationally."

Section 226.20 (b) 5:

"(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.."

Section 226.27 (b) 8:

"(8) Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible."

4.2 STATE FUNCTIONAL PLANS

The Hawaii State Functional Plans (Chapter 226) 1991, provide a management program that allows judicious use of the State's natural resources to improve current conditions and attend to various societal issues and trends. The plans identify the objectives, policies, and actions established to address statewide needs relative to the provision of health services and health related facilities. The proposed project is generally consistent with the State Agriculture Functional Plan. The following objective of the State Agriculture Functional Plan is relevant to the proposed project:

Agriculture Policy C (1):

"Protect individuals from unfair commercial practices, prevent distribution of substandard animal products, and ensure standards are met for other agricultural commodities throughout the monitoring and enforcement of related regulations."

4.3 STATE LAND USE LAW

The State of Hawaii Land Use District classifications designate the proposed project area within the State **Urban District**. Uses proposed under the development would be consistent with objectives and policies of the State Land Use Law, Chapter 205, Hawaii Revised Statutes.

4.4 CITY AND COUNTY ZONING

TMK: 1-2-25:11, according to the City and County of Honolulu, Development Plan Land Use Map, the project site is designated as "Industrial." The site is zoned I-3 "Industrial" Waterfront (**Figure 4-1**). No land use changes will be required for the proposed project. The project area also is not within the Special Management Area (SMA) boundary; therefore an SMA Use Permit is not required.

4.5 COASTAL ZONE MANAGEMENT ASSESSMENT

The State Office of Planning within the Department of Business, Economic Development, and Tourism (DBEDT), administers the Federal CZM program in Hawaii. The proposed project modifications do not directly involve use of Federal lands or agency involvement which would ordinarily require the filing of a CZM Federal Consistency Review. However, the proposed project will involve lands within Hawaii's coastal zone. The proposed project is consistent with the Hawaii

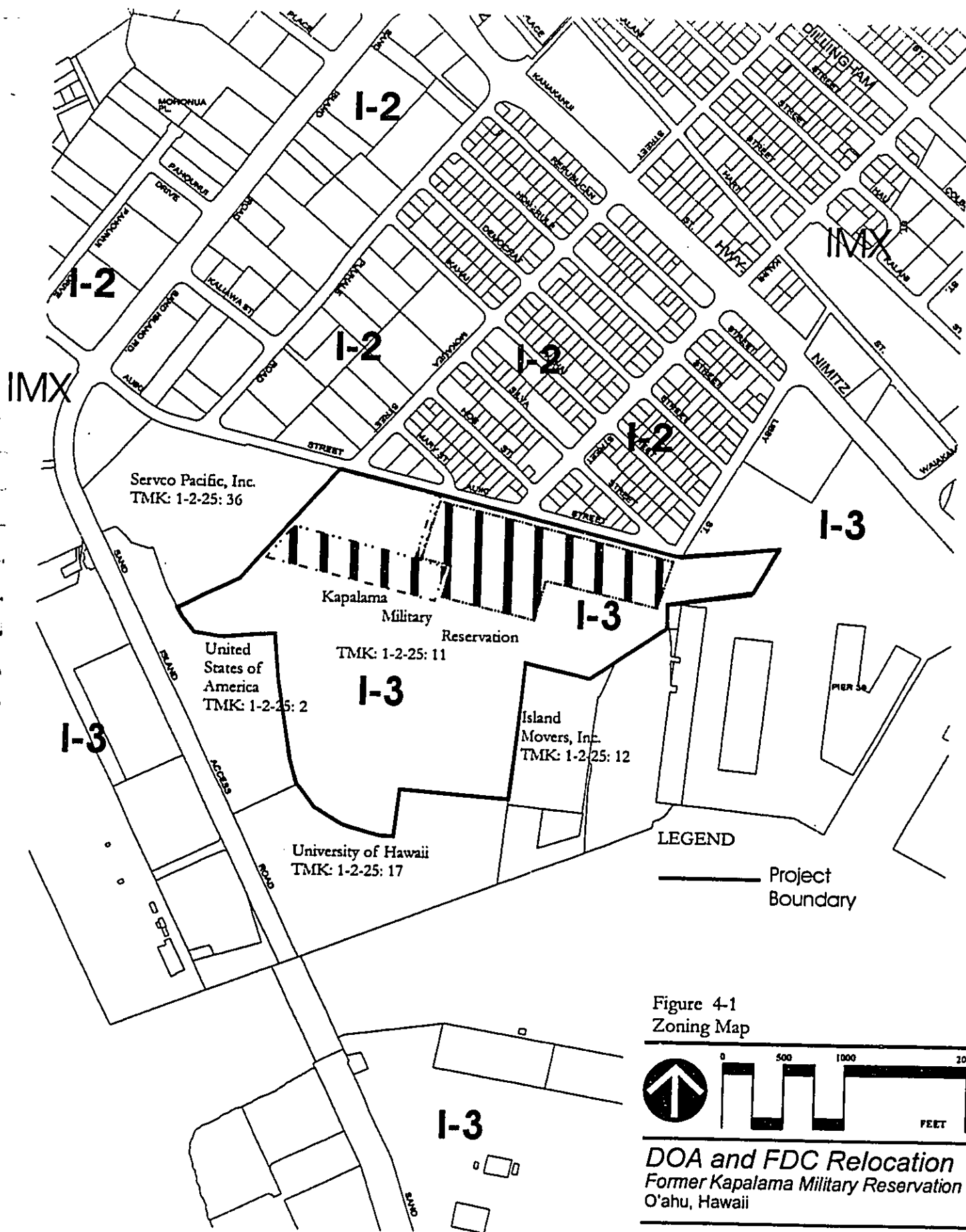
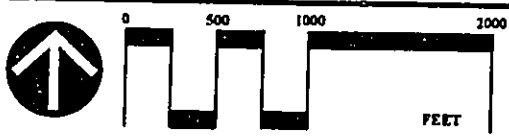


Figure 4-1
Zoning Map



DOA and FDC Relocation
Former Kapalama Military Reservation
O'ahu, Hawaii

R. M. TOWILL CORPORATION
May 2001

Coastal Zone Management Program in the following areas:

Recreational Resources

Objective: Provide coastal recreational opportunities accessible to the public.

There are no public recreational resources within the boundaries of the project site area.

Historic Resources

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

The project site is comprised of Fill Land, mixed (FL), and has been previously disturbed during construction of the existing buildings. No archaeological sites are known within the area and none are expected to be encountered due to the nature of the area which was primarily constructed of fill material. No potential for negative impacts are therefore anticipated or expected.

Scenic and Open Resources

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

The proposed project calls for construction of facilities that are not anticipated to affect the public's enjoyment of scenic vistas or view planes from the project site area to views of urban Honolulu and the Pacific Ocean. Most of the uses in the area are designated commercial and industrial. No potential negative adverse impacts to views are therefore anticipated or expected.

Coastal Ecosystems

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

The proposed project will not adversely impact the existing ecosystem of Kapalama Military Reservation or the surrounding nearshore waters. The existing land portion of the site also does not provide a habitat for threatened or endangered species of flora or fauna.

Economic Uses

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

The proposed project will fulfill a crucial need for the State in providing modern upgraded facilities for imported produce storage, distribution and inspection. The DOA Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, and Plant Quarantine Branch buildings will provide continued and upgraded statewide services.

Coastal Hazards

Objective: Reduce hazard to life and property from tsunامي, storm waves, stream flooding, erosion, and subsidence.

The project site is designated as lying within Zone X of the Flood Insurance Rate Map (FIRM), of the Federal Emergency Management Agency (FEMA). Zone X is an area which is identified as lying outside the 500-year flood zone, Zone A is an area where no base flood elevations have been determined.

Managing Development

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

The proposed project conforms to all State and County land use designations. Permits required for the proposed action have been identified and are listed in Section 8. Public notification of the EA will also be provided by publication of the proposed action in the Office of Environmental Quality Control (OEQC) Environmental Notice.

Chapter 5 ALTERNATIVES TO PROPOSED ACTION

5.1 NO ACTION

The proposed action is related to other action proposed by other State agencies, therefore, the no action alternative would critically delay or render infeasible the project schedule for the following actions in Kakaako: a) proposed University of Hawaii biomedical research center, b) infrastructure improvements in Kakaako; and 3) development of a high technology center. The University of Hawaii's proposed biomedical research center at the current site of the FDC and negotiations regarding the PCDL's lease with HCDA are in progress.

The no action alternative will fail to meet the objectives of the Department of Agriculture by keeping related departmental functions segregated. Currently, the segregation of functions creates inefficiencies that negatively impact the Department's ability to provide needed support to the State's agricultural sector.

5.2 ALTERNATE SITES

5.2.1 Site Selection Criteria

Site selection for the Department of Agriculture's facilities involved the application of site assessment criteria and an evaluation of the sites that met the criteria. The criteria are outline in the "Project Development Report, DAGS Job No. 12-10-4943" (May 1993). These criteria include:

- a. The facility should be located on stable ground so that the integrity of the quarantine rooms are not affected.
- b. The site should be relatively level with good drainage.
- c. The site should not be located in areas that are prone to natural disasters (tsunami inundation).
- d. The site should have a reliable power source.
- e. The site should be a reasonable distance from residential zones or areas of high population density.
- f. The site should be away from areas of agriculture production.

- g. The site should be provided with a security system to insure that quarantine requirements are not breached.
- h. The facilities should be reasonably accessible from the port of entry to facilitate the transport of materials and products.
- i. The site should have adequate space for expansion.
- j. For the Standards and Technical Branch facilities, the site should be located in areas which are free from external sources of vibration.

The DOA and PCDL facilities function with greater economic efficiency and productivity when in near proximity to the harbor and airport. State owned sites located near Honolulu Harbor and the Honolulu International Airport were sought as preferred sites. Non-state owned sites would delay the construction timetable due to land acquisition processes.

5.2.2 *Alternative Sites*

The search for alternative sites ranged from Kakaako to Halawa Valley. Sites in this study area were seen as best meeting the requirements of the two functions. The plans for the Kakaako Community Development Area and the Kapalama Master Plan currently provided for the relocation of the Food Distribution Center from Kakaako to Kapalama. Therefore, the search for alternatives was limited to meeting the needs specific to the Department of Agriculture facilities.

A. Halawa Animal Quarantine

The Halawa Animal Quarantine, TMK: 9-9-10:34, was examined as an alternate site in the Halawa area. This site was rejected because it did not provide enough space. Further, access to the site was difficult and a considerable distance from Honolulu Harbor and Honolulu International Airport.

B. Pier 38 and Kapalama

Two sites near Pier 38 and adjacent to the Young Brothers facilities in Kapalama were presented to Department of Transportation (DOT) for consideration, however, these sites were rejected in favor of the harbor expansion project.

The site of the former Kapalama Military Reservation was examined as a candidate for the

DOA's facilities. A portion of the site was already committed for the relocation of the Food Distribution Center. The only drawback to this alternative was that existing buildings would require demolition and existing tenants would be required to relocate. The tenants are on 30-day revocable permits.

C. Keehi Lagoon / Mapunapuna

Property adjacent to Keehi Lagoon on Lagoon Drive, under the jurisdiction of the DOT, was considered because of its proximity to Honolulu International Airport and Honolulu Harbor. These sites were rejected because they did not have enough space to accommodate the proposed uses.

D. Private Land Holdings

Private land holding were not considered. The search for available space was limited to State-owned lands. If State-owned lands were unavailable, then private land alternatives would have been examined.

5.3 DELAYED ACTION

Delaying the proposed action will not serve to meet to objectives of the proposed programs. Further, delaying the Department of Agriculture and Food Distribution projects will further delay projects that are proposed for the Kakaako area. For the above reasons, the delayed action alternative was rejected.

5.4 RECOMMENDED ACTION

The site recommended for both the DOA Quality Assurance Division Administration, Measurement Standards Branch, Commodities Branch, Division Administration, Plant Quarantine Branch; and the Food Distribution Center is located on a portion of the Kapalama Military Reservation. The site's advantage over other sites considered was its proximity to Honolulu Harbor and the Honolulu International Airport. The minimal transportation time afforded by the site's proximity to these two major ports of entry will facilitate more efficient provision of inspection, testing, and quarantine services for both import and export agricultural products. These efficiencies

will be further enhanced by the close proximity of the DOA facility to the Food Distribution Center. As a final benefit, the site is within an established industrial area; therefore its operations will not be restricted, as would be the case in a commercial or residential area.

Chapter 6

FINDINGS AND REASONS SUPPORTING DETERMINATION

In accordance with the provisions set forth in Chapter 343, Hawaii Revised Statutes, and the significance criteria in Section 11-200-12 of Title 11, Chapter 200, this assessment has determined that the project will have no significant adverse impact to water quality, air quality, existing utilities, noise, archaeological sites, or wildlife habitat. All anticipated impacts will be temporary and will not adversely impact the environmental quality of the area. The significance criteria are listed below along with a brief discussion:

- 1. *Irrevocable commitment to loss of destruction of any natural or cultural resources***
The proposed project is not anticipated to adversely impact any natural or cultural resources. The proposed site is located in an area which has been previously disturbed to accommodate clearing, grading, and construction of buildings. The area was filled in to form man made land in the 1930s and for this reason, no significant archaeological or cultural sites are anticipated to be discovered. However, in the unlikely event that any remains or artifacts are encountered, work will immediately cease and the DLNR, Historic Preservation Division will be notified at (808) 692-8015, to determine significance and treatment.
- 2. *Curtailment of range of beneficial uses of the environment***
The location of the buildings are on developed land. The proposed use of the site is not expected to curtail existing surrounding land uses including the Kalihi residential neighborhood.
- 3. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders***
The proposed project is consistent with the environmental policies, goals and guidelines as delineated in Chapter 344, HRS.

4. ***Substantially affects the economic or social welfare of the community or state***
The proposed project is expected to improve the infrastructure necessary for the health, welfare, and future growth of the community and region.
5. ***Substantially affects public health***
The proposed project will be developed in accordance with federal, state, and City and County of Honolulu, rules and regulations governing public safety and health. Potential sources of adverse impacts have been identified and appropriate mitigative measures developed. The primary public health concerns will involve air, water, noise, and traffic impacts. However, it is expected that these impacts will be minimized or brought to negligible levels by appropriate use of the mitigation measures described in this document.
6. ***Involves substantial secondary impacts, such as population changes or effects on public facilities***
The proposed project will generate temporary employment opportunities during demolition and construction, and will result in improved public facilities, however, it will not generate new population growth. Public infrastructure requirements, including power and water services, which will be utilized as part of this proposal have been evaluated and appropriate actions will be taken to ensure that there are no adverse impacts to the public.
7. ***Involves a substantial degradation of environmental quality***
The proposed project will be developed in accordance with the environmental policies of Chapter 343, HRS. The analysis provided in this Environmental Assessment indicates that no environmental degradation is anticipated.
8. ***Is individually limited but cumulatively has a considerable effect on the environment, or involves a commitment for larger actions***
The proposed project addresses the needs of existing and future area residents, businesses, and institutional users. The relocation and collocation of these facilities will contribute positively to the health and welfare of the state. The project is a stand-alone project. Potential for considerable adverse environmental effects and a commitment for larger actions are neither anticipated nor expected.

9. ***Substantially affects a rare, threatened or endangered species or its habitat***
There are no endangered flora or fauna species within or surrounding the project site.
10. ***Detrimentially affects air or water quality or ambient noise levels***
Any potential impacts to air, water quality, or noise levels will be addressed by use of appropriate mitigation measures described in the document.
11. ***Affects or is likely to suffer damage by being located in an environmentally sensitive area, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, freshwater, or coastal waters;***
The site contains no especially sensitive or hazardous environmental characteristics. The project is not anticipated to affect or suffer from damage from natural forces.
12. ***Substantially affects scenic vistas and view planes identified in county or state plans or studies***
No adverse impacts to scenic vistas or view planes are expected. Upon completion of work all equipment, machinery, and personnel mobilized to the site will be removed.
13. ***Requires substantial energy consumption***
Energy will be used to demolish the existing buildings and construct the new facilities. The transportation of construction equipment, materials, and personnel to the project site will also require energy. None of the activities are expected to result in use of significantly large amounts of energy.

CONCLUSION

Based on analysis and review of the above factors, it has been determined that an Environmental Impact statement (EIS) will not be required. A Finding of No Significant Impact (FONSI) is anticipated for this project.

Chapter 7
RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES
OF THE ENVIRONMENT AND THE MAINTENANCE
AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Development of the project will commit the necessary funds, construction material, and human resources in order to complete the project. Construction of the facilities will take place within an area currently developed and will not constrain uses within or surrounding the site.

The proposed redevelopment of the Kapalama Military Reservation will alter the area. Land uses will continue to be industrial. The land use change will promote better utilization of the land and create opportunity of development for areas that are vacated in Kakaako.

Chapter 8
NECESSARY PERMITS AND APPROVALS

8.1 STATE AGENCIES

Department of Accounting and General Services

- Environmental Assessment

Department of Health

- National Pollution Discharge Elimination System (NPDES)

8.2 CITY AND COUNTY OF HONOLULU

Department of Planning and Permitting

- Building Permit
- Sewer Connection
- Demolition Permit
- Subdivision of Lot

Chapter 9

**CONSULTED AGENCIES AND PARTICIPANTS IN THE
PREPARATION OF THE ENVIRONMENTAL ASSESSMENT
AND COMMENTS RECEIVED AND RESPONSES PROVIDED**

9.1 STATE AGENCIES

Department of Accounting and General Services
Department of Agriculture
Hawaii Community Development Authority
Department of Business and Economic Development
University of Hawaii
Office of Environmental Quality Control
Department of Land and Natural Resources
Department of Transportation
Kalihi-Palama Library

9.2 CITY AND COUNTY OF HONOLULU

Department of Planning and Permitting
Department of Design and Construction
Police Department
Board of Water Supply
Kalihi-Palama Neighborhood Board

9.3 INDIVIDUALS AND ORGANIZATION

Produce Center Development, Ltd.
Servco Pacific
Hawaiian Electric Company
Kalihi-Palama Businessmen's Association
Kalihi-Palama Community Association

BEKUMARI J. CAVETANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
338 SOUTH BERTMANA STREET
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4178
FACSIMILE (808) 586-4178
JUNE 21, 2001

Mr. Wayne Kimura, Comptroller
Department of Accounting and General Services
P.O. Box 119
Honolulu, Hawaii 96810

Dear Mr. Kimura:

Subject: Draft EA for the Kapalauna Facilities for DOA and Food Distribution Center, Oahu

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

1. Traffic on the already congested Auiki Street will increase with this project. Please include a traffic assessment report in the final environmental assessment.
2. The surrounding area has a history of hazardous material use. Please include copies of any relevant Phase I and/or Phase II Environmental Site Assessment that have been completed for the affected area in the final EA.
3. Please describe whether any of the buildings that will be demolished have been designated as historic sites. If so, please consult with the State Historic Preservation Division.
4. Please consider applying sustainable building techniques as presented in the enclosed "Guidelines for Sustainable Building Design in Hawaii."
5. This project should comply with sections 103D-407 and 408 of Hawaii Revised Statutes concerning the use of indigenous plants and recycled glass.

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

Sincerely,

Jeyan Thiruganman
Jeyan Thiruganman
Director

c: R.M. Towill Corp.

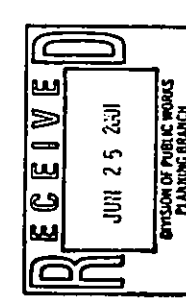
EM Kim
BT

RECEIVED - DIVISION OF PUBLIC WORKS
DIRECTOR

JUN 25 P 2:00

DIVISION OF PUBLIC WORKS
FOR PUBLIC UTILITIES

IP	_____
PW Asst	_____
PW Sec	_____
Staff Sec	_____
Information	_____
Planning Br	_____
Proj Mgmt Br	_____
See Me	_____
Design Br	_____
Inspect Br	_____
Investigate &	_____
Report	_____
Qual Cont Br	_____
Leasing Br	_____



Guidelines for Sustainable Building Design in Hawaii *A planner's checklist*

(Adopted by the Environmental Council on October 13, 1999)

Introduction

Hawaii law calls for efforts to conserve natural resources, promote efficient use of water and energy and encourage recycling of waste products. Planning a project from the very beginning to include sustainable design concepts can be a critical step toward meeting these goals.

The purpose of the state's environmental review law (HRS Ch. 343) is to encourage a full, accurate and complete analysis of proposed actions, promote public participation and support enlightened decision making by public officials. The Office of Environmental Quality Control offers the following guidelines for preparers of environmental reviews under the authority of HRS 343 to assist agencies and applicants in meeting these goals.

These guidelines do not constitute rules or law. They have been refined by staff and peer review to provide a checklist of items that will help the design team create projects that will have a minimal impact on Hawaii's environment and make wise use of our natural resources. In a word, projects that are *sustainable*.

A sustainable building is built to minimize energy use, expense, waste, and impact on the environment. It seeks to improve the region's sustainability by meeting the needs of Hawaii's residents and visitors today without compromising the needs of future generations. Compared to conventional projects, a resource-efficient building project will:

- I. Use less energy for operation and maintenance
- II. Contain less embodied energy (e.g. locally produced building products often contain less embodied energy than imported products because they require less energy-consuming transportation.)
- III. Protect the environment by preserving/conserving water and other natural resources and by minimizing impact on the site and ecosystems
- IV. Minimize health risks to those who construct, maintain, and occupy the building
- V. Minimize construction waste
- VI. Recycle and reuse generated construction wastes

- VII. Use resource-efficient building materials (e.g. materials with recycled content and low embodied energy, and materials that are recyclable, renewable, environmentally benign, non-toxic, low VOC (Volatile Organic Compound) emitting, durable, and that give high life cycle value for the cost.)
- VIII. Provide the highest quality product practical at competitive (affordable) first and life cycle costs.

In order to avoid excessive overlapping of items, the checklist is designed to be read in totality, not just as individual sections. This checklist tries to address a range of project types, large scale as well as small scale. Please use items that are appropriate to the type and scale of the project.

Although this list will help promote careful and sensitive planning, mere compliance with this checklist does not confirm sustainability. Compliance with and knowledge of current building codes by users of this checklist is also required.

TABLE OF CONTENTS

I. Pre Design	Page 3
II. Site Selection, and Site Design	Page 3
III. Building Design	Page 4
IV. Energy Use	Page 5
V. Water Use	Page 7
VI. Landscape and Irrigation	Page 7
VII. Building Materials and Solid Waste Management	Page 8
VIII. Indoor Air Quality	Page 10
IX. Commissioning & Construction Project Close-out	Page 10
X. Occupancy and Operation	Page 11
XI. Resources	Page 12

I. Pre Design

1. Hold programming team meeting with client representative, Project Manager, planning consultant, architectural consultant, civil engineer, mechanical, electrical, plumbing (MEP) engineer, structural engineer, landscape architect, interior designer, sustainability consultant and other consultants as required by the project. Identify project and sustainability goals. Client representatives and consultants need to work together to ensure that project and environmental goals are met.
2. Develop sustainable guideline goals to insert into outline specifications as part of the Schematic Design documents. Select goals from the following sections that are appropriate for the project.
3. Use Cost-Benefit Method for economic analysis of the sustainability measures chosen (Cost-Benefit Method is a method of evaluating project choices and investments by comparing the present and life cycle value of expected benefits to the present and life cycle value of expected costs.)
4. Include "Commissioning" in the project budget and schedule. (Building "Commissioning" is the process of ensuring that systems are designed, installed, functionally tested, and capable of being operated and maintained in accordance with specifications that meet the owner's needs, and recognize the owner's financial and operational capacity. It improves the performance of the building systems, resulting in energy efficiency and conservation, improved air quality and lower operation costs. Refer to Section IX.)

II. Site Selection & Site Design

- A. Site Selection
1. Analyze and assess site characteristics such as vegetation, topography, geology, climate, natural access, solar orientation patterns, water and drainage, and existing utility and transportation infrastructure to determine the appropriate use of the site.
 2. Whenever possible, select a site in a neighborhood where the project can have a positive social, economic and/or environmental impact.
 3. Select a site with short connections to existing municipal infrastructure (sewer lines, water, waste water treatment plant, roads, gas, electricity, telephone, data communication lines and services). Select a site close to mass transportation, bicycle routes and pedestrian access.
- B. Site Preparation and Design
1. Prepare a thorough existing conditions topographic site plan depicting topography, natural and built features, vegetation, location of site utilities and include solar information.

- rainfall data and direction of prevailing winds. Preserve existing resources and natural features to enhance the design and add aesthetic, economic and practical value. Design to minimize the environmental impact of the development on vegetation and topography.
2. Site building(s) to take advantage of natural features and maximize their beneficial effects. Provide for solar access, daylighting and natural cooling. Design ways to integrate the building(s) with the site that maximizes and preserves positive site characteristics, enhances human comfort, safety and health, and achieves operational efficiencies.
 3. Locate building(s) to encourage bicycle and pedestrian access and pedestrian oriented uses. Provide bicycle and pedestrian paths, bicycle racks, etc. Racks should be visible and accessible to promote and encourage bicycle commuting.
 4. Retain existing topsoil and maintain soil health by clearing only the areas reserved for the construction of streets, driveways, parking areas, and building foundations. Replant exposed soil areas as soon as possible. Reuse excavated soils for fill and cut vegetation for mulch.
 5. Grade slopes to a ratio of less than 2 : 1 (run to rise). Balance cut and fill to eliminate hauling. Check grading frequently to prevent accidental over excavation.
 6. Minimize the disruption of site drainage patterns. Provide erosion and dust controls, positive site drainage, and siltation basins as required to protect the site during and after construction, especially, in the event of a major storm.
 7. Minimize the area required for the building footprint. Consolidate utility and infrastructure in common corridors to minimize site degradation, and cost, improve efficiency, and reduce impermeable surfaces.
 8. For termite protection, use non toxic alternatives to pesticides and herbicides, such as Borate treated lumber, Basaltic Termite Barrier, stainless steel termite barrier mesh, and termite resistant materials.

III. Building Design

1. Consider adaptive re-use of existing structures instead of demolishing and/or constructing a new building. Consult the State Historic Preservation Officer for possible existing historic sites that may meet the project needs.
2. Plan for high flexibility while designing building shell and interior spaces to accommodate changing needs of the occupants, and thereby extend the life span of the building.
3. Design for re-use and/or disassembly. (For recyclable and reusable building products, see Section VII).
4. Design space for recycling and waste diversion opportunities during occupancy.
5. Provide facilities for bicycle and pedestrian commuters (showers, lockers, bike racks, etc.) in commercial areas and other suitable locations.
6. Plan for a comfortable and healthy work environment. Includes inviting outdoor spaces, wherever possible. (Refer to Section VIII.)

4

7. Provide an Integrated Pest Management approach. The use of products such as Termi-mesh, Basaltic Termite Barrier and the Sentricon "bait" system can provide long term protection from termite damage and reduce environmental pollution.
8. Design a building that is energy efficient and resource efficient. (See Sections IV, V, VII.) Determine building operation by-products such as heat gain and build up, waste/gray-water and energy consumption, and plan to minimize them or find alternate uses for them.
9. For natural cooling, use
 - a. Reflective or light colored roofing, radiant barrier and/or insulation, roof vents
 - b. Light colored paving (concrete) and building surfaces
 - c. Tree Planting to shade buildings and paved areas
 - d. Building orientation and design that captures trade winds and/or provides for convective cooling of interior spaces when there is no wind.

IV. Energy Use

1. Obtain a copy of the State of Hawai'i Model Energy Code (available through the Hawai'i State Energy Division, at Tel. 587-3811). Exceed its requirements. (Contact local utility companies for information on tax credits and utility-sponsored programs offering rebates and incentives to businesses for installing qualifying energy efficient technologies.)
2. Use site sensitive orientation to :
 - a. Minimize cooling loads through site shading and carefully planned east-west orientation.
 - b. Incorporate natural ventilation by channeling trade winds.
 - c. Maximize daylighting.
3. Design south, east and west shading devices to minimize solar heat gain.
4. Use spectrally selective tints or spectrally selective low-e glazing with a Solar Heat Gain Coefficient (SHGC) of 0.4 or less.
5. Minimize effects of thermal bridging in walls, roofs and window systems.
6. Maximize efficiencies for lighting, Heating, Ventilation, Air Conditioning (HVAC) systems and other equipment. Use insulation and/or radiant barriers, natural ventilation, ceiling fans and shading to avoid the use of air conditioning whenever appropriate.
7. Eliminate hot water in restrooms when possible.
8. Provide tenant sub-metering to encourage utility use accountability.
9. Use renewable energy. Use solar water heaters and consider the use of photovoltaics and Building Integrated Photovoltaics (BIPV).
10. Use available energy resources such as waste heat recovery, when feasible.

5

A. Lighting

1. Design for at least 15% lower interior lighting power allowance than the Energy Code.
2. Select lamps and ballasts with the highest efficiency, compatible with the desired level of illumination and color rendering specifications. Examples that combine improved color rendering with efficient energy use include compact fluorescents and T8 fluorescents that use tri-phosphor gases.
3. Select lighting fixtures which maximize system efficacy and which have heat removal capabilities
4. Reduce light absorption on surfaces by selecting colors and finishes that provide high reflectance values without glare.
5. Use task lighting with low ambient light levels.
6. Maximize daylighting through the use of vertical fenestration, light shelves, skylights, clerestories, building form and orientation as well as through translucent or transparent interior partitions. Coordinate daylighting with electrical lighting for maximum electrical efficiency
7. Incorporate daylighting controls and/or motion activated light controls in low or intermittent use areas.
8. Avoid light spillage in exterior lighting by using directional fixtures.
9. Minimize light overlap in exterior lighting schemes.
10. Use lumen maintenance procedures and controls.

B. Mechanical Systems

1. Design to comply with the Energy Code and to exceed its efficiency requirements.
2. Use "Smart Building" monitor/control systems when appropriate.
3. Utilize thermal storage for reduction of peak energy usage.
4. Use Variable air volume systems to save fan power.
5. Use variable speed drives on pumping systems and fans for cooling towers and air handlers.
6. Use air-cooled refrigeration equipment or use cooling towers designed to reduce drift.
7. Specify premium efficiency motors.
8. Reduce the need for mechanical ventilation by reducing sources of indoor air pollution. Use high efficiency air filters and ultraviolet lamps in air handling units. Provide for regular maintenance of filtration systems. Use ASHRAE standards as minimum.
9. Locate fresh air intakes away from polluted or overheated areas. Locate on roof where possible. Separate air intake from air exhausts by at least 40 ft.
10. Use separate HVAC systems to serve areas that operate on widely differing schedules and/or design conditions.
11. Use shut off or set back controls on HVAC system when areas are not occupied.
12. Use condenser heat, waste heat or solar energy. (Contact local utility companies for information on the utility-sponsored Commercial and Industrial Energy Efficiency

6

Programs which offer incentives to businesses for installing qualifying energy efficient technologies.)

13. Evaluate plug-in loads for energy efficiency and power saving features.
14. Improve comfort and save energy by reducing the relative humidity by waste reheat, heat pipes or solar heat.
15. Minimize heat gain from equipment and appliances by using:
 - a. Environmental Protection Agency (EPA) Energy Star rated appliances.
 - b. Hoods and exhaust fans to remove heat from concentrated sources.
 - c. High performance water heating that exceeds the Energy Code requirements
16. Specify HVAC system "commissioning" period to reduce occupant exposure to Indoor Air Quality (IAQ) contaminants and to maximize system efficiency.

V. Water Use

A. Building Water

1. Install water conserving, low flow fixtures as required by the Uniform Plumbing Code
2. If practical, eliminate hot water in restrooms.
3. Use self closing faucets (infrared sensors or spring loaded faucets) for lavatories and sinks

B. Landscaping and Irrigation

(See Section VI.)

VI. Landscape and Irrigation

1. Incorporate water efficient landscaping (xeriscaping) using the following principles:
 - a. **Planning. Efficient irrigation:** Create watering zones for different conditions. Separate vegetation types by watering requirements. Install moisture sensors to prevent operation of the irrigation system in the rain or if the soil has adequate moisture. Use appropriate sprinkler heads.
 - b. **Soil analysis/Improvement:** Use (locally made) soil amendments and compost for plant nourishment, improved water absorption and holding capacity.
 - c. **Appropriate plant selection:** Use drought tolerant and/or slow growing hardy grasses, native and indigenous plants, shrubs, ground covers, trees, appropriate for local conditions, to minimize the need for irrigation.
 - d. **Practical turf areas:** Turf only in areas where it provides functional benefits.

7

- e. **Mulches:** Use mulches to minimize evaporation, reduce weed growth and retard erosion.
- Contact the local Board of Water Supply for additional information on xeriscaping such as efficient irrigation, soil improvements, mulching, lists of low water-demand plants, tours of xeriscaped facilities, and xeriscape classes.
- ___ 2. Protect existing beneficial site features and save trees to prevent erosion. Establish and carefully mark tree protection areas well before construction.
 - ___ 3. Limit staging areas and prevent unnecessary grading of the site to protect existing, especially native, vegetation.
 - ___ 4. Use top soil from the graded areas, stockpiled on the site and protected with a silt fence to reduce the need for imported top soil.
 - ___ 5. Irrigate with non-potable water or reclaimed water when feasible. Collect rainwater from the roof for irrigation.
 - ___ 6. Sub-meter the irrigation system to reduce water consumption and consequently water and sewer fees. Contact the local county agency to obtain irrigation sub-metering requirements and procedures. Locate irrigation controls within sight of the irrigated areas to verify that the system is operating properly.
 - ___ 7. Use pervious paving instead of concrete or asphalt paving. Use natural and man-made berms, hills and swales to control water runoff.
 - ___ 8. Avoid the use of solvents that contain or leach out pollutants that can contaminate the water resources and runoff. Contact the State of Hawai'i Clean Water Branch at 586-4309 to determine whether a NPDES (National Pollutant Discharge Elimination System) permit is required.
 - ___ 9. Use Integrated Pest Management (IPM) techniques. IPM involves a carefully managed use of biological and chemical pest control tactics. It emphasizes minimizing the use of pesticides and maximizing the use of natural process.
 - ___ 10. Use trees and bushes that are felled at the building site (i.e. mulch, fence posts). Leave grass trimmings on the lawn to reduce green waste and enhance the natural health of lawns.
 - ___ 11. Use recycled content, decay and weather resistant landscape materials such as plastic lumber for planters, benches and decks.

VII. Building Materials & Solid Waste Management

A. Material Selection and Design

- ___ 1. Use durable products.
- ___ 2. Specify and use natural products or products with low embodied energy and/or high recycled content. Products with recycled content include steel, concrete with glass,

- drywall, carpet, etc. Use ground recycled concrete, graded glass cullet or asphalt as base or fill material.
- ___ 3. Specify low toxic or non-toxic materials whenever possible, such as low VOC (Volatile Organic Compounds) paints, sealers and adhesives and low or formaldehyde-free materials. Do not use products with CFCs (Chloro-fluoro-carbons). Use locally produced products such as plastic lumber, insulation, hydro-mulch, glass tiles, compost.
 - ___ 5. Use advanced framing systems that reduce waste, two stud corners, engineered structural products and prefabricated panel systems.
 - ___ 6. Use materials which require limited or no application of finishing or surface preparation. (i.e. finished concrete floor surface, glass block and glazing materials, concrete block masonry, etc.)
 - ___ 7. Use re-milled salvaged lumber where appropriate and as available. Avoid the use of old growth timber.
 - ___ 8. Use sustainably harvested timber.
 - ___ 9. Commit to a material selection program that emphasizes efficient and environmentally sensitive use of building materials, and that uses locally available building materials. (A list of Earth friendly products and materials is available through the Green House Hawai'i Project. Call Clean Hawai'i Center, Tel. 587-3802 for the list.)

B. Solid Waste Management, Recycling and Diversion Plan

- ___ 1. Prepare a job-site recycling plan and post it at the job-site office.
- ___ 2. Conduct pre-construction waste minimization and recycling training for employees and sub-contractors.
- ___ 3. Use a central area for all cutting.
- ___ 4. Establish a dedicated waste separation/diversion area. Include Waste/Compost/Recycling collection areas and systems for use during construction process and during the operational life cycle of the building.
- ___ 5. Separate and divert all unused or waste cardboard, ferrous scrap, construction materials and fixtures for recycling and/or forwarding to a salvage exchange facility. Information on "Minimizing C&D (construction and demolition) waste in Hawai'i" is available through Department of Health, Office of Solid Waste Management, Tel. 586-4240.
- ___ 6. Use all green waste, untreated wood and clean drywall on site as soil amendments or divert to offsite recycling facilities.
- ___ 7. Use concrete and asphalt rubble on-site or forward the material for offsite recycling.
- ___ 8. Carefully manage and control waste solvents, paints, sealants, and their used containers. Separate these materials from C&D (construction and demolition) waste and store and dispose them of them carefully.
- ___ 9. Donate unused paint, solvents, sealants to non-profit organizations or list on HIMEX (Hawai'i Materials Exchange). HIMEX is a free service operated by Maui Recycling

- Group, that offers an alternative to landfill disposal of usable materials, and facilitates no-cost trades. See web site, www.himex.org.
- ___10 Use suppliers that re-use or recycle packaging material whenever possible.

VIII. Indoor Air Quality

- ___1. Design an HVAC system with adequate supply of outdoor air, good ventilation rates, even air distribution, sufficient exhaust ventilation and appropriate air cleaners.
- ___2. Develop and specify Indoor Air Quality (IAQ) requirements during design and contract document phases of the project. Monitor compliance in order to minimize or contain IAQ contaminant sources during construction, renovation and remodeling.
- ___3. Notify occupants of any type of construction, renovation and remodeling and the effects on IAQ.
- ___4. Inspect existing buildings to determine if asbestos and lead paint are present and arrange for removal or abatement as needed.
- ___5. Supply workers with, and ensure the use of VOC (Volatile Organic Compounds)-safe masks where required.
- ___6. Ensure that HVAC systems are installed, operated and maintained in a manner consistent with their design. Use UV lamps in Air Handling Units to eliminate mold and mildew growth. An improperly functioning HVAC system can harbor biological contaminants such as viruses, bacteria, molds, fungi and pollen, and can cause Sick Building Syndrome (SBS).
- ___7. Install separate exhaust fans in rooms where air polluting office equipment is used, and exhaust directly to the exterior of the building, at sufficient distance from the air intake vents.
- ___8. Place bird guards over air intakes to prevent pollution of shafts and HVAC ducts.
- ___9. Control indoor air pollution by selecting products and finishes that are low or non-toxic and low VOC emitting. Common sources of indoor chemical contaminants are adhesives, carpeting, upholstery, manufactured wood products, copy machines, pesticides and cleaning agents.
- ___10. Schedule finish application work to minimize absorption of VOCs into surrounding materials e.g. allow sufficient time for paint and clear finishes to dry before installing carpet and upholstered furniture. Increase ventilation rates during periods of increased pollution.
- ___11. Allow a flush-out period after construction, renovation, remodeling or pesticide application to minimize occupant exposure to chemicals and contaminants.

IX. Commissioning & Construction Project Closeout

- ___1. Appoint a Commissioning Authority to develop and implement a commissioning plan and a preventative maintenance plan. Project Manager's responsibilities must include coordination of commissioning activities during project closeout.
- ___2. Commissioning team should successfully demonstrate all systems and perform operator training before final acceptance.
- ___3. Provide flush-out period to remove air borne contaminants from the building and systems.
- ___4. Provide as-built drawings and documentation for all systems. Provide data on equipment maintenance and their control strategies as well as maintenance and cleaning instructions for finish materials.

X. Occupancy and Operation

A. General Objectives

- ___1. Develop a User's Manual for building occupants that emphasizes the need for Owner/Management commitment to efficient sustainable operations.
- ___2. Management's responsibilities must include ensuring that sustainability policies are carried out.

B. Energy

- ___1. Purchase EPA rated, Energy Star, energy-efficient office equipment, appliances, computers, and copiers. (Energy Star is a program sponsored by U.S. Dep. Of Energy. Use of these products will contribute to reduced energy costs for buildings and reduce air pollution.)
- ___2. Institute an employee education program about the efficient use of building systems and appliances, occupant impact on and responsibility for water use, energy use, waste generation, waste recycling programs, etc.
- ___3. Re-commission systems and update performance documentation periodically per recommendations of the Commissioning Authority, or whenever modifications are made to the systems.

C. Water

- ___1. Start the watering cycle in the early morning in order to minimize evaporation.
- ___2. Manage the chemical treatment of cooling tower water to reduce water consumption.

D. Air

- ___1. Provide incentives which encourage building occupants to use alternatives to and to reduce the use of single occupancy vehicles.

2. Provide a location map of services within walking distance of the place of employment (child care, restaurants, gyms, shopping).
3. Periodically monitor or check for indoor pollutants in building.
4. Provide an IAQ plan for tenants, staff and management that establishes policies and documentation procedures for controlling and reporting indoor air pollution. This helps tenants and staff understand their responsibility to protect the air quality of the facility.

E. Materials and Products

1. Purchase business products with recycled content such as paper, toners, etc.
2. Purchase Furniture made with sustainably harvested wood, or with recycled and recycled content materials, which will not off gas VOC's.
3. Remodeling and painting should comply with or improve on original sustainable design intent.
4. Use low VOC, non-toxic, phosphate and chlorine free, biodegradable cleaning products.

F. Solid Waste

1. Collect recyclable business waste such as paper, cardboard boxes, and soda cans.
2. Avoid single use items such as paper or Styrofoam cups and plates, and plastic utensils.

XI. Resources

Financing: Energy Efficiency in Buildings. U.S. Department of Energy. DOE/EE-0152, May, 1998 (Call Tel. 1-800-DOE-EREC or visit local office)

Building Commissioning: The Key to Quality Assurance. U.S. Department of Energy. DOE/EE-0153, May, 1998 (Call Tel. 1-800-DOE-EREC or visit local office)

Guide to Resource-Efficient Building in Hawaii. University of Hawaii at Manoa, School of Architecture and Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, October 1998. (Call Tel. 587-3804 for publication)

Hawaii Model Energy Code. Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, November 1997 (Call Tel. 587-3810 for publication)

Photovoltaics in the Built Environment: A Design Guide for Architects and Engineers. NREL Publications, DOE/GO #10097-436, September 1997 (Call Tel. 1-800-DOE-EREC or visit local office)

Building Integrated Photovoltaics: A Case Study. NREL Publications #TP-472-7574, March 1995 (Call Tel. 1-800-DOE-EREC or visit local office)

Solar Electric Applications: An overview of Today's Applications. NREL Publications, DOE/GO #10097-357, Revised February, 1997 (Call Tel. 1-800-DOE-EREC or visit local office)

Green Lights: An Enlightened Approach to Energy Efficiency and Pollution Prevention. U.S. Environmental Protection Agency, Pacific Island Contact Office (Call Tel. 541-2710 for publication.)

Healthy Lawns, Healthy Environment. U.S. Environmental Protection Agency, Pacific Island Contact Office. (Call Tel. 541-2710 for this and related publications)

How to Plant a Native Hawaiian Garden. Office of Environmental Quality Control (OEQC), Department of Health, State of Hawaii (Call Tel. 586-4185 for publication)

Buy Recycled in Hawaii. Clean Hawaii Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, November 1997. (Call Tel. 587-3802 for publication)

Hawaii Recycling Industry Guide and other recycling and reuse related fact sheets. Clean Hawaii Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, July 1999. (Call Tel. 587-3802 for publication)

Minimizing Construction and Demolition Waste. Office of Solid Waste Management, Department of Health and Clean Hawaii Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, February 1998. (Call Tel. 586-4240 for publication)

Contractor's Waste Management Guide and Construction and Demolition Waste Management Facilities Directory. Clean Hawaii Center, Energy, Resources and Technology Division, Department of Business, Economic Development and Tourism, 1999. (Call Tel. 587-3802 for publication)

Waste Management and Action: Construction Industry. Department of Health, Solid and Hazardous Waste Branch (Call Tel. 586-7496 for publication)

Business Guide For reducing Solid Waste. U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for publication.)

The Inside Story: A Guide to Indoor Air Quality, U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for this and related publications.) Additional information is available from the American Lung Association, Hawaii, Tel. 537-5966

Selecting Healthier Flooring Materials, American Lung Association and Clean Hawaii Center, February 1999. (Call Tel. 537-5966 x307)

Office Paper Recycling: An Implementation Manual, U.S. Environmental Protection Agency, Pacific Island Contact Office, Tel. 541-2710 (Call for publication.)

Acknowledgments

OEQC and the Environmental Council would like to thank Allison Beale, Gary Gill, Nick H. Huddleston, Gail Suzuki-Jones, Purnima McCutcheon, Virginia B. MacDonald, Steve Meder, Ramona Mullahy, Thomas P. Papandrew, Victor Olgay, Howard Tanaka, and Howard Wig for their assistance with this project.

WAYNE N. BERRY
COMPTROLLER
MARY ALICE OHA
DEPUTY COMPTROLLER



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

WILLIAM J. CAYTANO
GOVERNOR

11/15/01 (P)

JUL 25 2001

MEMORANDUM

TO: Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
Department of Health

FROM: Gordon Matsuoka
Public Works Administrator

SUBJECT: Draft Environmental Assessment (EA)
Department of Agriculture's Kapalama Facility and Food Distribution Center at
the Former Kapalama Military Reservation

John Matsuoka

Thank you for your June 29, 2001, comments on the draft EA for the Department of Agriculture's Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

1. A Traffic Impact Assessment Report has been completed and will be included in the final EA.
2. We have completed the subsurface investigation for hazardous materials on the portion of the site that will house the Department of Agriculture's Measurement Standards and Commodities and Plant Quarantine Buildings and will include the results in the final EA. We will be completing the aboveground hazardous materials investigation before the buildings are demolished.
3. We have asked the Department of Land and Natural Resources - Historic Preservation Division for their approval to demolish the five (5) warehouse buildings. They indicated that the structures are not historic but would require a photo documentation of the five (5) structures prior to demolition. They have indicated that a formal letter will be forthcoming in response to our request.

Ms. Genevieve Salmonson
(P)1488.1
Page 2

4. We will consider applying the sustainable building techniques as noted in the "Guidelines for Sustainable Building Design in Hawaii."
5. We will note that this project shall comply with Sections 103D-407 and 408 of the Hawaii Revised Statutes concerning the use of indigenous plants and recycled glass.

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

BI:mo



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION
P.O. BOX 831
HONOLULU, HAWAII 96809
July 3, 2001

DM ten 7/3/01 18
BI

AGRICULTURE DEVELOPMENT PROGRAMS
AQUATIC RESOURCES
BOTANY AND OCEAN RECREATION
CONSERVATION AND RESTORATION
LAND DIVISION
NATURAL RESOURCES
PLANNING AND ZONING
PLANTATION AND FORESTRY
SPECIAL SERVICES
WATER RESOURCE MANAGEMENT

LD-NAV

Mr. Brian Isa
State of Hawaii
Department of Accounting and
General Services
1151 Punchbowl Street, Room 430
Honolulu, Hawaii 9813

Dear Mr. Isa:

SUBJECT: I.D.: DAGS121117104 - Kapalama Facilities for the
Department of Agriculture and Food Distribution Center,
Oahu, Hawaii TMK: 1-2-15: 11

Thank you for the opportunity to review and comment on the subject matter. We have transmitted the subject informational material to our Division of Aquatic Resources, Forestry and Wildlife, State Parks, Commission on Water Resource Management, Land Division Oahu District Land Office and Land Division Engineering Branch for their review and comment on the proposed project.

Attached herewith is a copy of our Land Division Engineering Branch, Oahu District Land Office and Commission on Water Resource Management comments.

The Department has no other comment to offer on the subject matter at this time. Should you have any questions, please feel free to contact Nicholas Vaccaro of the Land Division's Support Services Branch at 808-587-0438.

Very truly yours,

Harry M. Yada
Harry M. YADA
Acting Administrator

C: Oahu District Land Office



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION
P.O. BOX 831
HONOLULU, HAWAII 96809

2001 JUN 19 10 24 AM

June 19, 2001

Ref: LD/BC

MEMORANDUM

TO: Harry M. Yada, Acting Administrator, Land Division

ATTN: Nicholas A. Vaccaro

FROM: Barry Cheung, Oahu District Land Office *Barry Cheung*
SUBJECT: Draft Environmental Assessment for Kapalama Facilities for
Department of Agricultural and Food Distribution Center

Suggested comments on the DEA:

Page 1-7 - Food Distribution Center, point 3
delete "site will"; replace "existing Kapalama" with "existing buildings";

Page 3.7 - 3.2.2, 1st paragraph

Line 3 - replace "in favor" with "set aside"

u

BE KAPAMA J. CAVEIANO
Administrator

RECEIVED
JUN 29 10 33 AM '01



2001 JUN 29 A 10:33

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
P.O. BOX 151
HONOLULU HAWAII 96809

June 25, 2001

GERBERT S. COLOMA-AGUIRRE
Administrator

BRUCE S. ANDERSON
ROBERT G. GRALD
BRUCE C. HESLOA
DAVID A. HONOGA
HERBERT M. RICHARDS, JR.
LINDSEY T. NISHIOKA
Deputy Director

Ref:Kapalama Facilities. dr

TO: Mr. Dean Uchida, Administrator
Land Division

FROM: Linnet T. Nishioka, Deputy Director
Commission on Water Resource Management (CWRM)

SUBJECT: Draft Environmental Assessment for Kapalama Facilities for Department of
Agriculture and Food Distribution Center

FILE NO.: DAGS12117104.COM

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

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

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

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

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

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

Mr. Hamy Yada, Acting Administrator
Page 2

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

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

We are concerned about the potential for degradation of instream uses from development on highly erodible slopes adjacent to streams within or near the project. We recommend that approvals for this project be conditioned upon a review by the corresponding county's Building Department and the developer's acceptance of any resulting requirements related to erosion control.

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

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

OTHER:

The discussion under the Groundwater Hydrology section appears to be more of a distribution system description, rather than a description of the groundwater hydrology. From the maps provided in the report, it appears that the projects fall within the boundaries of the Kailihi Aquifer System, which extends from Kailihi Valley to Nuuanu Valley and from the ocean to the crest of the Koolaus. The Kailihi Aquifer System, which is part of the larger Honolulu Aquifer Sector, has an estimated sustainable yield of 9 mgd.

If there are any questions, please contact Lenore Nakama at 587-0218.

DLNR-LAND DIVISION
ENGINEERING BRANCH

COMMENTS

We confirm that the proposed project site, according to FEMA Community-Panel No. 150001 0115 C, is located in Zone X. This is an area determined to be outside the 500-year flood plain.

The Draft Environmental Assessment should include the water demand for the proposed project. Please provide the water demands and calculations to the Engineering Branch, Land Division so that it can be included in the Water Master Plan being prepared by Fukunaga and Associates for the Department of Land and Natural Resources.

For your information, the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply (BWS) system must first obtain a water allocation credit from the Engineering Branch, Land Division before it can receive a building permit and/or water meter.

KMR_DOAfacil&FoodDistCtr_EA_com_04



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

WALTER A. KONOHA
COMPTROLLER
MARY ALICE BYARS
DEPUTY COMPTROLLER

(P)1487.1

Mr. Harry Yada
(P)1487.1
Page 2

JUL 25 2001

TO: Mr. Harry Yada, Acting Administrator
Land Division
Department of Land and Natural Resources

SUBJECT: Draft Environmental Assessment (EA)
Department of Agriculture's
Kapalama Facility and Food Distribution Center at the
Former Kapalama Military Reservation

Thank you for your July 3, 2001, comments on the draft EA for the Department of Agriculture's Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

1. We will revise pages 1-7 and 3-7 as noted.
2. By copy of this letter to the Board of Water Supply along with our water needs calculation, we will be coordinating with the County government to incorporate this project into the County's Water Use and Development Plan.
3. We have coordinated water needs with the Department of Land and Natural Resources, Land Division. (A request for water allocation was made on July 18, 2001.) We understand they will incorporate this project into the State's Water Projects Plan.
4. Your comment on the groundwater hydrology will be noted in the final EA.
5. We acknowledge that the proposed project site is located in Zone X, according to FEMA Community-Panel No. 150001 0115 C.
6. The water demands for the project will be noted in the final EA.

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

GORDON MATSUOKA
Public Works Administrator

Bl:mo
Attachment

c: Mr. Clifford Jamile, BOW w/attach

WES	KTS	
R.F.	MM	
RIT	BRT	
REC'D JUL 11 2001		
KMR		



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

JUL 10 2001

The Honorable Gilbert Coloma-Agaran
 (P)1437.1
 Page 2

4. The DOA needs to relocate out of the Kakaako area by September 1, 2002 and has obtained the necessary CIP funding to construct their new facilities. The current construction schedule is as follows:

- 06/22/01 - 08/27/01 Planning/design (expedited)
- 08/27/01 - 10/15/01 Bidding
- 10/15/01 - 07/31/02 Construction (expedited)
- 07/31/02 - 08/31/02 Move-in

5. At this time, we know the following about the Food Distribution Center site:
- A. We anticipate Produce Center Development Limited to occupy the site.
 - B. The schedule to develop the Food Distribution Center should be similar to the DOA's schedule but no definitive schedule has been identified.
6. In June 2001, we published a draft Environmental Assessment for the subject project. We are awaiting public comments and expect to complete a final report by the end of this month.

Because we are preparing the final EA, we would appreciate an expedited response on this matter. Should there be any questions on this matter, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

c: Mr. Chester Koga, RM Towill Corp.
 Mr. Clarence Izuo, Anbe Aruga Ishizu Architects, Inc.
 Mr. Dail Rhee, PMB

MEMORANDUM

TO: The Honorable Gilbert Coloma-Agaran
 Department of Land and Natural Resources (DLNR)

ATTENTION: Mr. Don Hibbard, Administrator
 Historic Preservation Division

FROM: Wayne H. Kimura
 State Comptroller

SUBJECT: Kapalama Facilities for the Department of Agriculture (DOA) and Food Distribution Center
 TMK (1) 1-2-25:11
 DAGS Job No. 12-11-7104

This is to request your approval to demolish existing warehouse structures located on the former Kapalama Military Reservation (KMR) site. We provide the following information and comments on the matter:

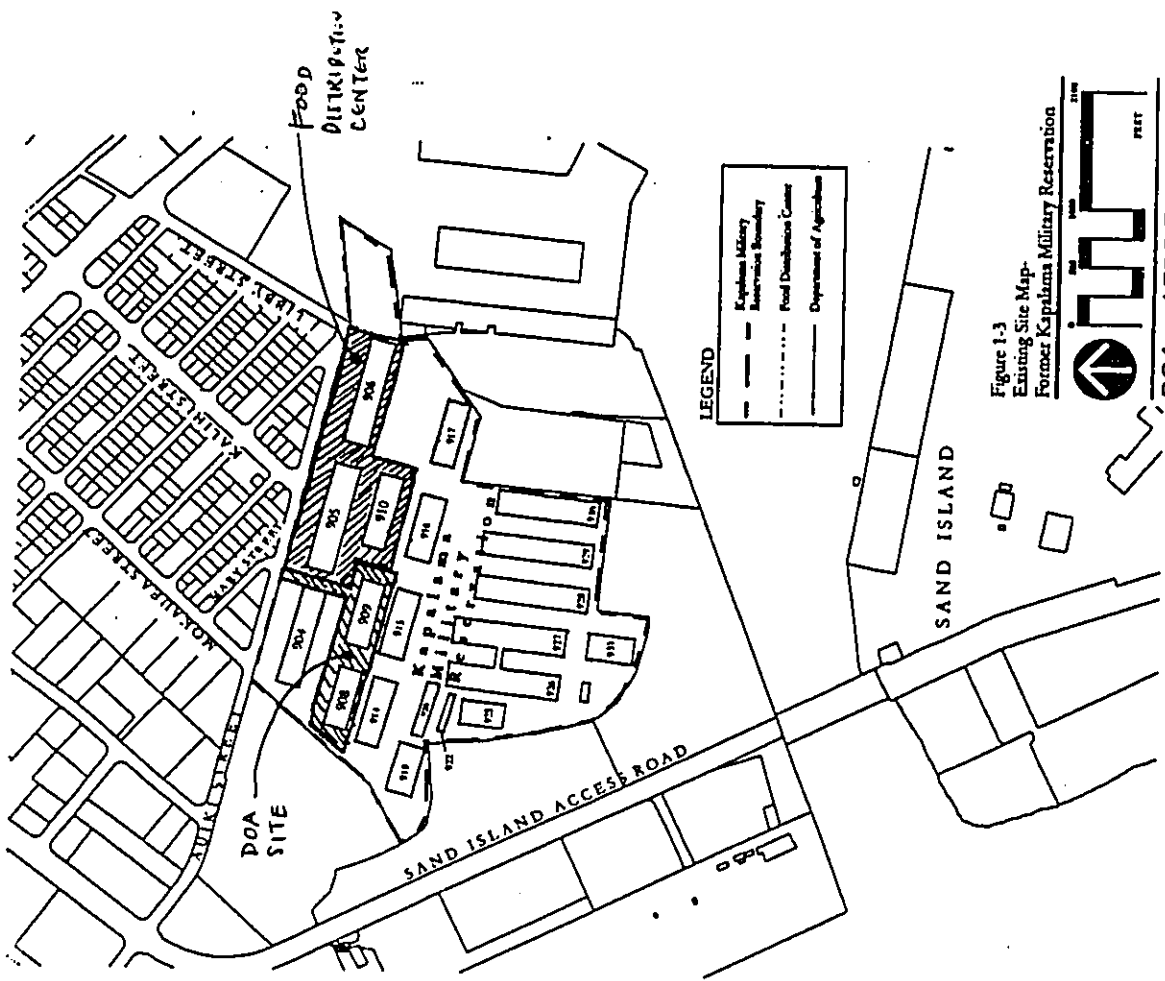
1. A portion of the former KMR site is proposed for the new DOA and Food Distribution Center facilities (Attachment 1).
2. The new DOA site will house the Measurement Standards and Commodities and Plant Quarantine offices and a Food Distribution Center.
3. The existing site has warehouse buildings (905, 906, 908, 909, and 910) that are either wood or metal frame with corrugated asbestos siding and corrugated metal roofing. The buildings were built in 1943 and 1944 as noted on Attachment 2.

TABLE I. PHASE II
KAPALAMA MILITARY RESERVATION

BUILDING NO.	SIZE (SQ. FT.)	YEAR BUILT	DESCRIPTION
T-904	43,200	1945	Wood frame, corr metal warehouse
S-905	50,000	1943	Metal frame, corr metal warehouse
S-906	50,000	1944	Metal frame, corr metal warehouse
T-908	27,000	1944	Wood frame, corr metal warehouse
S-909	30,000	1944	Steel frame, corr metal warehouse
T-910	35,000	1944	Wood frame, corr metal warehouse
T-913	29,800	1945	Wood frame, corr metal warehouse
T-914	23,000	1944	Wood frame wareh with corrugated slab foundation. a mortuary.
T-915	30,000	1944	Wood frame wareh with corrugated slab foundation.
S-916	30,000	1944	Steel frame ware with corrugated slab foundation.
S-917	30,000	1944	Steel frame ware with corrugated slab foundation.
T-919	22,500	1945	Wood frame wareh with corrugated slab foundation.

THIS TABLE IS TAKEN FROM NEGATIVE DECLARATION PREPARED BY STATE DOT (5/90) FOR ACQUISITION OF LAND AND IMPROVEMENTS (KAPALAMA MILITARY RESERVATION)

ATTACHMENT



ATTACHMENT I

July 09-01 03:30pm

From HAWAII COMMUNITY DEVELOPMENT AUTHORITY 808-587-8150

1-388 P 02/02 P-216

1-388-8150 7/9/01

549



HAWAII COMMUNITY DEVELOPMENT AUTHORITY



Benjamin J. Cayetano
Governor

Lori Aue C. Lima
Chair

Jan S. Yokota
Executive Director

Ref No.: PL WD 11.7d.4

July 6, 2001

MEMORANDUM

TO: Wayne Kimura, Comptroller
Department of Accounting and General Services

FROM: Jan S. Yokota, Executive Director
Hawaii Community Development Authority

SUBJECT: Draft Environmental Assessment for the Kapalama Facilities for the
Department of Agriculture and Food Distribution Center

The Hawaii Community Development Authority (HCDA) has reviewed the Draft Environmental Assessment for the proposed development of the above-referenced facilities on a portion of the former Kapalama Military Reservation and is in accord with the findings and recommended action.

Thank you for the opportunity to provide comments. Should you have any questions, please call me at 587-2870 or Sandy Pfund of my staff at 587-8160.

c: Office of Environmental Quality Control
R. M. Towill Corporation

71 Ala Moana Boulevard
Suite 1001
Honolulu, Hawaii
96813

Telephone
(808) 587-3870

Facsimile
(808) 587-8150

e-Mail
hcdaweb.org

Web site
www.hcdaweb.org

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

630 SOUTH KING STREET - HONOLULU, HAWAII 96813
TELEPHONE (808) 523-4414 - FAX (808) 527-6743 - INTERNET WWW.HONOLULU.HI



JEREMY HARRIS
SALON

Ysabel Ruy B I

RECEIVED - BAGS
CITY OF PUBLIC WORKS

2001 JUL 11 P 12:49
RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K. CHIEZ
DEPUTY DIRECTOR
2001/CLOG-2638(RY)

July 11, 2001

Mr. Brian Isa
Department of Accounting and General Services
Kalanimoku Building, Room 430
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Isa:

Draft Environmental Assessment for State Department of Agriculture Quality Assurance:
Measurement Standards Branch, Commodities Branch, Division Administrator and
Plant Quarantine and Food Distribution Center. Tax Map Key 1-2-25-11

We have reviewed the subject Draft Environmental Assessment (DEA) and have the following comments:

Frontage improvements shall be constructed in accordance with the city's standards. Existing and/or proposed driveway aprons, sidewalk, and curb ramps in the city right of way shall be reconstructed or constructed to comply with the ADA requirements.

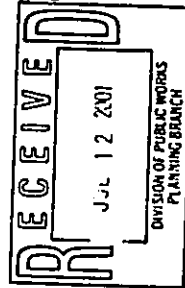
The DEA vaguely describes the on-site drainage system. If the on-site drainage system discharges into the city storm drain system, permanent water quality facilities must be provided in accordance with the Rule Related to the Storm Drainage Standards.

If you have any questions, please call Raymond Young of our staff at 527-5839.

Sincerely yours,

Randall K. Fujiki

RANDALL K. FUJIKI, AIA
Director of Planning and Permitting



RKF:lh
doc 102422



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

BERNARD J. CAVETTANO
GOVERNOR

JUL 25 2001

Mr. Randall K. Fujiki, AIA
Director of Planning and Permitting
City and County of Honolulu
630 South King Street
Honolulu, HI 96843

Dear Mr. Fujiki:

Subject: Draft Environmental Assessment (EA)
Department of Agriculture's
Kapalama Facility and Food Distribution Center at the
Former Kapalama Military Reservation

Thank you for your July 11, 2001, comments on the draft EA for the Department of Agriculture's (DOA) Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

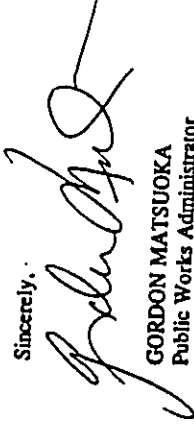
1. We will provide frontage improvements in accordance with the City's standards.
2. Where impacted, we will reconstruct existing driveway aprons, sidewalk, and curb ramps, within the City's right-of-way, to comply with Americans with Disabilities Act (ADA) requirements.
3. Where impacted, new driveway aprons, sidewalk, and curb ramps within the City's right-of-way will comply with the ADA requirements.
4. The site's drainage will be directed to an onsite drainage system for disposal. Permanent water quality facilities will be provided in accordance with the Rules Related to the Storm Drainage Standards.

WAYNE K. ENRIK
COMPTROLLER
MARY ALICE PYLE
DEPUTY COMPTROLLER
JUL 19 2001

Mr. Randall K. Fujiki
(P)1485.1
Page 2

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

Sincerely,



GORDON MATSUOKA
Public Works Administrator

Bf:mo

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
 3375 KAPAPA STREET, SUITE 4023
 HONOLULU, HAWAII 96819-1000



WES	KTIS
R-F	NM
RT	BRT
JUL 06 2001	
MTC	
[Signature]	
[Signature]	

ATTILIO LEONARD
 FIRE CHIEF
 JOHN CLARK
 DEPUTY FIRE CHIEF

JEREMY HARRIS
 MAYOR

Mr. Brian Isa
 Page 2
 June 29, 2001

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

June 29, 2001

Mr. Brian Isa
 Department of Accounting and General Services
 State of Hawaii
 Kalamimoku Building, Room 430
 1151 Punchbowl Street
 Honolulu, Hawaii 96813

Dear Mr. Isa:

Subject: Draft Environmental Assessment for the
 Department of Agriculture and Food Distribution Center
 Tax Map Key: 1-2-015: 011

We received your memorandum dated June 14, 2001, regarding the Draft Environmental Assessment for the Department of Agriculture and Food Distribution Center.

The Honolulu Fire Department (HFD) requests that the following be complied with:

1. Provide a private water system where all appurtenances, hydrant spacing, and fire flow requirements meet Board of Water Supply standards.
2. Provide a fire department access road within 150 feet of the first floor of the most remote structure. Such access shall have a minimum vertical clearance of 13 feet 6 inches, be constructed of an all-weather driving surface complying with Department of Transportation Services (DTS) standards, capable of supporting the minimum 60,000 pound weight of our fire apparatus, and with a gradient not to exceed 20%. The unobstructed width of the fire apparatus access road shall meet the requirements of the appropriate county jurisdiction. All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved turnaround having a radius complying with DTS standards.
3. Submit civil drawings to the HFD for review and approval.

Sincerely,

JOHN CLARK
 Acting Fire Chief

JC/KS:jo

cc: Office of Environmental Quality Control
 Chester Koga, R.M. Towill Corporation



WALTER H. OSMUNA
COMPTROLLER
MARY ALICE EVANS
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 1115 HONOLULU, HAWAII 96810

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES

(P)1484.1

JUL 25 2001

Mr. John Clark, Acting Fire Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street, Suite H425
Honolulu, Hawaii 96819-1869

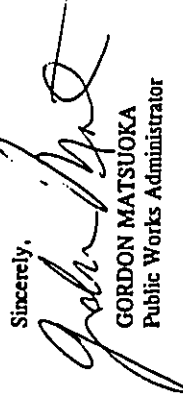
Dear Mr. Clark:

Subject: Draft Environmental Assessment (EA)
Department of Agriculture's
Kapalama Facility and Food Distribution Center at the
Former Kapalama Military Reservation

Thank you for your June 29, 2001, comments on the draft EA for the Department of Agriculture's Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

1. We will provide a private water system onsite that will meet both domestic and fire flow requirements with appropriate hydrant spacing for fire protection.
2. We will comply with the fire department access road requirements of the Uniform Fire Code.
3. We will submit the civil drawings to your office during the building permit approval process.

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

Bl:mo

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
501 SOUTH HERMANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 929-3111
<http://www.honolulu.gov>
www.ca.honolulu.hi.us



LEE D. DONOHUE
MICHAEL S. ROBERTSON
DEPUTY CHIEF

REFERENCE CS-JD

July 5, 2001

Mr. Brian Isa
Department of Accounting and General Services
Kalanimoku Building, Room 430
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Isa:

We have reviewed the Draft Environmental Assessment for the State Department of Agriculture Quality Assurance: Measurement Standards Branch, Commodities Branch, Division Administrator and Plant Quarantine, and Food Distribution Center.

We have no comment to offer at this time.

If there are any questions, please call Carol Sodehant of the Support Services Bureau at 529-3658.

LEE D. DONOHUE
Chief of Police

By

EUGENE UEMURA
Assistant Chief
Support Services Bureau

cc: ✓ Mr. Chester Koga
R. M. Towill Corporation

DOCUMENT CAPTURED AS RECEIVED

SENT BY:DAGS : 7-26-01 : 9:31AM : PLANNING BRANCH+ 65808 842 1937

SENT BY:DAGS : 7-26-01 : 9:31AM : PLANNING BRANCH+ 65808 842 1937:01

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
634 SOUTH-BERETANIA STREET
HONOLULU, HI 96843



RECEIVED - DAGS
DIV. OF PUBLIC WORKS

2001 JUL 18 A 8:33

July 17, 2001
RECEIVED
DIVISION OF PUBLIC WORKS
PLANNING BRANCH 19
Mr. Wayne Kimura
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810
Attention: Brian Isa
Dear Mr. Kimura:

Mr. Wayne Kimura, State Comptroller
Department of Accounting and General Services
State of Hawaii
P. O. Box 119
Honolulu, Hawaii 96810
Attention: Brian Isa
Dear Mr. Kimura:

Subject: Your Transmittal of June 14, 2001 of the Draft Environmental Assessment for the Department of Agriculture Kapaemahu Facility and Food Distribution Center at the Kapaemahu Military Reservation, Sand Island, Oahu, TMK: 1-2-15-11

Thank you for the opportunity to review the subject document for the proposed facilities. We have the following comments to offer:

1. The existing off-site water system is presently adequate to accommodate the proposed project.
2. If additional water is needed, a water allocation should be obtained from the Department of Land and Natural Resources.
3. The availability of water will be determined when the Building Permit Applications are submitted for our review and approval. If water is made available, the applicant will be required to pay the applicable Water System Facilities Charges for transmission and daily storage.
4. There is an existing water service consisting of two 8-inch water meters installed in a siamese connection serving the project site.
5. If an additional three-inch or larger water meter is required, the construction drawings showing the installation of the meter should be submitted for our review and approval.

Postnet Fax Note	7871
To	CHESTER KEA
City/State	RM TOWILL
Phone	7-42-1133
Fax	842-1937

Mr. Wayne Kimura
July 12, 2001
Page 2

6. The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.
7. Board of Water Supply approved Reduced Pressure Principle Backflow Prevention Assemblies are required to be installed immediately after all water meters serving the project site.

If you have any questions, please contact Scot Murooka at 527-5221.
Very truly yours

Samy Hageawa
for CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Office of Environmental Quality Control
R. M. Towill Corporation



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

LETTER (P)1483.1

JUL 25 2001

BENJAMIN J. CAYTELINO
CONTROLLER

WAYNE H. KIMURA
COMPTROLLER
MARTY ALICE EWING
DEPUTY COMPTROLLER

Mr. Clifford S. Jamile
(P)1483.1
Page 2

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: Draft Environmental Assessment (EA)
Department of Agriculture's
Kapalama Facility and Food Distribution Center at the
Former Kapalama Military Reservation

Thank you for your July 12, 2001, comments on the draft EA for the Department of Agriculture's Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

1. We have requested a water allocation (for the Department of Agriculture's 4.0 acre site which will have the Measurement Standards and Commodities Building and Plant Quarantine Building) from the Department of Land and Natural Resources on July 18, 2001.
2. We acknowledge that:
 - A. The availability of water will be determined when the building permit applications are submitted for your review and approval.
 - B. We will be responsible for paying water system facilities charges for transmission and daily storage that will be determined during the building permit review process.
 - C. If an additional 3-inch or larger water meter is required, the construction drawings showing the water meter will be submitted for your review and approval.

3. We have received comments from the Fire Department and will be addressing their on-site fire system requirements.
4. We will indicate that a Board of Water Supply approved Reduced Water Pressure Principle Backflow Prevention Assembly will be required immediately after all water meters serving the project site.

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

Bl:mo



SERVCO PACIFIC INC.

P.O. Box 2788 • Honolulu, Hawaii 96813-2788 • Telephone: (808) 531-6111 • Fax: (808) 531-9537 • www.servco.com

WES	KTS		
R-F	NM		
RTT	BRT		
MCO JUL 09 2001 BMT			

July 5, 2001

Mr. Brian Isa
State of Hawaii
Department of Accounting and General Services
Kalanimoku Bldg., Room 430
1151 Punchbowl Street
Honolulu, Hawaii 96813

Dear Mr. Isa:

Re: Draft Environmental Assessment
State Department of Agriculture Quality Assurance:
Measurement Standards Branch, Commodities Branch, Division
Administrator and Plant Quarantine and Food Distribution Center
Former Kapalama Military Reservations, Oahu,
May 2001

Thank you for providing Servco Pacific Inc. with an opportunity to review the above referenced report. Due to the close proximity of your proposed construction to our facility, we would like to share our concerns with you.

- During construction, we would like to ensure that dust barriers and controls are established to minimize both dirt and cement-type dust from becoming air-borne during construction. In addition, if the buildings are spray-painted, we are concerned that the winds will carry the paint onto Servco's new car inventory, and hence, we would like to inquire what measures would be taken to prevent this from happening. Also, we would like to be provided with the names and telephone numbers of individuals we could contact in the event there is a concern while the project is ongoing.
- We would like to inform you that Servco has an access easement to the roadway located on the eastern boundary of our property.
- What kind of vehicular traffic is anticipated for the proposed facilities at KMR? Also, what is the projected increase in traffic to the general area?
- Has your traffic report/study been completed? We would like an opportunity to review it.

Hawaii • Guam • N. Mariana • Marshall • California
Automotive Products • Office Equipment • Appliances • Insurance
Educational & Musical Products • Property Development

Mr. Brian Isa
July 5, 2001
Page 2

If there are any questions, please do not hesitate to contact myself or Carol Lam at 521-6511. In addition, future correspondence may be directed to us at

Servco Pacific Inc.
Corporate Properties
P.O. Box 2788
Honolulu, Hawaii 96803

Sincerely,

SERVCO PACIFIC INC.

Karen Shimizu
Property Manager

cc: Mr. Chester Koga
R.M. Towill Corporation



MATHEA KONURA
COMPTROLLER
MARY ALICE IVINS
DEPUTY COMPTROLLER

STATE OF HAWAII
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
PO BOX 119 HONOLULU, HAWAII 96810

LETTER NO (P)1486.1

JUL 25 2001

BERNARD J. CAYTEAO
GOVERNOR

Ms. Karen Shimizu
(P)1486.1
Page 2

Should there be any questions, please have your staff contact Mr. Brian Isa of the Planning Branch at 586-0484.

Ms. Karen Shimizu, Property Manager
Servco Pacific Inc.
Corporate Properties
P.O. Box 2788
Honolulu, HI 96803

Dear Ms. Shimizu

Subject: Draft Environmental Assessment (EA)
Department of Agriculture's
Kapalama Facility and Food Distribution Center at the
Former Kapalama Military Reservation

Thank you for your July 5, 2001, comments on the draft EA for the Department of Agriculture's (DOA) Kapalama Facility and Food Distribution Center. The following responses are provided on the matter:

1. During the site development, the contractor will be required to install dust barriers and other controls to minimize dust and paint migration.
2. We acknowledge that Servco Pacific has an access easement along the Mokauea Street extension.
3. Prior to site construction, we will invite Servco Pacific to the pre-construction meeting which will allow you or your representative to meet our project engineer and general contractor.
4. The final EA will include the traffic impact assessment report. We will send you a copy of the report by separate cover letter.

Sincerely,

GORDON MATSUOKA
Public Works Administrator

Bl:mo

References
(listed in alphabetical order)

Atlas of Hawaii, Second Edition. Department of Geography, University of Hawaii, University of Hawaii Press, 1983.

Final Assessment Report for Kaka'ako Community Development District Improvement District 9 Honolulu, Hawaii, R.M. Towill, Corp., February 2000.

Final Supplemental Environmental Impact Statement for Kakaako Makai Area Plan, Hawaii Community Development Agency, State of Hawaii, January 1990.

Negative Determination for Acquisition of land and Improvements Kapalama Military Reservation, Honolulu Harbor, Oahu, Harbors Division, State Department of Transportation, May 1990.

Resident Population and Households for the City and County of Honolulu, By Districts and Census Tracts: 1990 (Statistical Report, 1990) Table 1.14, Hawaii State Data Book 1996. Hawaii State Department of Business, Economic Development and Tourism.

Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii. State of Hawaii, U.S. Department of Agriculture, Soil Conservation Services, December 1973.

Sterling, E. and Summers, C. Sites of Oahu. Bishop Museum Press: Honolulu, HI, 1978 p.320.

Appendix A

Photo Documentation of the Project Site Area

Preliminary Photographic Documentation of Building No's. 905, 906, 908, 909 and 910
KAPALAMA MILITARY RESERVATION
Honolulu, Oahu, Hawaii

July 19, 2001

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

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard, Suite 206
Honolulu, Hawaii 96814



R. M. TOWILL CORPORATION
420 Waikamilo Road, Suite 411
Honolulu, Hawaii 96817-4941

SQUARE FOOTAGE AND TENANTS

The square footage and current tenants of buildings are provided below. Photographs should be referenced to the attached Photo Key.:

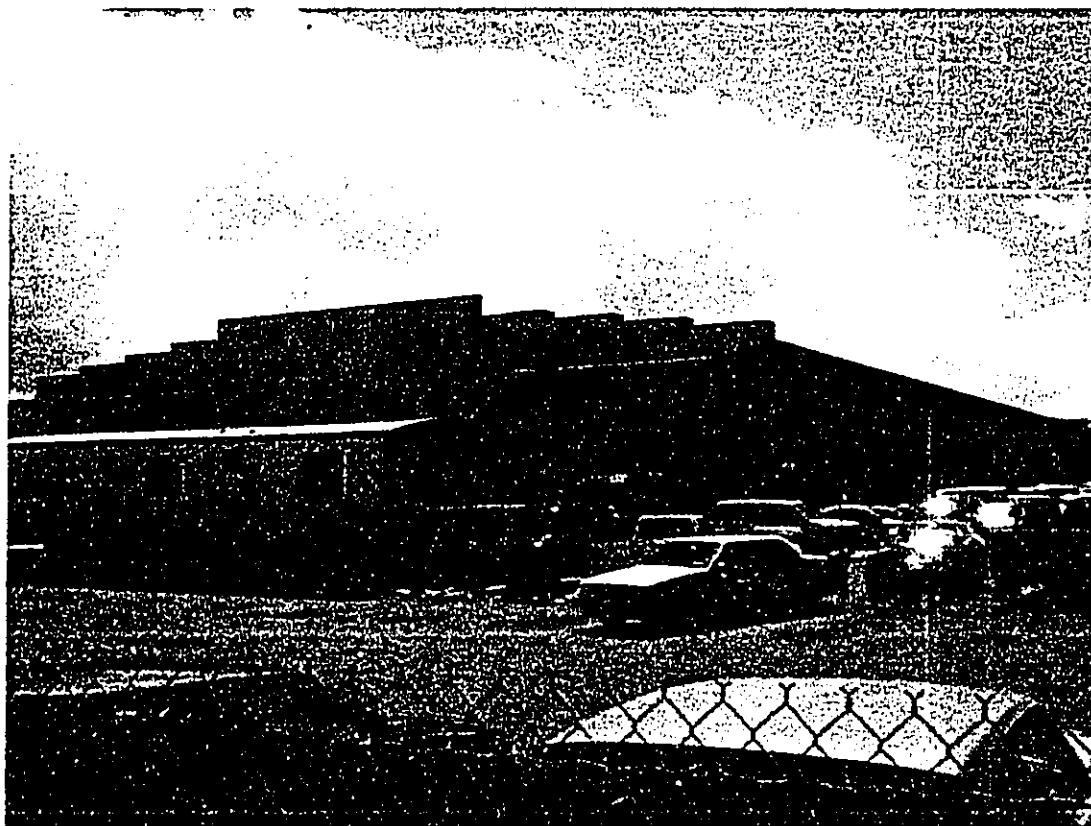
Building No./ TMK No.	Square Footage* (approximate)	Year of Construction*	Current Tenants
905 1-2-25:54	49,370 sq. ft.	1943	Vacant
906 1-2-25: 46	50,000 sq. ft.	1944	Dependable Hawaiian Express Building, Kano Trucking, Kenneth Tokunaga, Don Makiki
908 1-2-25: 57	30,000 sq. ft.	1944	Taiyo Inc., Walashek Industries
909 1-2-25: 56	27,100 sq. ft.	1944	Royal Hawaiian Movers
910 1-2-25: 58	34,300 sq. ft.	1944	Fuelman, Kona Crane, Convention Set Builders, Uni- Tek Technical Service, Clean-N-Rooter Plumbing, NBK Trading, United Equipment

* Source: Negative Determination For Acquisition of Land and Improvements Kapalama Military Reservation, Honolulu Harbor, Oahu May, 1990

Current tenants listed above are on a month to month revocable permit by DLNR and DOT Harbors Division.

NOTE: All photography taken on July 19th, between the hours of 9:45 am and 10:45 am.

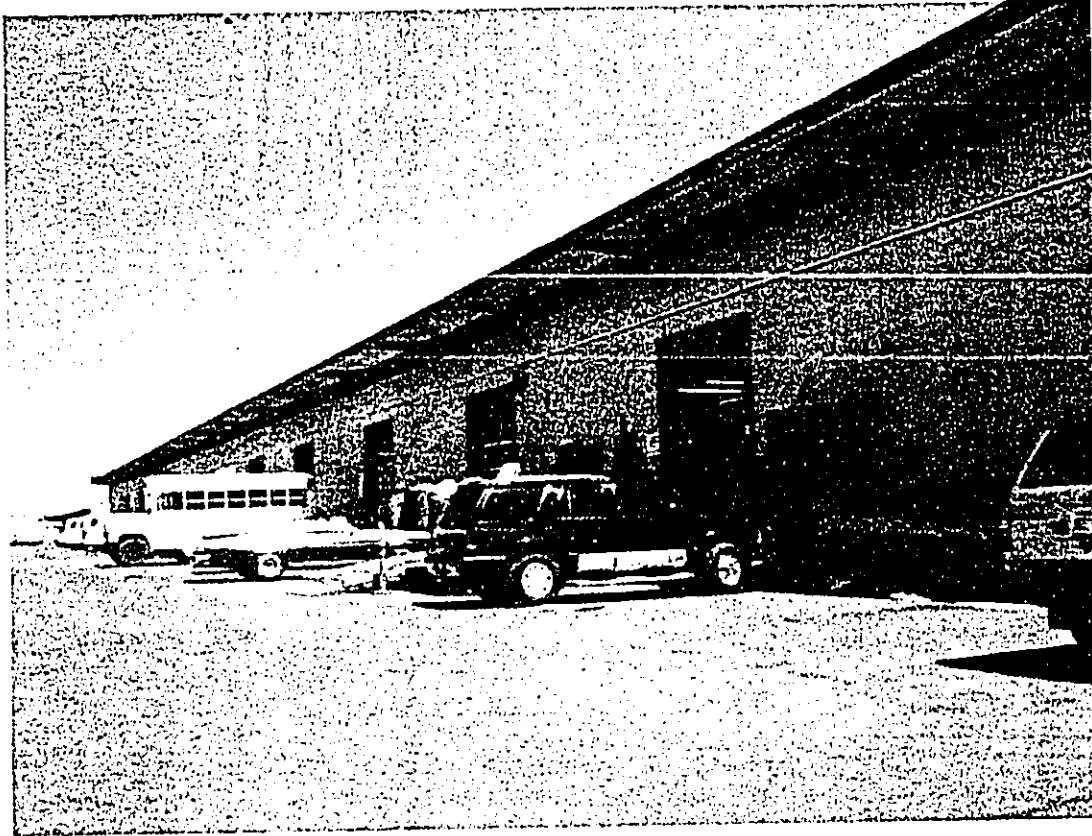
Building 905
Photo a



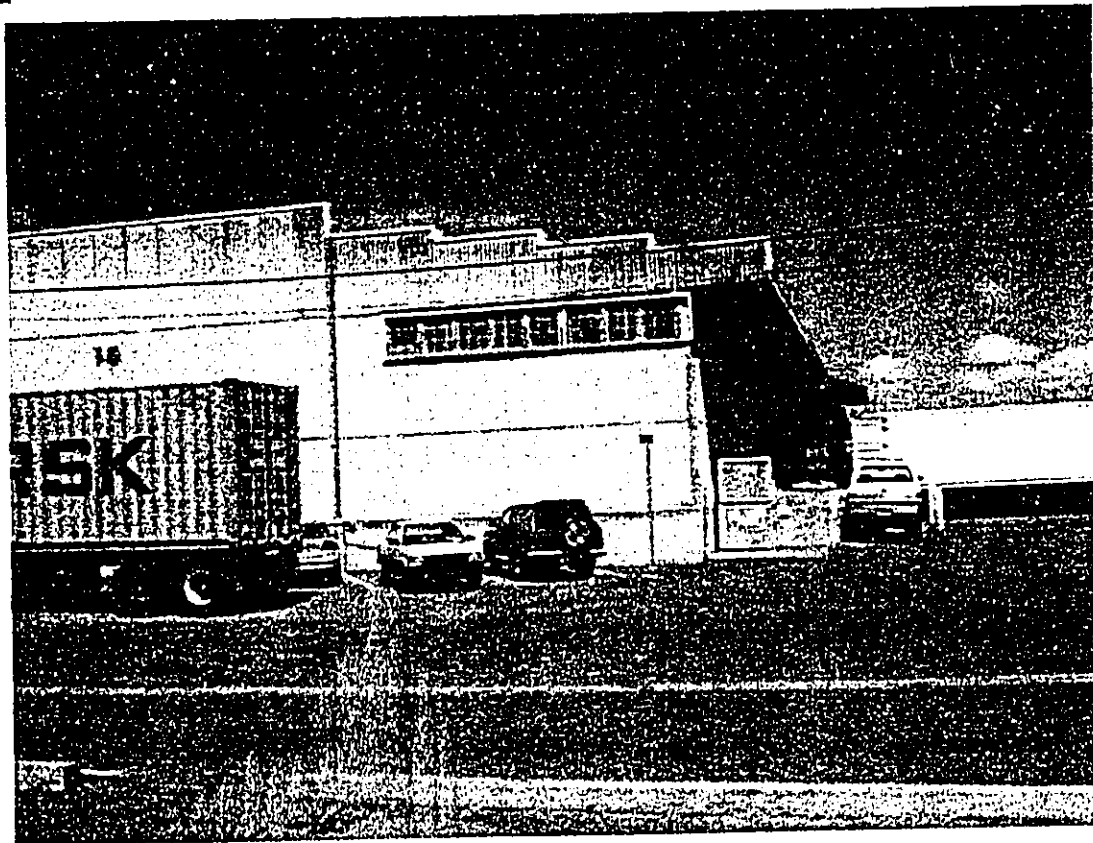
Building 905
Photo b



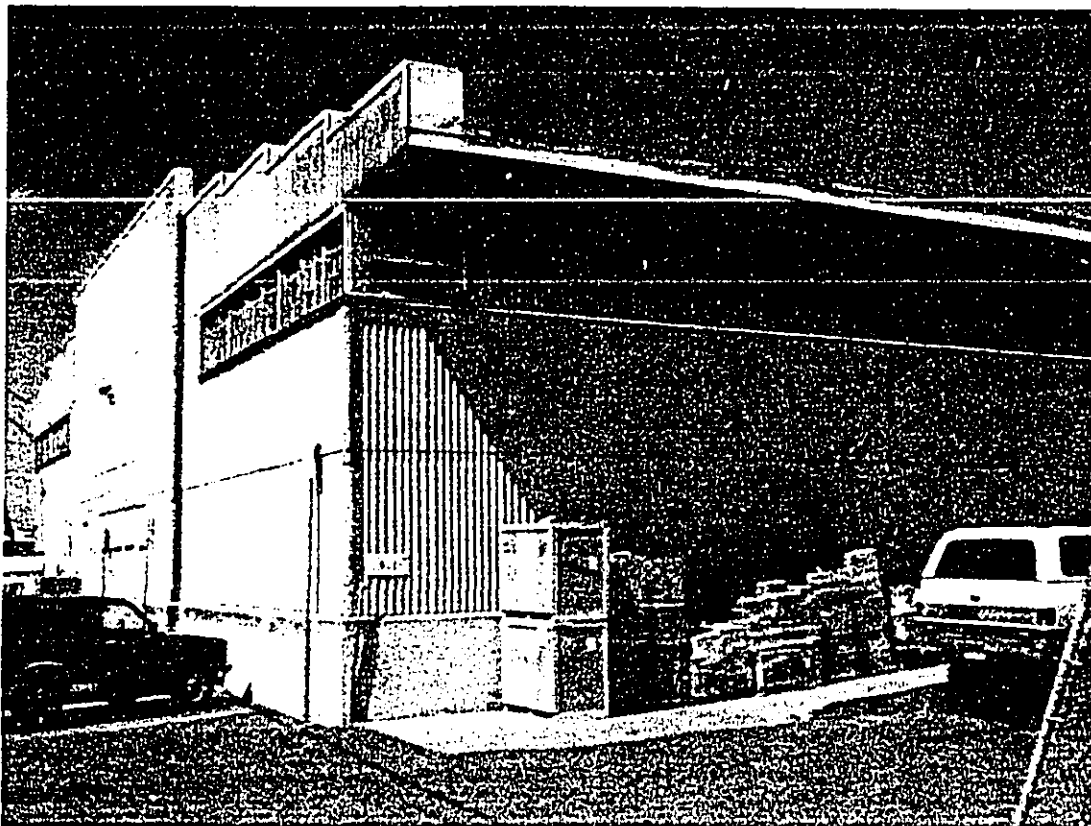
Building 905
Photo c



Building 906
Photo a



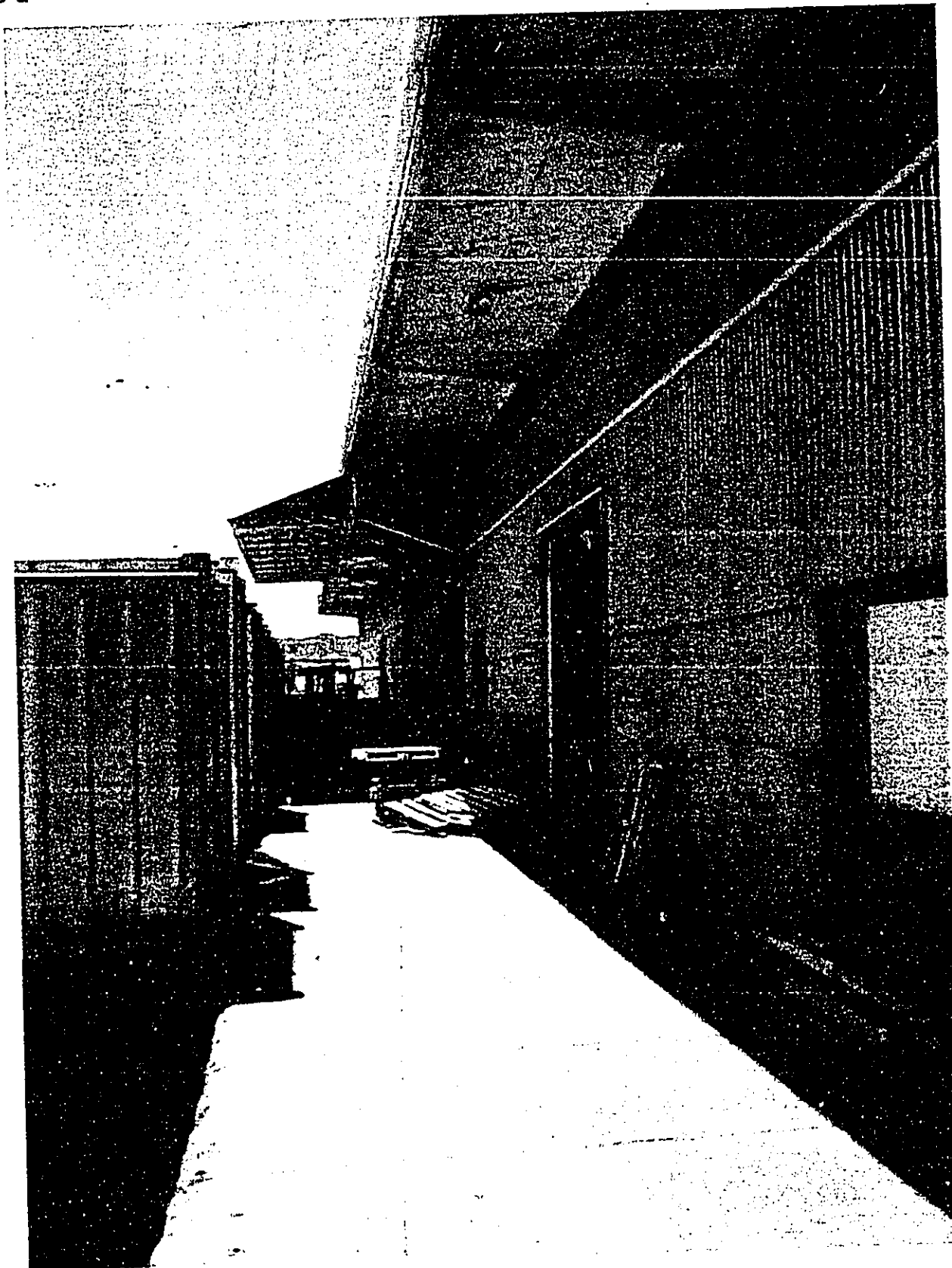
Building 906
Photo b



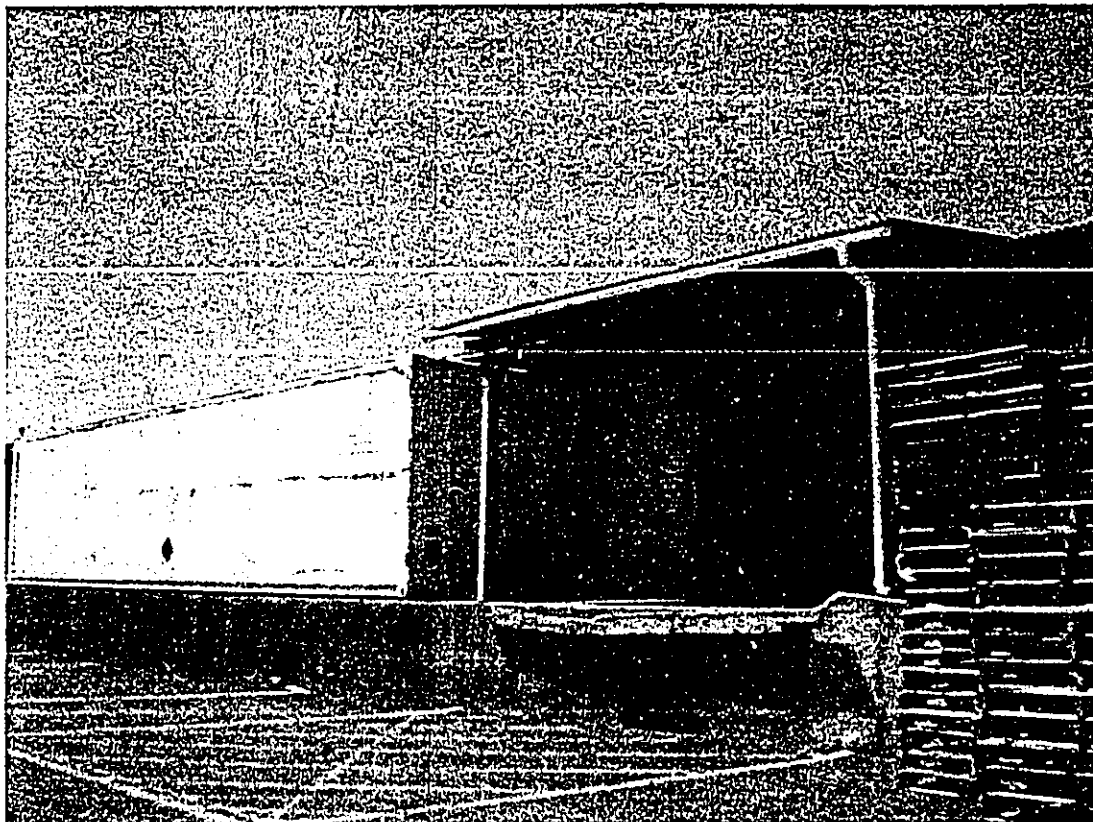
Building 906
Photo c



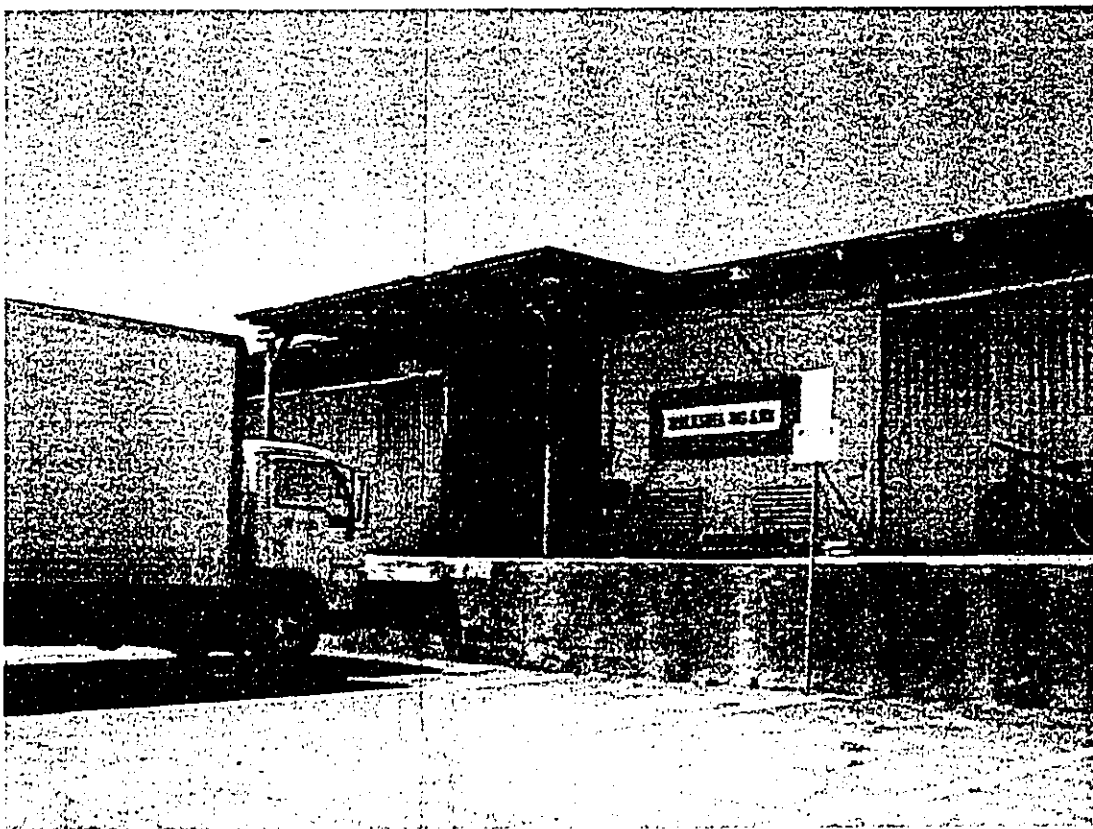
Building 906
Photo d



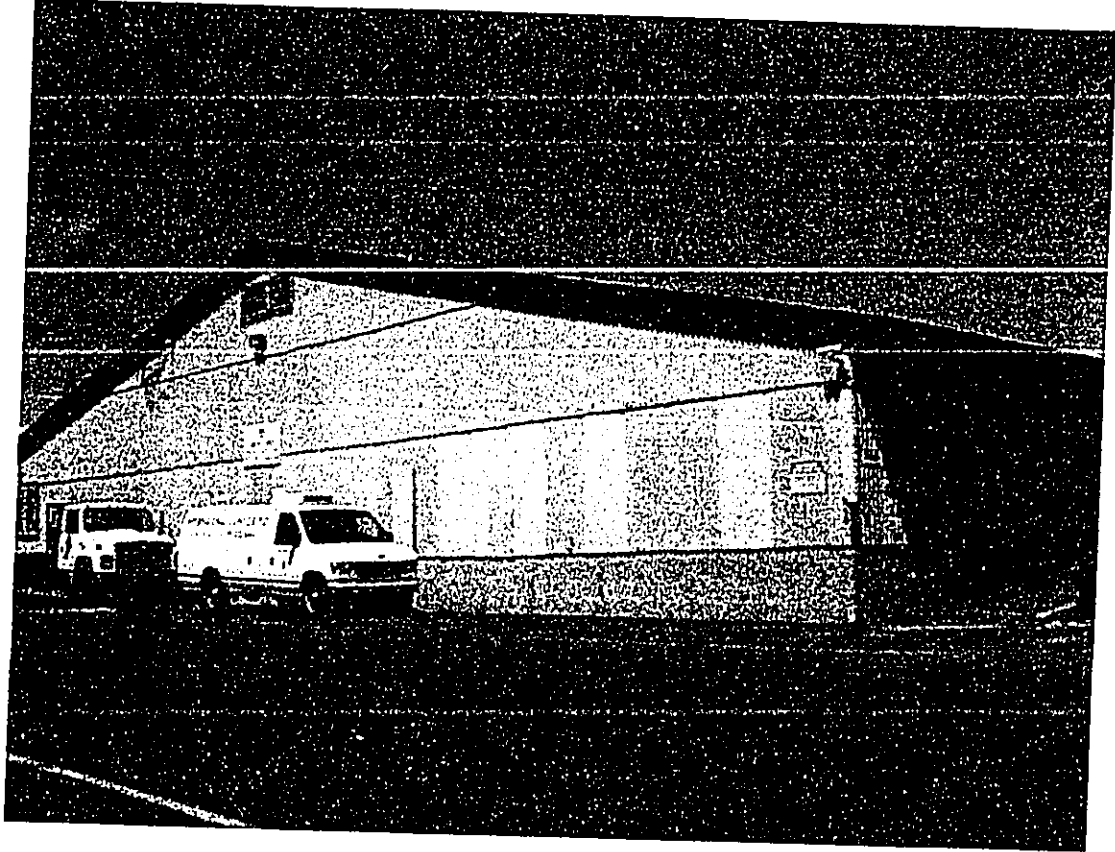
Building 908
Photo b



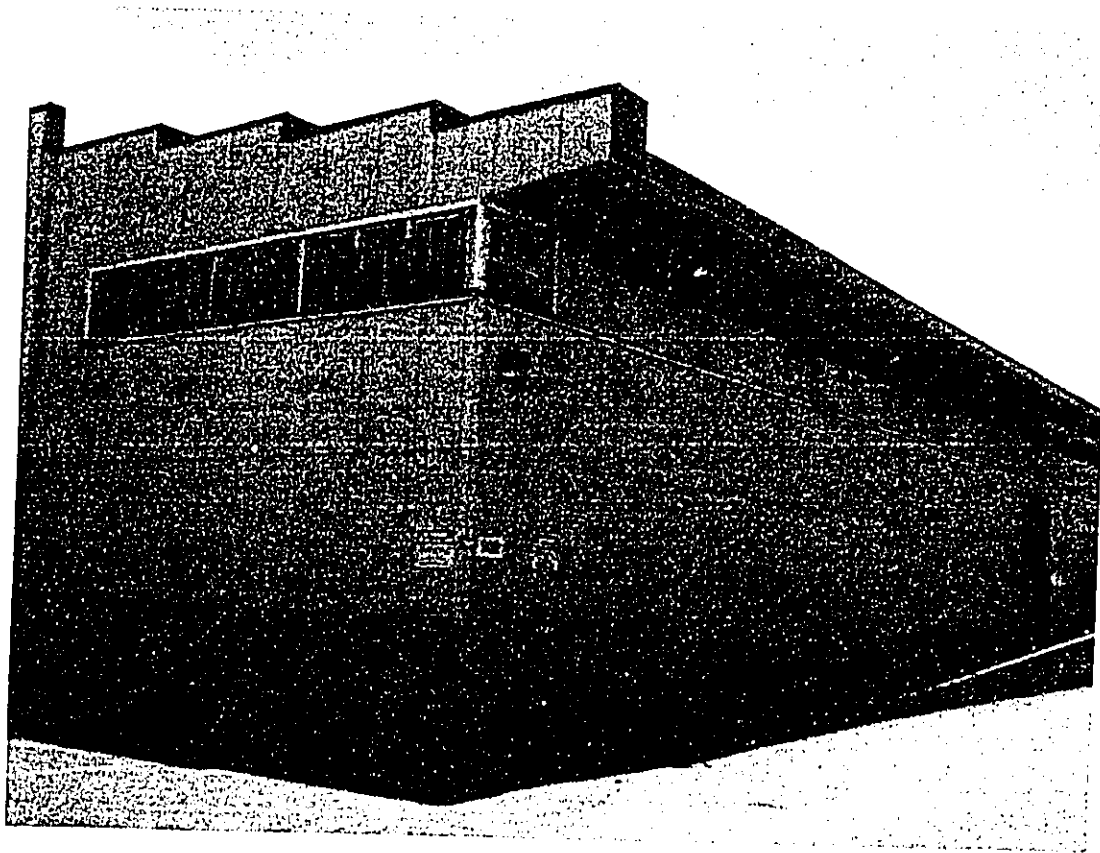
Building 908
Photo c



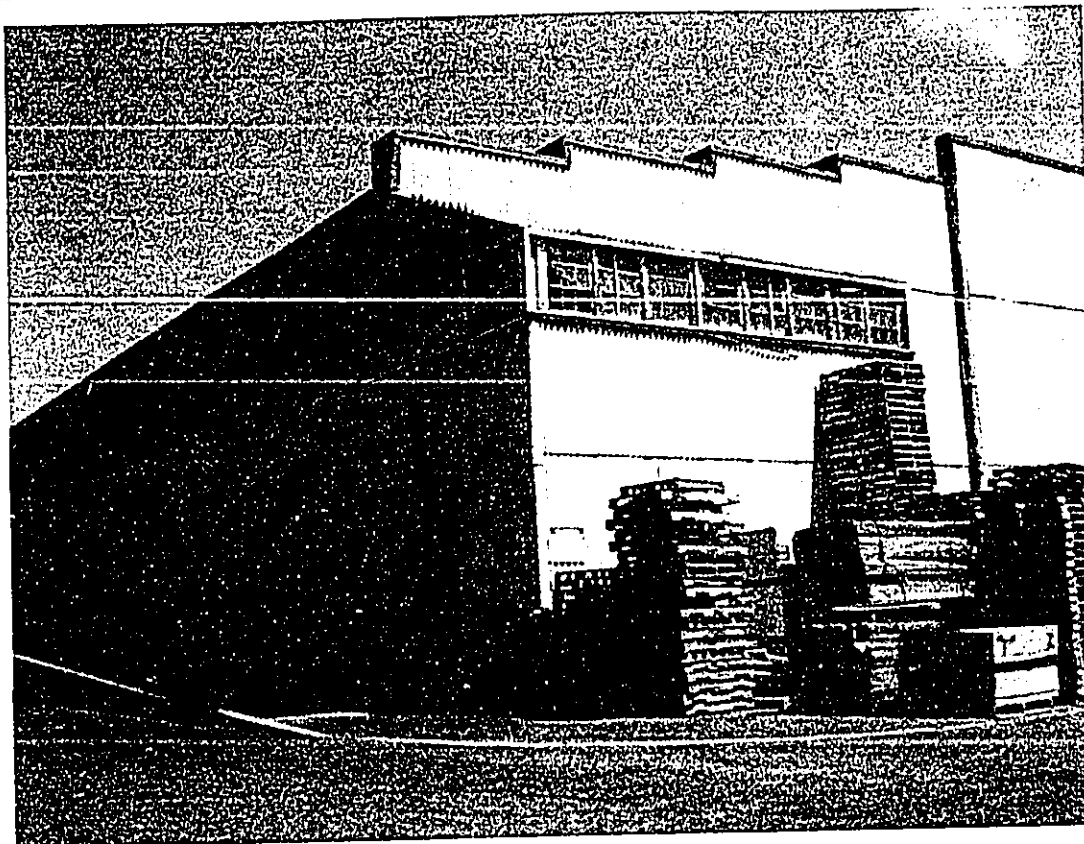
Building 908
Photo d



Building 909
Photo a



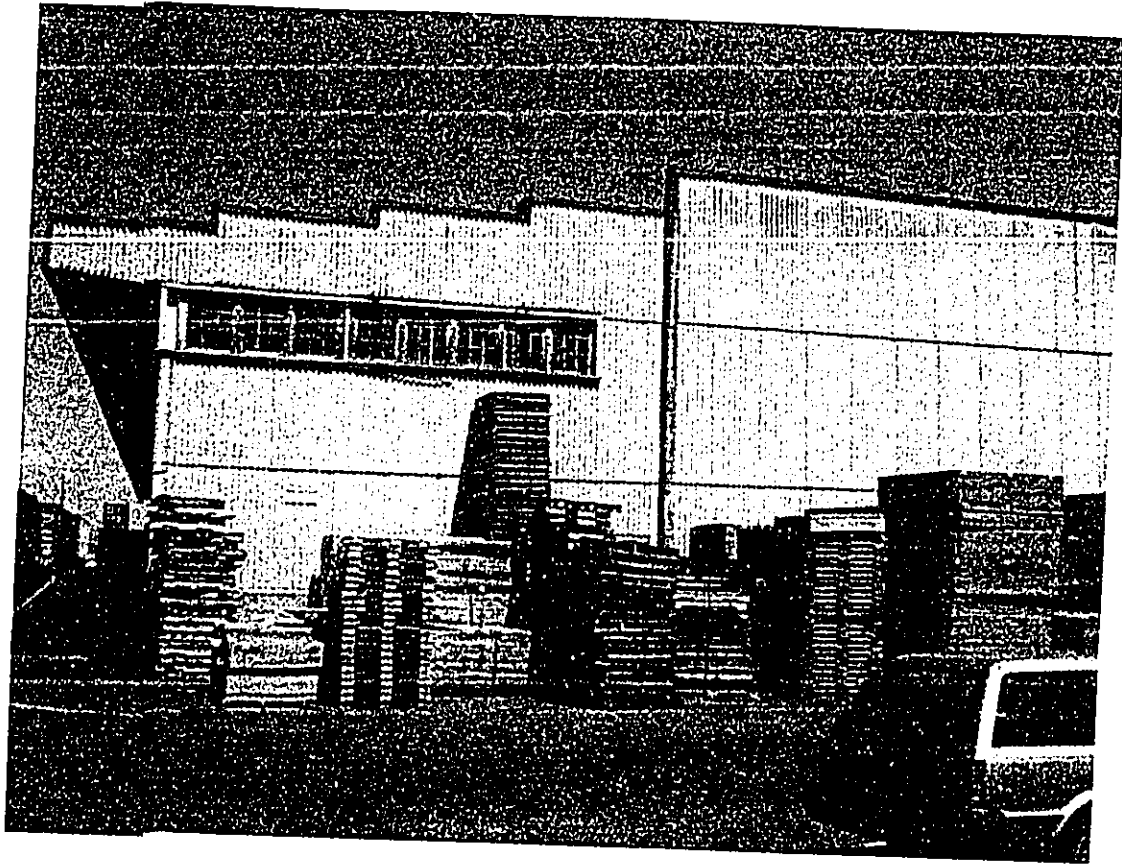
Building 909
Photo b



Building 909
Photo c



Building 909
Photo d



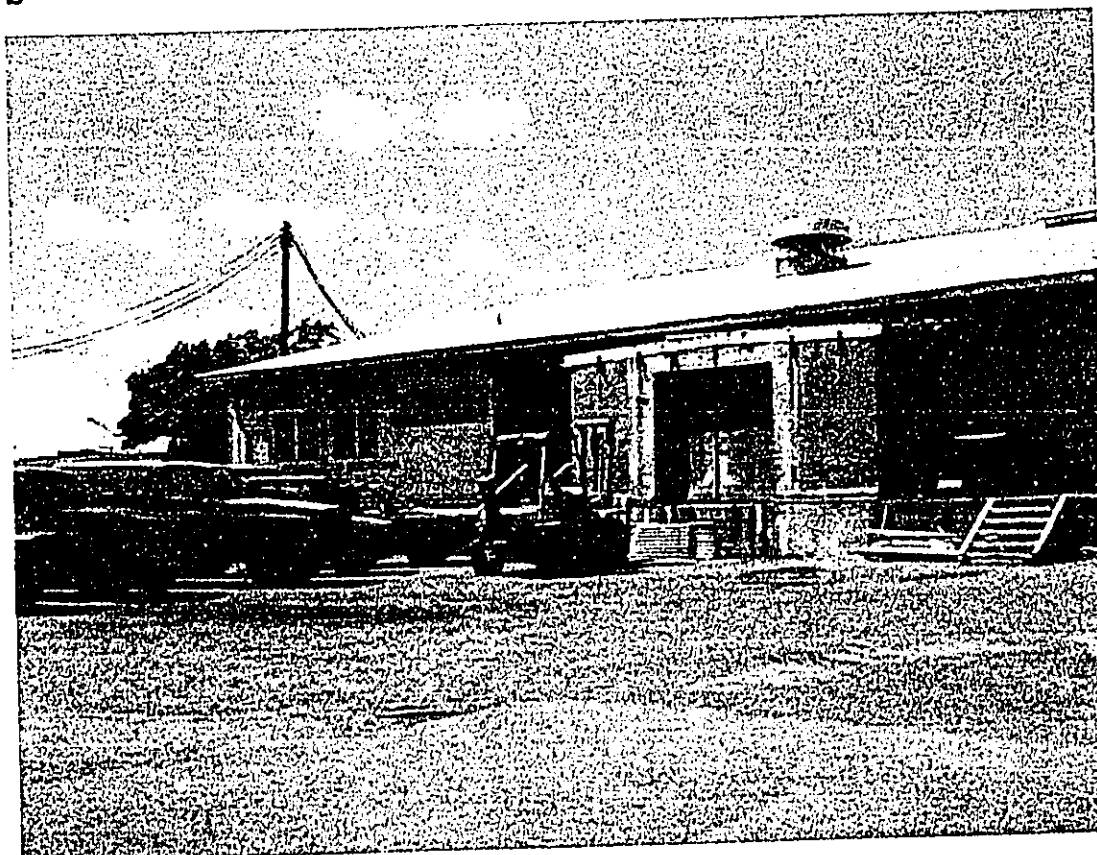
Building 909
Photo e



Building 910
Photo a



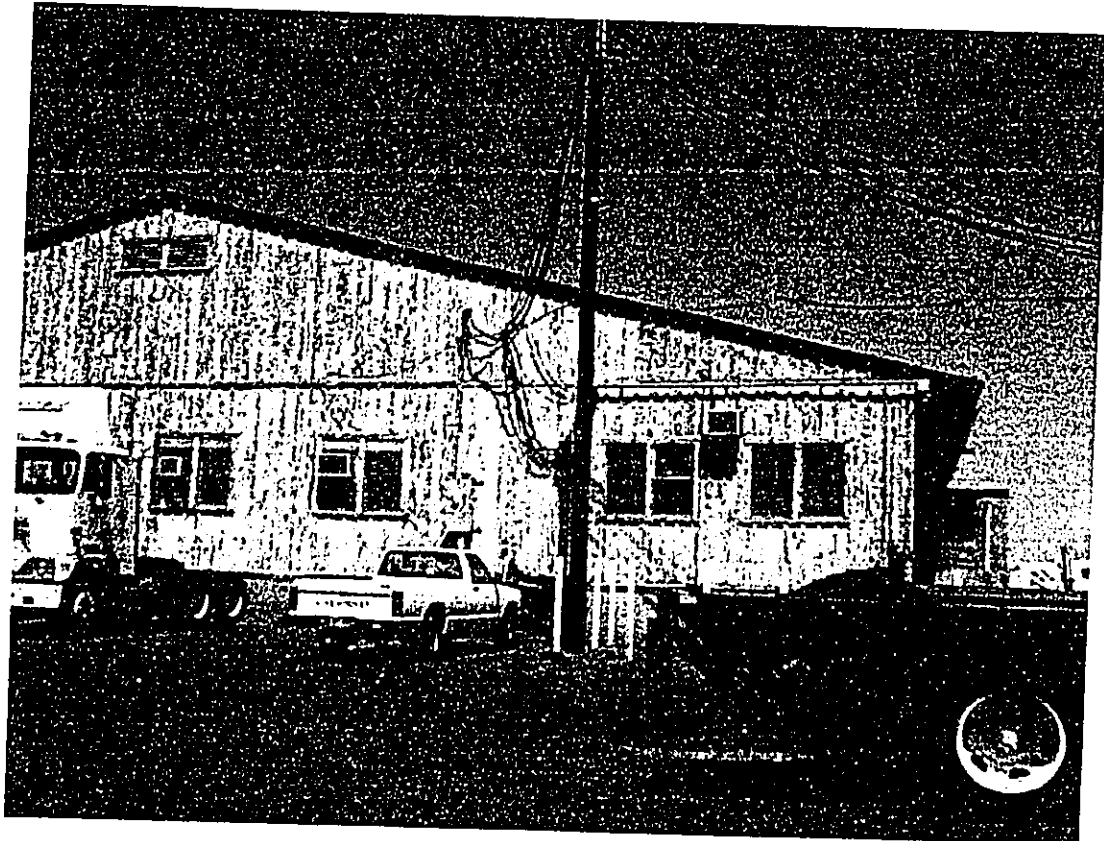
Building 910
Photo b



Building 910
Photo c



Building 910
Photo d

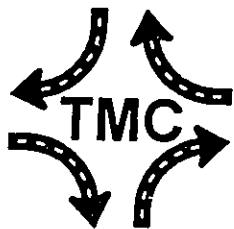


Appendix B

Traffic Impact Assessment Report

TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
**STATE DEPARTMENT OF AGRICULTURE
AND FOOD DISTRIBUTION CENTER**
FORMER KAPALAMA MILITARY RESERVATION

PREPARED FOR
R. M. TOWILL CORPORATION
JULY 26, 2001



PREPARED BY
THE TRAFFIC MANAGEMENT CONSULTANT
RANDALL S. OKANEKU, P.E., P.T.O.E., PRINCIPAL • 1188 BISHOP STREET, SUITE 1907 • HONOLULU, HI

Table of Contents

	<u>Page</u>
I. Introduction.....	1
A. Purpose of the Study	1
B. Scope of the Study	1
C. Project Description	1
D. Methodology.....	2
II. Existing Conditions	5
A. Roadways	5
E. Existing Peak Hour Traffic Volumes and Operating Conditions.....	6
1. Field Investigation and Data Collection.....	6
2. Existing AM Peak Hour Traffic.....	6
3. Existing PM Peak Hour Traffic	6
III. Future Traffic Conditions	9
A. Site-Generated Traffic.....	9
1. Trip Generation Methodology	9
2. Trip Generation Characteristics	9
B. External Traffic.....	10
C. Peak Hour Traffic Analysis Without Project	10
1. AM Peak Hour Traffic Analysis Without Project.....	10
2. PM Peak Hour Traffic Analysis Without Project	10
IV. Traffic Impact Analysis	12
A. General	12
B. AM Peak Hour Traffic Impact Analysis With Project.....	12
C. PM Peak Hour Traffic Impact Analysis With Project	12

V.	Conclusions and Recommendations.....	16
A.	Conclusions	16
B.	Recommendations.....	16
1.	Proposed Improvements Without Project.....	16
2.	Proposed Access Improvements	16

List of Figures

	<u>Page</u>
Figure 1. Vicinity Map	3
Figure 2. Proposed Site Plan	4
Figure 3. Existing AM Peak Hour Traffic.....	7
Figure 4. Existing PM Peak Hour Traffic	8
Figure 5. AM Peak Hour Traffic Without Project.....	11
Figure 6. PM Peak Hour Traffic Without Project.....	13
Figure 7. AM Peak Hour Traffic With Project.....	14
Figure 8. PM Peak Hour Traffic With Project.....	15

**TRAFFIC IMPACT ANALYSIS REPORT
FOR THE PROPOSED
STATE DEPARTMENT OF AGRICULTURE
AND FOOD DISTRIBUTION CENTER
FORMER KAPALAMA MILITARY RESERVATION**

I. Introduction

A. Purpose of the Study

The purpose of this study is to analyze the traffic impacts of the proposed relocation of the State of Hawaii Department of Agriculture (DOA) facilities from its current location in Kakaako to what was formerly known as the Kapalama Military Reservation (KMR). The State of Hawaii is also proposing to establish a Food Distribution Center (FDC) adjacent to the DOA facilities. This report presents the findings and recommendations of the study.

B. Scope of the Study

The scope of this study includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic conditions.
3. Analysis of future traffic conditions without the proposed project.
4. Development of trip generation characteristics of the proposed project.
5. Identification and analysis of access impacts resulting from the development of the proposed project.
6. Recommendations of improvements, as necessary, that would mitigate the access impacts identified in this study.

C. Project Description

The State of Hawaii is proposing to relocate the Department of Agriculture Quality Assurance Division, Measurement Standards Branch, Commodities Branch, and Plant Quarantine facilities from their current location on Ilalo Street in Kakaako to a portion of

what was formerly known as the Kapalama Military Reservation. The State of Hawaii is also proposing to establish a Food Distribution Center adjacent to the DOA facilities. FDC would accommodate the relocation of Produce Center Development, Ltd. (PCDL) facilities, whose current location also is on Ilalo Street in Kakaako.

The project site is located along the makai side of Auiki Street, between Mokauea Street and Libby Street. Figure 1 depicts the vicinity map. The site plan is depicted on Figure 2.

D. Methodology

The highway capacity analysis, performed for this study, is based upon procedures presented in the Highway Capacity Manual (HCM2000), Transportation Research Board. Level of Service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream". Several factors are included in determining LOS, such as: speed, travel time, freedom to maneuver, traffic interruptions, driver comfort, and convenience. LOS "A", "B", and "C" are considered satisfactory levels of service. LOS "D" is generally considered a "desirable minimum" operating level of service. LOS "E" is an undesirable condition, and LOS "F" is an unacceptable condition. Table 1 summarizes the LOS criteria.

Table 1. Level of Service Criteria (HCM2000)		
	Signalized Intersections	Unsignalized Intersections
LOS	Control Delay (sec/veh)	Control Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 – 20	> 10 – 15
C	> 20 – 35	> 15 - 25
D	> 35 – 55	> 25 – 35
E	> 55 – 80	> 35 – 50
F	> 80	> 50

II. Existing Conditions

A. Roadways

Sand Island Access Road is a four-lane, divided roadway between Nimitz Highway and Sand Island. Sand Island Access Road intersects Auiki Street/Pohaunui Drive at a four-legged signalized intersection. Sand Island Access Road provides exclusive left turn lanes in both directions at its intersection with Auiki Street/Pohaunui Drive. Sand Island Access Road is the primary access to the area from Nimitz Highway and Interstate Route H-1.

The existing Kapalama Military Reservation access is located on Sand Island Access Road between its intersection with Auiki Street and Sand Island Bridge. The KMR access is stop-controlled (unsignalized) at its intersection with Sand Island Access Road, opposite the access to parking lot for the boat harbor. A two-way left turn median lane is provided on Sand Island Access Road at the KMR access, which functions as an exclusive left turn lane.

Auiki Street is a two-way, two-lane roadway between Sand Island Access Road and Libby Street. Parking is permitted on both sides of Auiki Street, which is heavily utilized during the weekday daytime hours. Auiki Street acts as a bypass road for eastbound Nimitz Highway.

Mokauea Street is a two-way, two-lane roadway between Nimitz Highway and Auiki Street. Mokauea Street is stop-controlled at its Tee-intersection with Auiki Street. Mary Street is a two-way, two-lane street between Mokauea Street and Auiki Street. Mary Street intersects Auiki Street at an unsignalized Tee-intersection. The access driveway for the DOA facility is proposed on Auiki Street, opposite Mary Street.

Kalihi Street is a two-way, four-lane, undivided roadway between Nimitz Highway and Auiki Street. Kalihi Street is stop-controlled at its Tee-intersection with Auiki Street. Kalihi Street is the primary route to eastbound Lunalilo Freeway and Likelike Highway.

Libby Street is a two-way, two-lane roadway between Nimitz Highway and Auiki Street. Libby Street intersects Auiki Street at a four-legged, all-way stop intersection. The east leg of Auiki Street provides access to Pier 40. The makai leg of Libby Street provides access to Piers 41 and 42. Access to the FDC facility is proposed off of the makai leg of Libby Street.

E. Existing Peak Hour Traffic Volumes and Operating Conditions

1. Field Investigation and Data Collection

Manual traffic count surveys were conducted during the peak periods of traffic — from 6:00 AM to 8:30 AM and from 3:00 PM to 5:30 PM in May 2001 — at the following intersections:

- a. Sand Island Access Road and Auiki Street
- b. Sand Island Access Road and Kapalama Military Reservation Access
- c. Auiki Street and Mokauea Street
- d. Auiki Street and Mary Street
- e. Auiki Street and Kalihi Street
- f. Auiki Street and Libby Street

Additional Year 2000 truck traffic data on Sand Island Access Road were obtained from State Department of Transportation (DOT).

2. Existing AM Peak Hour Traffic

The AM peak hour of traffic occurred from 7:00 AM to 8:00 AM. The intersection of Sand Island Access Road and Auiki Street operated at an overall LOS "D", during the AM peak hour of traffic. The makai bound left turn movement and the westbound through/left turn movements operated at LOS "E".

The makai bound left turn movement from Kalihi Street to Auiki Street operated at LOS "D". The other intersections in the study area operated at satisfactory Levels of Service, i.e., LOS "C" or better, during the existing AM peak hour. Figure 3 depicts the existing AM peak hour traffic volumes and results of the capacity analysis.

3. Existing PM Peak Hour Traffic

The PM peak hour of traffic occurred between 3:15 PM and 4:15 PM. The intersection of Sand Island Access Road and Auiki Street operated at capacity during the PM peak hour of traffic. The intersection operated at an overall LOS "E". The makai bound left turn movement from Sand Island Access Road and the westbound through/left turn movement from Auiki Street operated at LOS "F". The mauka bound through/right turn movement on Sand Island Access Road operated at LOS "E".

The makai bound left turn movement from Kalihi Street to Auiki Street operated at LOS "E", during the existing PM peak hour of traffic. The eastbound left turn/through movement on Auiki Street at Libby Street operated at LOS "E". The existing PM peak hour traffic volumes and results of the capacity analysis are depicted on Figure 4.

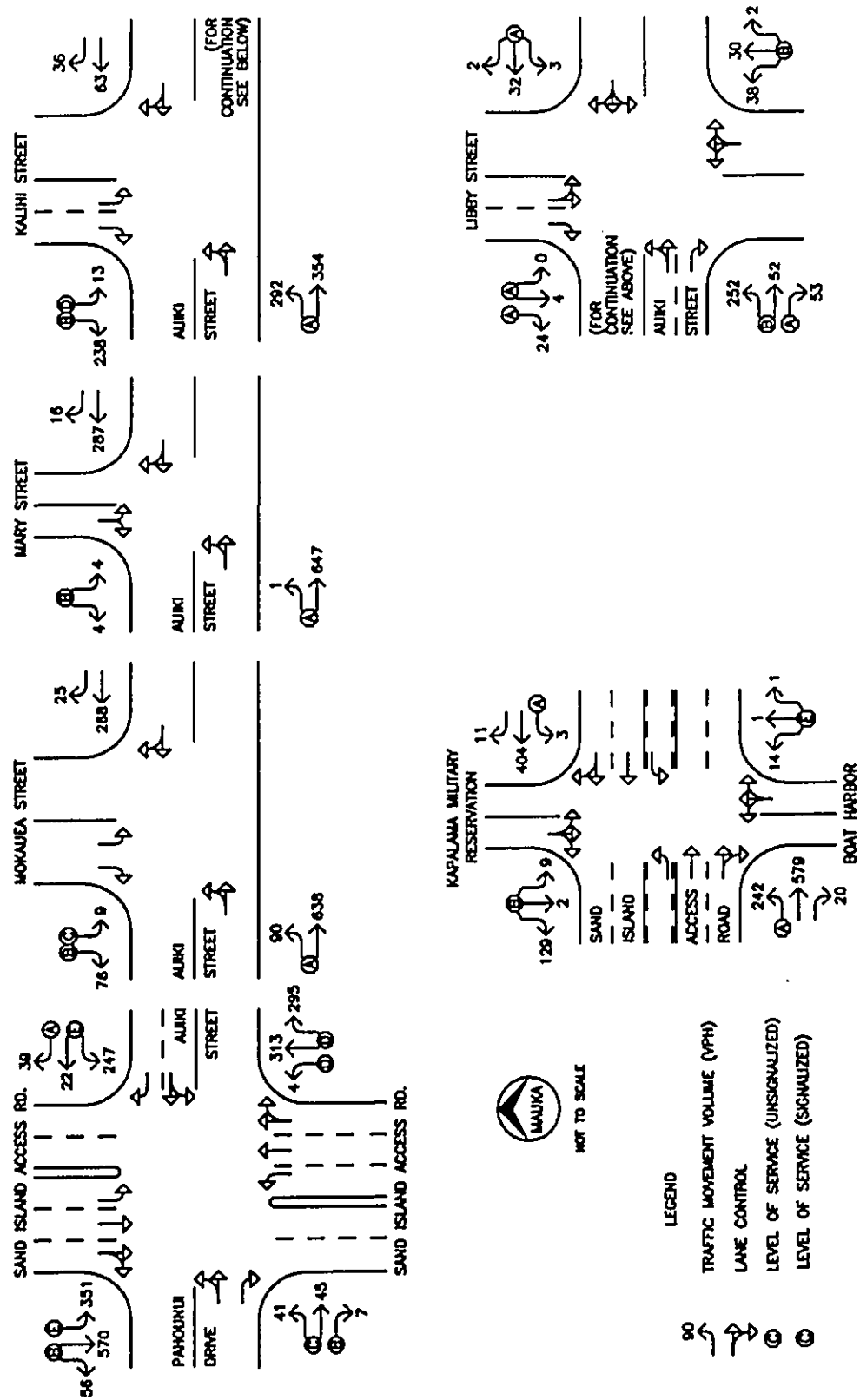


Figure 3. Existing AM Peak Hour Traffic

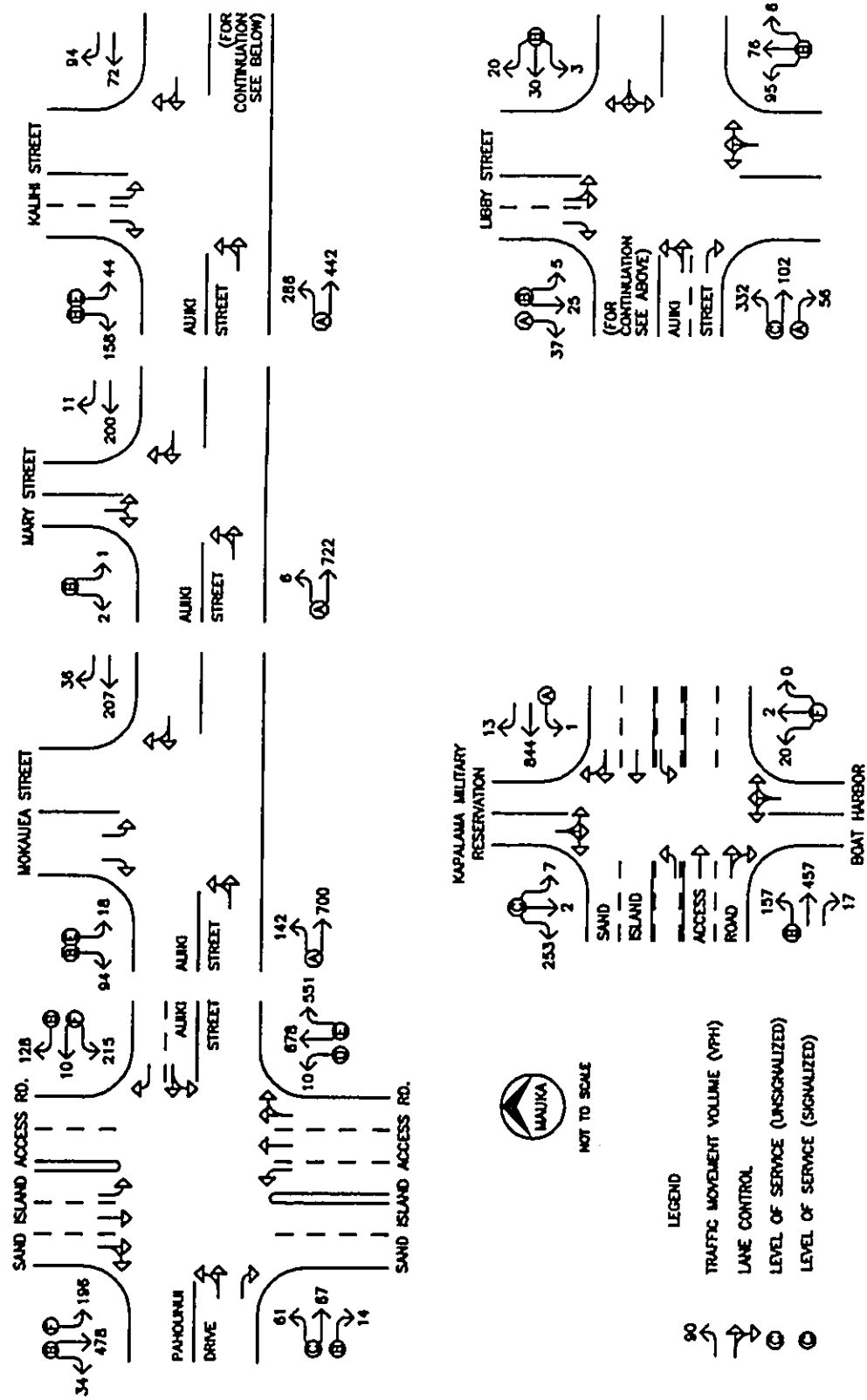


Figure 4. Existing PM Peak Hour Traffic

III. Future Traffic Conditions

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in *Trip Generation*, 6th Edition. ITE trip rates are developed by correlating the total vehicle trip generation data with various activity/land use characteristics, such as the vehicle trips per hour per employee.

2. Trip Generation Characteristics

The trip generation characteristics for DOA are based upon ITE trip rates for a government office building and a single tenant office building. The trip generation characteristics for FDC are based upon the ITE trip rates for *light industrial land use* activity. The independent variables used in the trip generation analysis for both facilities are the number of employees.

The proposed DOA facility is expected to generate a total of 43 vehicle trips per hour (vph) during the AM peak hour of traffic – 36 vph entering the site and 7 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate a total of 52 vph – 8 vph entering the site and 44 vph exiting the site.

The proposed FDC facility is expected to generate a total of 152 vehicle trips per hour (vph) during the AM peak hour of traffic — 126 vph entering the site and 26 vph exiting the site. During the PM peak hour of traffic, the proposed project is expected to generate a total of 144 vph — 17 vph entering the site and 127 vph exiting the site.

The existing Kapalama Military Reservation generated a total of 379 vph — 248 vph entering the site and 131 vph exiting the site, during the AM peak hour of traffic. During the PM peak hour of traffic, the existing Kapalama Military Reservation generates a total of 407 vph — 159 vph entering the site and 248 vph exiting the site. KMR contains about 561,634 square feet of gross floor area (SFGFA). The proposed project would displace tenants, which utilize about 235,200 SFGFA (42%). The existing site trip generation was reduced by 42 percent. The total site generation is expected to increase by 36 vph during the AM peak hour of traffic, and 25 vph during the PM peak hour of traffic. The trip generation characteristics for the proposed DOA and FDC facilities are summarized in Table 1.

Table 1. Trip Generation Characteristics						
Peak Hour		DOA	FDC	Total	KMR	Net
AM	Enter	36	126	162	-104	+58
	Exit	7	26	33	-55	-22
	Total	43	152	195	-159	+36
PM	Enter	8	17	25	-67	-42
	Exit	44	127	171	-104	+67
	Total	52	144	196	-171	+25

B. External Traffic

A linear regression analysis was performed on historical traffic count data that have been collected by the State Department of Transportation at the intersection of Sand Island Access Road and Auiki Street since 1991. The analysis indicated that traffic entering the intersection has increased at a rate of about 0.6 percent per year. The project is expected to be completed by the Year 2002. For the purpose of this traffic impact analysis, the Year 2006 was used as the planning horizon. A growth factor of 1.03 was applied to the existing traffic demands.

C. Peak Hour Traffic Analysis Without Project

1. AM Peak Hour Traffic Analysis Without Project

During the AM peak hour of traffic without the proposed project, the Levels of Service within the study area will remain relatively the same as the existing AM peak hour of traffic. Only the left turn movement from Mokauea Street to Auiki Street will worsen from LOS "C" to LOS "D". Figure 5 depicts the AM peak hour traffic without the proposed project, and the results of the capacity analysis.

2. PM Peak Hour Traffic Analysis Without Project

The overall intersection of Sand Island Access Road and Auiki Street is expected to deteriorate from LOS "E" to LOS "F", during the PM peak hour of traffic without the proposed project. To mitigate the LOS "F" conditions, the intersection would require widening of mauka bound Sand Island Access Road to provide for an exclusive right turn lane.

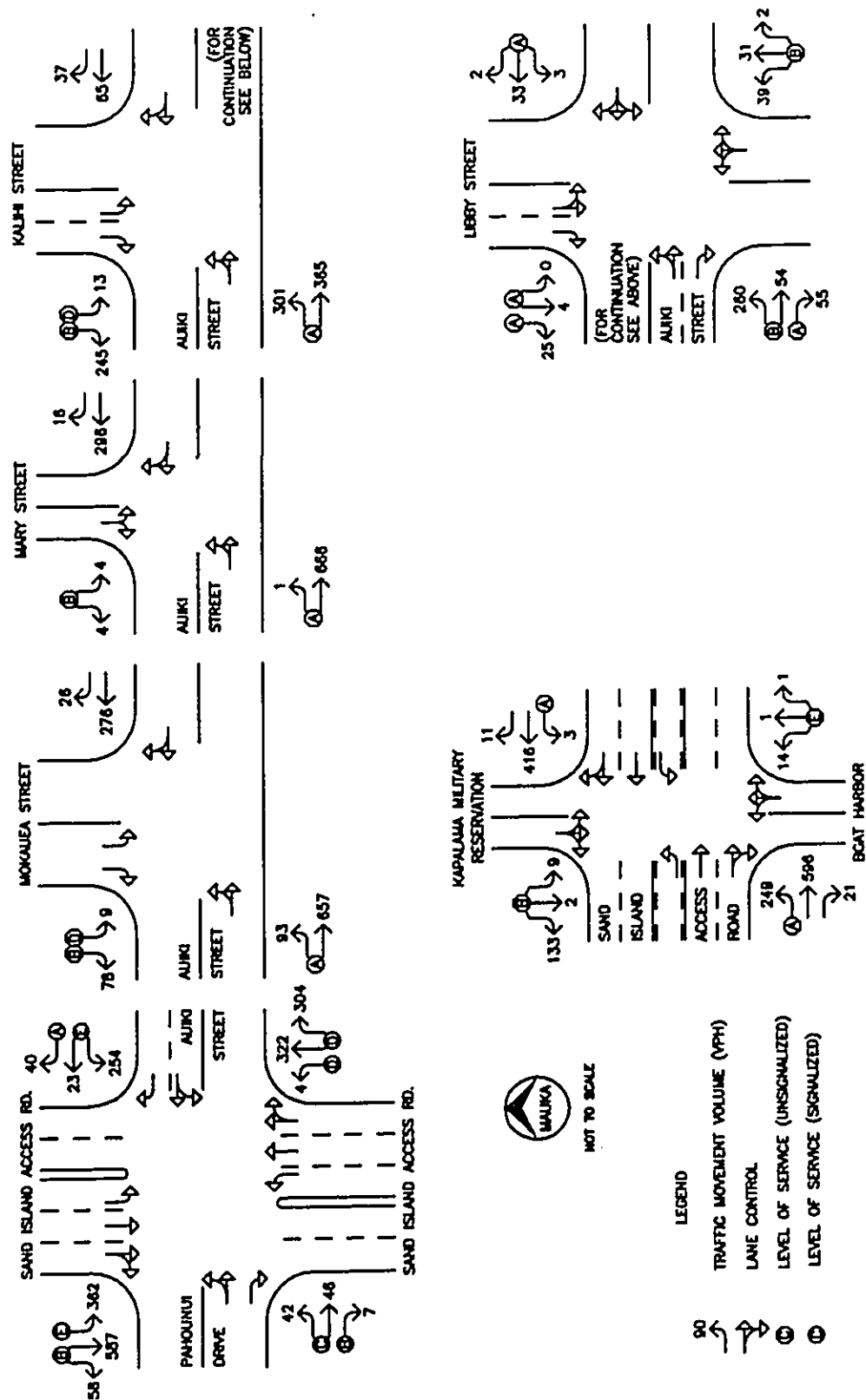


Figure 5. AM Peak Hour Traffic Without Project

The left turn movement from Kalihi Street to Auiki Street is expected to deteriorate from LOS "E" to LOS "F". The LOS "F" condition can be improved to LOS "D" by installing an exclusive left turn lane and a median shelter lane on eastbound Auiki Street at Kalihi Street. The PM peak hour traffic without the proposed project and the results of the capacity analysis are depicted on Figure 6.

IV. Traffic Impact Analysis

A. General

The proposed project is expected to result in a relatively small net increase in overall traffic due to the displacement of existing traffic generators located on the site. Therefore, the proposed project is not expected to significantly impact traffic operations on Nimitz Highway. The proposed accesses to DOA and FDC are expected to increase traffic on Auiki Street, while decreasing the peak hour traffic at the existing KMR access on Sand Island Access Road.

B. AM Peak Hour Traffic Impact Analysis With Project

The left turn movement from makai bound Sand Island Access Road to Auiki Street is expected to operate at LOS "E", during the AM peak hour with the proposed project. The overall intersection is expected to remain at LOS "D".

The left turn movement from Kalihi Street to Auiki Street is expected to operate at LOS "E", due to the increase in site traffic on Auiki Street. The LOS "E" conditions would be improved to LOS "C" under the proposed left turn lane improvements recommended in Section III.C.2. The DOA and FDC access driveways are expected to operate at satisfactory Levels of Service, during the AM peak hour of traffic with the proposed project. Figure 7 depicts the AM peak hour traffic with the proposed project and the results of the capacity analysis.

C. PM Peak Hour Traffic Impact Analysis With Project

The reduction in traffic from KMR is expected to improve the traffic operations at the intersection of Sand Island Access Road and Auiki Street from LOS "F" to LOS "E". The left turn movement from Kalihi Street to Auiki Street would continue to operate at LOS "F" under the existing roadway conditions. Providing left turn improvements on eastbound Auiki Street would improve operating conditions to LOS "D".

The shared left turn/through lane on eastbound Auiki Street at Libby Street is expected to operate at LOS "F", during the PM peak hour of traffic with the proposed traffic. The FDC access is expected to operate at LOS "E". The overall intersection can be improved by providing an exclusive left turn lane and a shared through/right turn lane at the FDC access. The DOA access on Auiki Street is expected to operate at LOS "C". The PM peak hour traffic with the proposed project and the results of the capacity analysis are depicted on Figure 8.

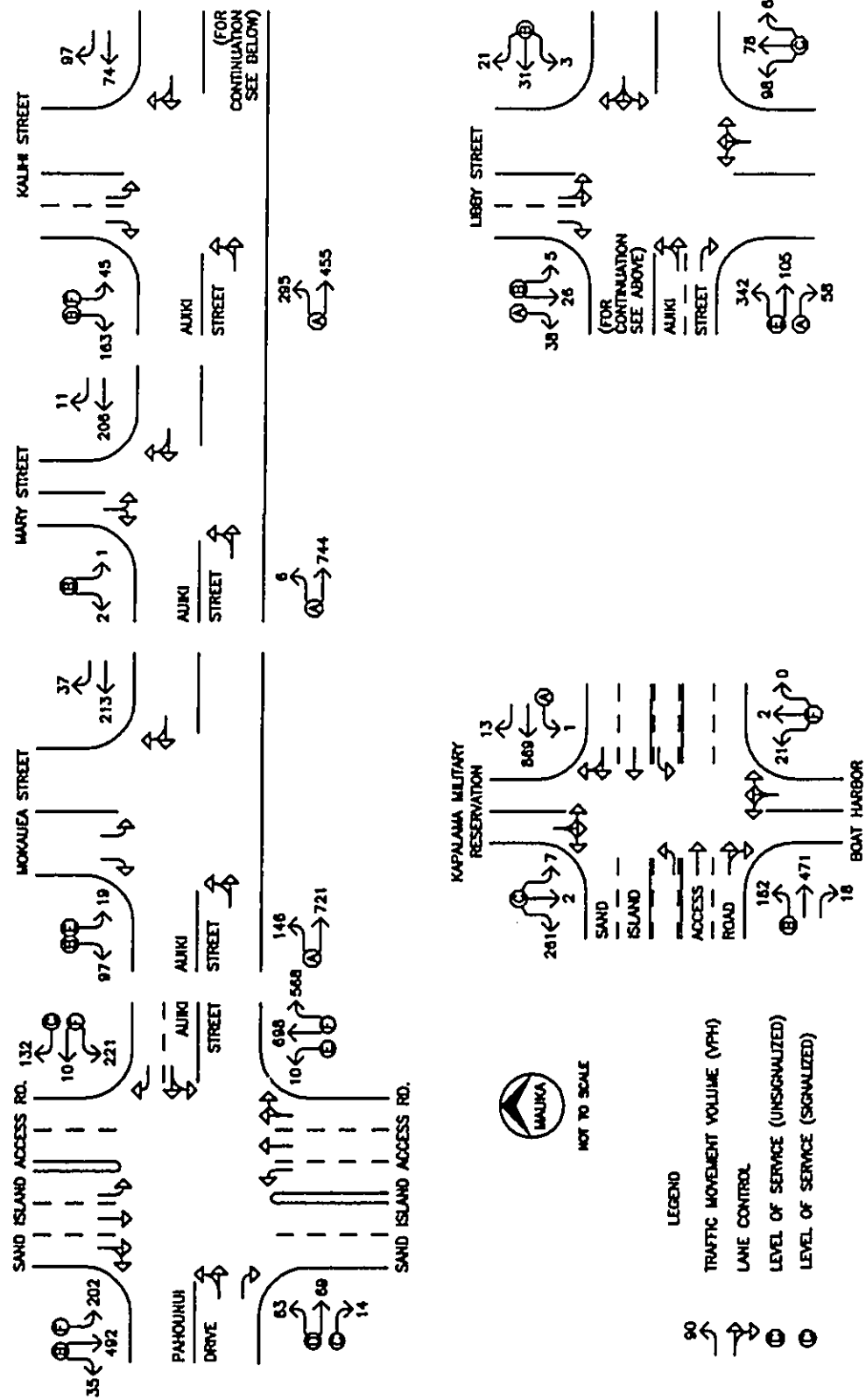


Figure 6. PM Peak Hour Traffic Without Project

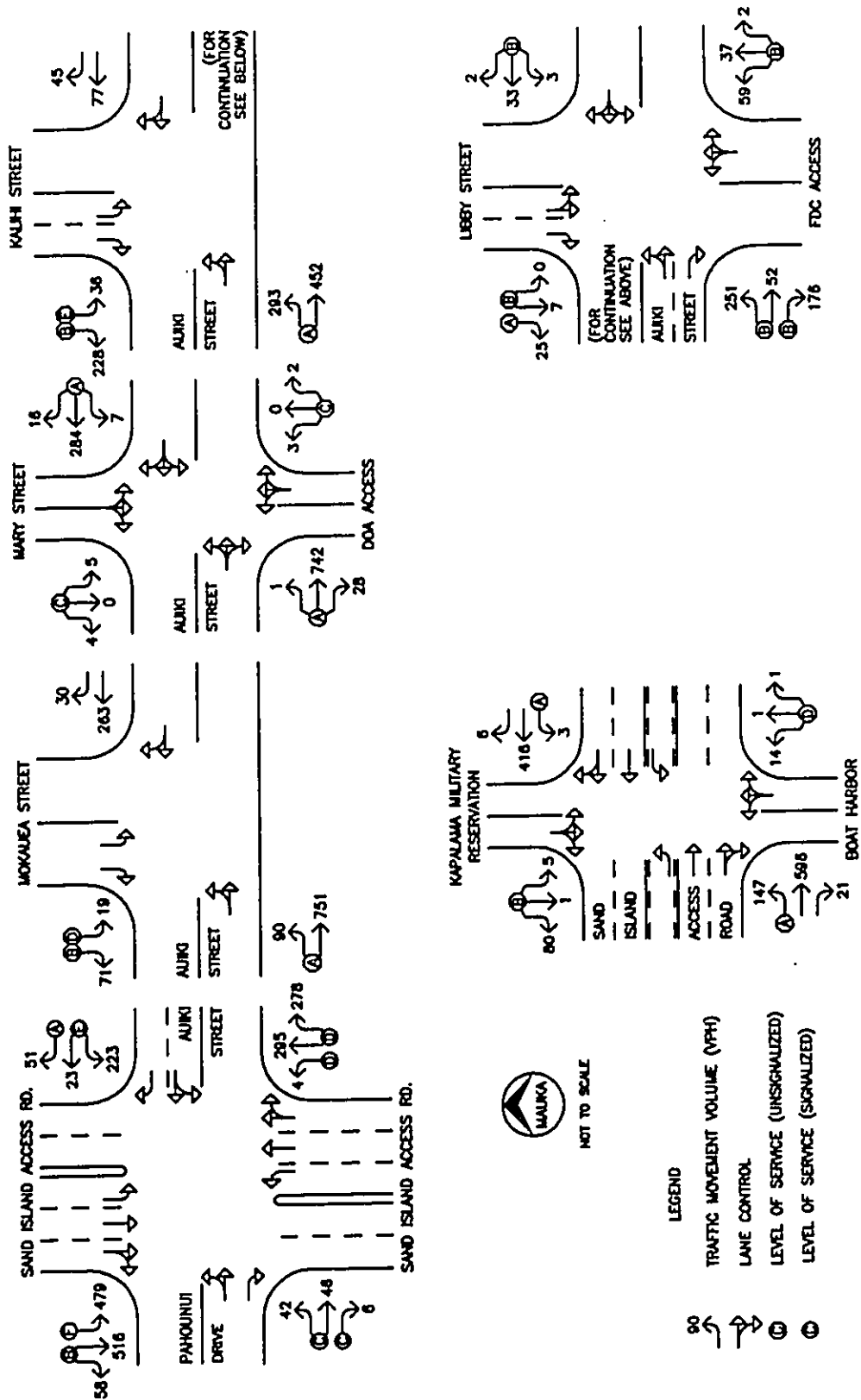


Figure 7. AM Peak Hour Traffic With Project

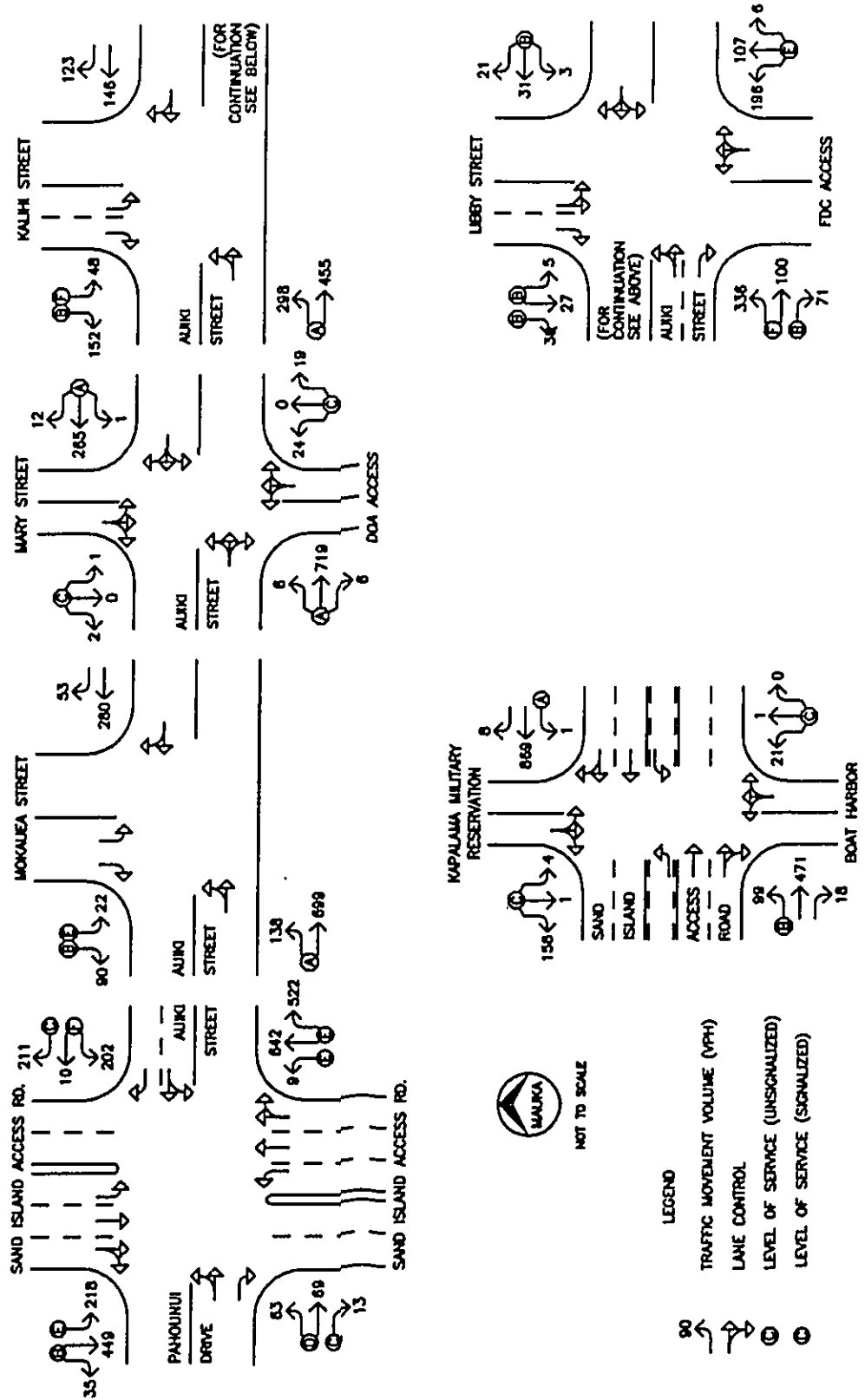


Figure 8. PM Peak Hour Traffic With Project

V. Conclusions and Recommendations

A. Conclusions

The relocation of the State of Hawaii Department of Agriculture Quality Assurance Division, Measurement Standards Branch, Commodities Branch, and Plant Quarantine facilities, and the establishment of a Food Distribution Center on a portion of the Kapalama Military Reservation site are not expected to impact traffic operations on Nimitz Highway. The proposed project is a redevelopment of an existing site and the net increase in traffic is less than 50 vph during the AM and PM peak hours of traffic.

The intersection of Sand Island Access Road and Auiki Street is expected to operate at LOS "F" during the PM peak hour of traffic without the proposed project. Mauka bound Sand Island Access Road should be widened to provide an exclusive right turn lane to Auiki Street. The proposed project would actually improve traffic operations during the PM peak hour of traffic by reducing the KMR traffic on Sand Island Access Road.

Auiki Street is a heavily traveled roadway, which will require turning lanes at key intersections without the proposed project. Traffic improvements on Auiki Street can be implemented within the existing roadway widths of Auiki Street, however on-street parking would have to be removed to provide a wider travel way to accommodate the left turn lanes.

Traffic on Auiki Street can be expected to increase, due to the proposed DOA and FDC accesses, which would be located opposite Mary Street and Libby Street, respectively. The proposed improvements discussed in the report are expected to mitigate the traffic impacts resulting from the relocation of the DOA and FDC facilities to the former Kapalama Military Reservation.

B. Recommendations

1. Proposed Improvements Without Project

- a. Widen mauka bound Sand Island Access Road to provide for an exclusive right turn lane to Auiki Street.
- b. Restripe eastbound Auiki Street to provide for an exclusive left turn lane and a median shelter lane to/from Kalihi Street. Prohibit on street parking on Auiki Street to accommodate the proposed left turn lanes.

2. Proposed Access Improvements

The mauka bound approach of Libby Street at Auiki Street should be widened/restriped to provide for an exclusive left turn lane and a shared through/right turn lane.

Appendix C

Environmental Site Assessment



MURANAKA
ENVIRONMENTAL CONSULTANTS, INC.
P.O. Box 4341 • Honolulu, Hawaii 96812
Phone: (808) 836-8822 • Fax: (808) 836-8833

May 14, 2001

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard, Suite 206
Honolulu, Hawaii 96814

Attention: Clarence Izuo

Regarding: New Measurements Standards Building and Plant Quarantine
Phase I Research and Site Investigation - Environmental
DAGS Job No. 12-11-7104
MEC Project No. 2001E001

Dear Mr. Izuo:

This is Muranaka Environmental Consultants, Inc.'s preliminary report on the site investigation conducted for the New Measurements Standards Building and Plant Quarantine project.

Introduction

Muranaka Environmental Consultants, Inc. was retained to conduct an environmental site reconnaissance and review of existing site documentation to determine any environmental matters that may impact the construction of the new Measurements Standards Building and Plant Quarantine. The proposed new buildings site will be situated in what is known as the Kapalama Development Complex Buildings 908 and 909. The site investigation was limited to only the areas affected by the proposed construction.

Background

In the early 1900s, the Kapalama shoreline was once the site of Hawaiian fishponds. From the period between 1900 and 1940, the northern portions of the Kapalama shoreline area were used as a municipal waste disposal area, junkyard and asphalt batch processing plant. In 1941, the United States Government condemned the Kapalama lands and established the Kapalama Military Reservation.

The Kapalama Military Reservation was the Army's Port Service Facility that handled shipping requirements for the Armed Forces during World War II through 1963. In 1964 and 1973 the Army transferred title of 13 acres and 2.84 acres, respectively, of the

Kapalama Military Reservation land to the State of Hawaii that in turn was leased to the University of Hawaii Marine Research Center.

In 1976, 31.7 acres of Pier 39, Pier 40 and adjacent backlands were transferred to the State. The State purchased Pier 41 from the Dillingham Corporation in 1978 and subsequently leased it out for ship repair and freight storage.

A 2.5 acre parcel on the northwestern corner of the Kapalama Military Reservation was transferred from the Army to the U.S. Postal Service in 1982. Then in 1985, the Army sold portions of the Kapalama Military Reservation as fee simple surplus property that was subsequently divided into 3 primary phases.

Phase I consisted of 14.5 acres of land adjacent to the U.S. Postal Service property that was purchased by Servco Pacific, Inc. in 1987 and used as a central warehouse facility for its automotive business.

Phase II consisted of the purchase of a 7.8 acre Phase IIA parcel by Dai Showa America Company, Ltd. and subsequent purchase by the State for 3.9 acres of the original parcel for use as Pier 39 and 40 interisland cargo terminal. Phase IIB and III the remaining 58 acres of Kapalama surplus property was purchased by the State in 1990.

In 1993 the Army also transferred 17.7 acres of ceded land to the State.

Site Observations

On April 17, 2001 a site inspection of Building 908 and 909 was conducted to identify possible hazardous materials that exist on the site.

Building 908

Building 908 was an unpainted wood frame warehouse structure with a corrugated metal roof, painted corrugated cement panel siding and an elevated unpainted concrete floor constructed in the 1940s. The existing building was surrounded by asphalt-pavement and other warehouse structures to the north, south and east. To the west of Building 908 was a chain link fence, asphalt-paved roadway and the asphalt-paved Servco Pacific automobile storage area. No access to the roof was available at the time of the site visit.

The building had two tenants, Walashek Industrial and Marine, and Taiyo, Inc. Walashek Industrial and Marine, a ship repair establishment was located on the east side of the warehouse building. The interior of the Walashek tenant space included a workroom/tool storage constructed of wood framing, painted wood paneling, painted canec ceiling, fluorescent light fixtures and bare concrete floor located just west of the north main entry. An office room located to the east of the north main entry was constructed of wood framing, painted wood wall panels, 2'x 4' drop ceiling system, fluorescent light fixtures and bare concrete floor. About a quarter of the tenant space was filled with metal racks for storage of various ship and equipment parts. The repair activities included sandblasting and welding. At the time of the site visit, it appeared that the sandblasting operation was performed

in the east side of the building. In the north side of the building, just west of the main entry, various compressed gas tanks were observed. The tanks were labeled as compressed oxygen and petroleum gas with methlacelene propadiene. No plumbing fixtures other than a water spigot was observed. A forklift was observed inside the tenant space.

The Taiyo, Inc. tenant space was located in the west side of the warehouse building. On the west exterior of Building 908 a water meter and electric panel was mounted on the corrugated cement panel. Immediately to the west interior of the north main entry of the Taiyo, Inc. tenant space was a combination of tables, metal shelving with boxes, fire extinguishers, 5-gallon size buckets, plastic storage shed, stainless refrigerator unit, stainless steel sink, water cooler, water filter system and soda machine. To the southwest corner, was a pre-fabricated aluminum framed office with laminated wall panels, 2' x 4' drop ceiling system with fluorescent light fixtures, bare concrete floor and wall mounted air conditioners. A refrigerator unit was observed on the east side of the pre-fabricated office along with various boxes. To the east of the tenant space metal racks with various boxes were observed in the open beam area. Fluorescent light fixtures hung from the wood framing and the floor was bare concrete. A wood room structure with a wall mounted air-conditioning unit was located in the northeast side of the tenant space. Just to the east of this room a small boat was stored next to another wood constructed room. A stainless steel refer unit was located in the southeast side of the tenant space. Various trucks and forklifts are used in and around the building.

In a search of public records, as of September 2000, Building 908 and its tenants were not listed as a facility that required reporting of stored chemicals to the State of Hawaii Department of Health, (HEPCRA HRS 128E) and there was no record of Release Notification to the State of Hawaii Department of Health, Office of Hazard Evaluation and Emergency Response (HEER) for releases of hazardous substances to the environment. Similarly, a search of the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) from multiple EPA systems indicated that the site is not included on the list of potential hazardous waste sites that have been or are being evaluated by the U.S. EPA Hazard Ranking System.

Building 909

Building 909 was a painted steel framed warehouse structure with a bare raised concrete floor, wood roof decking and painted corrugated cement panel wall siding. At the time of the site visit, no access to the roof was available. The building was surrounded on all four sides by asphalt pavement and other warehouse buildings. Royal Hawaiian Movers was the tenant in the entire structure. The tenant space had been subdivided into 2 spaces by a floor to ceiling drywall system. The west side of the space was filled with wood and cardboard storage boxes. The interior was lighted by incandescent light fixtures. The east

side of the tenant space had an office area and restroom facilities constructed of painted wood and drywall. The office was finished with carpet, 12"x 12" gray floor tile, gray cove base and fluorescent light fixtures. The office was also equipped with air-conditioning, fire and alarm systems. The restroom included showers, toilets, urinals, sinks painted walls and bare concrete floors. The rest of the interior of the east side space was filled with metal racks and boxes. The space had incandescent light fixtures and bare concrete floor. The exterior of the warehouse was fitted with mercury sodium light fixtures. Various trucks and forklifts are used in and around the facility.

In a search of public records, as of September 2000, Building 909 and its tenant were not listed as a facility that required reporting of stored chemicals to the State of Hawaii Department of Health, (HEPCRA HRS 128E) and there was no record of Release Notification to the State of Hawaii Department of Health, Office of Hazard Evaluation and Emergency Response (HEER) for releases of hazardous substances to the environment. Similarly, a search of the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) from multiple EPA systems indicated that the site is not included on the list of potential hazardous waste sites that have been or are being evaluated by the U.S. EPA Hazard Ranking System.

Recommendations for Hazardous Materials Survey

Building 908 and 909 should be surveyed and sampled for asbestos, lead-containing paint, arsenic, 8-RCRA metals, mercury-containing gages, fluorescent and sodium lamps, PCB-containing light fixture ballasts and refrigerants prior to demolition. It is recommended that the survey be conducted after the current tenants have moved out of the buildings to limit the expense of components to be sampled since tenants may remove and clean-up suspected items of their own accord. Similarly, surveying the buildings after the tenants have moved would determine if any hazardous materials have been left behind by the tenant. Items of environmental and occupational health concern include the following:

1. Roofing material (asbestos, lead)
2. Corrugated cement panels (asbestos, lead)
3. Fluorescent and sodium light fixtures (PCB, mercury)
4. Water meter (mercury)
5. Building 908: Walashek Industrial and Marine's interior sandblasting area (8 RCRA metals)
6. Air conditioning units and refers (refrigerants)
7. Building 908: Canec ceiling panels (asbestos, lead, arsenic)
8. 2'x 4' ceiling panels (asbestos, lead)
9. Drywall systems (asbestos, lead)
10. Metal exterior warehouse doors (lead)
11. Floor tile, cove base, mastic (asbestos)
12. Compressed gas tanks


Contingent to the results of the survey and testing, special removal design and proper handling of any confirmed hazardous materials would ensure compliance with Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA) and State of Hawaii Department of Labor, Division of Occupational Safety and Health (HIOSH) regulations.

Disclaimer

The conclusions, the observations, and the recommendations made in this report are based on the condition of the property at the time the survey was conducted. MEC accepts no responsibility for the inaccuracy or inapplicability of any part of this report that may be attributable to a change in the condition of the property after the survey was conducted or attributable to property conditions that were not readily accessible or observable at the time of the survey. In addition, we accept no responsibility for inaccurate or missing information provided by existing documents.

If you have any questions regarding this report, please feel free to call us at 836-8822.

Sincerely,



Diane Fujinaka
Project Inspector

DOCUMENT CAPTURED AS RECEIVED

JUL-24-2001 TUE 04:08 PM ANBE ARUGA ISHIZU
07/24/2001 15:51 8887323788

FAX NO. 808 949 1027
MURANAKA ENVIRN

P. 03
PAGE 81



MURANAKA
ENVIRONMENTAL CONSULTANTS, INC.
P.O. Box 4341 • Honolulu, Hawaii 96812
Phone: (808) 836-8822 • Fax: (808) 836-8833

RECEIVED
JUL 24 2001

ANBE, ARUGA & ISHIZU
ARCHITECTS, INC.

July 24, 2001

Anbe, Aruga & Ishizu, Architects, Inc.
1441 Kapiolani Boulevard, Suite 206
Honolulu, Hawaii 96814

Attention: Clarence Izuo

Regarding: New Measurements Standards Building and Plant Quarantine
Phase II Sampling and Testing - Environmental
DAGS Job No. 12-11-7104
MEC Project No. 2001E001

Dear Mr. Izuo:

This is Muranaka Environmental Consultants, Inc.'s (MEC) summary report for the Phase II Sampling and Testing for the subject project.

Anbe, Aruga & Ishizu, Architects, Inc. retained Muranaka Environmental Consultants, Inc. (MEC) to conduct asbestos, lead, PCB ballast and mercury lamp surveys and soil and water sampling at the site of the New Measurements Standards Building and Plant Quarantine Facility to identify suspected hazardous materials and petroleum soil/water contamination that may impact this project.

Asbestos, Lead, PCB, Mercury, Arsenic and CFC Survey

Limited exterior asbestos and lead sampling was conducted on June 14 and 15, 2001. The roofs and exterior walls of the existing warehouse buildings 908 and 909 were inspected and sampled. Asbestos (25% to 27% chrysotile and 3% crocidolite) was found in the corrugated exterior wall panels of both buildings. Lead was found in all exterior paint of window frames, door/door frames in both buildings (14% to 26% total lead content).

Although the interior sampling has not been completed to date, due to tenant occupancy, the asbestos and lead that was confirmed to exist will be addressed in the removal design documents. PCB ballasts, mercury lamps, arsenic-containing ceiling panels and CFC containing refrigerants are assumed to be on-site until confirmatory interior survey can be conducted after tenants vacate. These items will also be addressed in the removal design documents for the project.

New Measurements Standard Building and Plant Quarantine
Phase II - Sampling and Testing
MEC Project No. 2001E001

page 1

JUL-24-2001 TUE 04:07 PM ANBE ARUGA ISHIZU
07/24/2001 15:51 8887323788

FAX NO. 808 949 1027
MURANAKA ENVIRN

P. 02
PAGE 02

Soil and Water Sampling

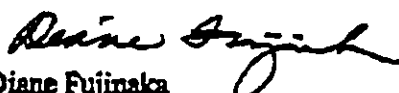
Soil sampling was conducted on April 17, 18, 19 and 20, 2001. The results of the soil sampling indicated that some of the soil at the 4' bsg level exceeds the DOH-RBCA Tier 1 Action Level for methylene chloride (0.011 to 0.019 mg/kg). Some of the soil was found to contain 1.1 mg/kg indeno (1,2,3-cd) pyrene and 4.5 mg/kg pyrene, although not listed in the DOH-RBCA Tier 1 Action Level tables, was listed in, but did not exceed the EPA Preliminary Remediation Goals (PRG). Soil was also found to contain polynuclear aromatic hydrocarbons (PAHs), 1.7 mg/kg benzo (g,h,i) perylene which is not currently listed in the DOH-RBCA Tier 1 Action Level nor the EPA PRG but still is a concern for dermal contact during construction. Soil sampled at the 2' bsg level did not indicate soil contaminants exceeding the DOH-RBCA Tier 1 Action Levels.

Water sampling was conducted on April 17, 18, 19 and 20, 2001. Groundwater was encountered at 7'-6" to 9' bsg level and collected at the 13' to 15' bsg level. The groundwater was found to exceed the DOH-RBCA Tier 1 Action Level for lead (0.02 to 0.59 mg/kg) and cadmium (0.02 mg/kg).

Correspondence and discussion as of this date with the Department of Health Solid and Hazardous Waste Branch confirmed that the soil and groundwater can remain on site and they will not require removal. Therefore for the purpose of this project, existing soil and groundwater will remain on site during the construction of the new facility, however health and safety issues and handling of contaminated soil and groundwater encountered during construction will be addressed in the design documents.

If you have any questions regarding this summary report, please feel free to call me at 836-8822.

Sincerely,


Diane Fujinaka
Project Manager

DOCUMENT CAPTURED AS RECEIVED

87/25/2001 18:02 8087323788

MURANAKA ENVIRN

PAGE 01



MURANAKA
ENVIRONMENTAL CONSULTANTS, INC.
P.O. Box 4341 • Honolulu, Hawaii 96812
Phone: (808) 835-8822 • Fax: (808) 835-8833

7/25/01 pm
BI

FACSIMILE TRANSMITTAL

Date: July 25, 2001
Time: 18:00 p.m.
To: Brian Isa
Company: DAGS - Planning Branch
Fax No.: 586-0482

Number of Pages (including this cover page): 11

From: Diane Fujinaka
Telephone: (808) 864-3805
Fax No.: (808) 732-3788

If you do not receive all pages, please call me at (808) 732-3788 or 864-3805.

Regarding: **New Measurements Standards Building and Plant Quarantine**
DAGS Job No. 12-11-7104
MEC Project No. 2001E001

Please find attached a copy of the soil and water sampling results and a summary report of our testing and findings for your use.

Please call me at 864-3805 if you have any questions.

Table 1A: Soil Sampling Results at Building 908, Boring T1

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MIBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S6, 4/18/01, Boring T1, West side of Bldg 908	2'	ND	ND	ND	ND	ND	ND	ND	37	1.6	ND
2001E001-S6, 4/18/01, Boring T1, West side of Bldg 908	4'	ND	ND	ND	ND	ND	ND	ND	29	1.2	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1B: Soil Sampling Results at Building 908, Boring T2

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MIBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S7, 4/18/01, Boring T2, North side of Bldg 908	2'	ND	ND	ND	ND	ND	ND	ND	1.5	1.3	ND
2001E001-S8, 4/18/01, Boring T2, North side of Bldg 908	4'	ND	ND	ND	ND	ND	ND	ND	ND	0.74	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1C: Soil Sampling Results at Building 908, Boring B2/T6

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MtBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S3 4/17/01 Boring B2/T6, NE corner of Bldg. 908	2	ND	NC	ND	ND	ND	ND	ND	1.1	0.48	ND
2001E001-S4 4/17/01 Boring B2/T6, NE corner of Bldg. 908	4	ND	NC	NC	ND	ND	1.7 Benzo (g,h,i) Perylene 1.1 Indene (1,2,3-cd) Pyrene	0.019 Methylene chloride (Dichloro-methane)	3.1	0.81	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1D: Soil Sampling Results at Building 908, Boring B1/T5

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MtBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S9 4/19/01 Boring B1/T5, South side of Bldg. 908	4'	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND
2001E001-S10 4/19/01 Boring B1/T5, South side of Bldg. 908	8'	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1E: Soil Sampling Results at Building 909, Boring T3

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MtBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S11 4/19/01 Boring T3, NW side of Bldg. 909	2'	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND
2001E001-S12 4/19/01 Boring T3, NW side of Bldg. 909	4'	ND	ND	ND	ND	ND	4.5 Pyrene	ND	ND	1.0	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1F: Soil Sampling Results at Building 909, Boring B4/T8

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MtBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S13 4/20/01 Boring B4/T8, North side of Bldg. 909	2'	ND	ND	ND	ND	ND	ND	ND	ND	0.80	ND
2001E001-S14 4/20/01 Boring B4/T8, North side of Bldg. 909	4'	ND	ND	ND	ND	ND	ND	ND	ND	0.90	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1G: Soil Sampling Results at Building 909, Boring T4

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRPH/oil & grease (mg/kg)	BTEX (mg/kg)	MtBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S15 4/20/01 Boring T4, South side of Bldg. 909	2'	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2001E001-S16 4/20/01 Boring T4, South side of Bldg. 909	4'	ND	ND	ND	ND	ND	ND	ND	ND	0.75	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 1H: Soil Sampling Results at Building 909, Boring B3/T7

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/kg)	TPH-diesel (mg/kg)	TRP-oil & grease (mg/kg)	BTEX (mg/kg)	MIBE (mg/kg)	PAHs (mg/kg)	HVO (mg/kg)	Total lead (mg/kg)	Total cadmium (mg/kg)	PCB (mg/kg)
2001E001-S1 4/17/01 Boring B3/T7, SW corner of Bldg. 909	2'	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND
2001E001-S2 4/17/01 Boring B3/T7, SW corner of Bldg. 909	4'	ND	ND	ND	ND	ND	ND	0.011 Methylene chloride (Dichloromethane)	ND	ND	ND

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for soil. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

5.2 Water Sample Results

The laboratory results for the water samples are shown in Tables 2A through 2H. The supporting laboratory reports and associated chain-of-custody forms can be found in Appendix B.

Table 2A: Water Sampling Results at Boring T1

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/oil & grease (mg/L)	BTEX (mg/L)	M:BE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V3 4/18/01 Boring T1, West side of Bldg. 908	13'	ND	-	-	ND	ND	-	ND	-	-	-	7.5
2001E001-A3 4/18/01 Boring T1, West side of Bldg. 908	13'	-	ND	-	-	-	ND	-	-	-	ND	
2001E001-T3 4/18/01 Boring T1, West side of Bldg. 908	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M3 4/18/01 Boring T1, West side of Bldg. 908	13'	-	-	-	-	-	-	-	0.02	ND	-	

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for groundwater. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2B: Water Sampling Results at Boring T2

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V4 4/18/01 Boring T2, North side of Bldg. 908	13'	ND	-	-	ND	ND	-	ND	-	-	-	7.5
2001E001-A4 4/18/01 Boring T2, North side of Bldg. 908	13'	-	ND	-	-	-	ND	-	-	-	-	
2001E001-T4 4/18/01 Boring T2, North side of Bldg. 908	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M4 4/18/01 Boring T2, North side of Bldg. 908	13'	-	-	-	-	-	-	-	0.02	ND	-	

*Bold results indicate levels that exceed the COH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2C: Water Sampling Results at Boring B2/T6

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V2 4/17/01 Boring B2/T6, NE corner of Bldg. 908	13'	ND	-	-	ND	ND	-	ND	-	-	-	8
2001E001-A2 4/17/01 Boring B2/T6, NE corner of Bldg. 908	13'	-	ND	-	-	-	ND	-	-	-	ND	
2001E001-T2 4/17/01 Boring B2/T6, NE corner of Bldg. 908	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M2 4/17/01 Boring B2/T6, NE corner of Bldg. 908	13'	-	-	-	-	-	-	-	0.16	0.02	-	

*Bold results indicate levels that exceed the COH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2D: Water Sampling Results at Boring B1/T5

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/ oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V5 4/19/01 Boring B1/T5, South side of Bldg. 905	13'	ND	-	-	ND	ND	-	ND	-	-	-	7.5
2001E001-A5 4/19/01 Boring B1/T5, South side of Bldg. 905	13'	-	-	-	-	-	ND	-	-	-	-	
2001E001-T5 4/19/01 Boring B1/T5, South side of Bldg. 905	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M5 4/19/01 Boring B1/T5, South side of Bldg. 905	13'	-	-	-	-	-	-	-	0.03	ND	-	

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2E: Water Sampling Results at Boring T3

Sample Number, Date & Location	Depth (bgs)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/ oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V6 4/19/01 Boring T3, NW side of Bldg. 909	13'	ND	-	-	ND	ND	-	ND	-	-	-	7.5
2001E001-A6 4/19/01 Boring T3, NW side of Bldg. 909	13'	-	-	-	-	-	ND	-	-	-	ND	
2001E001-T6 4/19/01 Boring T3, NW side of Bldg. 909	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M6 4/19/01 Boring T3, NW side of Bldg. 909	13'	-	-	-	-	-	-	-	0.59	ND	-	

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2F: Water Sampling Results at Boring B4/T8

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V7 4/20/01 Boring B4/T8, North side of Bldg. 909	13'	ND	-	-	ND	ND	-	ND	-	-	-	7
2001E001-A7 4/20/01 Boring B4/T8, North side of Bldg. 909	13'	-	ND	-	-	-	ND	-	-	-	ND	
2001E001-T7 4/20/01 Boring B4/T8, North side of Bldg. 909	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M7 4/20/01 Boring B4/T8, North side of Bldg. 909	13'	-	-	-	-	-	-	-	ND	ND	-	

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RSCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2G: Water Sampling Results at Boring T4

Sample Number, Date & Location	Depth (bsg)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/oil & grease (mg/L)	BTEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V8 4/20/01 Boring T4, South side of Bldg. 909	13'	ND	-	-	ND	ND	-	ND	-	-	-	8
2001E001-A8 4/20/01 Boring T4, South side of Bldg. 909	13'	-	ND	-	-	-	ND	-	-	-	ND	
2001E001-T8 4/20/01 Boring T4, South side of Bldg. 909	13'	-	-	ND	-	-	-	-	-	-	-	
2001E001-M8 4/20/01 Boring T4, South side of Bldg. 909	13'	-	-	-	-	-	-	-	ND	ND	-	

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RSCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.

Table 2H: Water Sampling Results at Boring B3/T7

Sample Number, Date & Location	Depth (bag)	TPH-gas (mg/L)	TPH-diesel (mg/L)	TRPH/ oil & grease (mg/L)	ETEX (mg/L)	MtBE (mg/L)	PAHs (mg/L)	HVO (mg/L)	Total lead (mg/L)	Total cadmium (mg/L)	PCB (mg/L)	PH
2001E001-V1 4/17/01 Boring B3/T7, SW corner of Bldg. 909	15'	ND	-	-	ND	ND	-	ND	-	-	-	8
2001E001-A1 4/17/01 Boring B3/T7, SW corner of Bldg. 909	15'	-	ND	-	-	-	ND	-	-	-	ND	-
2001E001-T1 4/17/01 Boring B3/T7, SW corner of Bldg. 909	15'	-	-	ND	-	-	-	-	-	-	-	-
2001E001-M1 4/17/01 Boring B3/T7, SW corner of Bldg. 909	15'	-	-	-	-	-	-	-	0.02	ND	-	-

*Bold results indicate levels that exceed the DOH Risk-Based Corrective Action and Decision Making at Sites With Contaminated Soil and Groundwater, (RBCA) Tier 1 Action Levels for ground water. See Appendix C for Table 5-2a, 5-2b Action Levels for soil and groundwater.