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July 11, 2002

Ms. Genevieve Salmonson, Director
Office of Environmental Quality Control
State of Hawaii
235 S. Beretania Street, Room 702
Honolulu, Hawai'i 96813

OFFICE OF ENVIRONMENTAL
QUALITY CONTROL

Subject: Final Environmental Assessment (EA) for UH Dole Street Parking Structure
Tax Map Key 02-08-029: Portion of 001
Honolulu, O'ahu, Hawai'i

The Final Environmental Assessment (EA) for the proposed UH Dole Street Parking Structure has been prepared in compliance with Chapter 343, Hawai'i Revised Statutes, and Chapter 11-200, Hawai'i Administrative Rules, State Department of Health. Based on the findings of the Final Environmental Assessment and associated studies conducted, a Finding of No Significant Impact (FONSI) has been determined.

Please publish a notice of the FONSI determination for this project in the July 23, 2002 edition of *The Environmental Notice*. Submitted are the following items in support of our request:

- Four (4) copies of the Final EA
- Completed publication form for *The Environmental Notice*
- Distribution List for the Final EA
- Distribution cover letter to the participants
- Project Summary on a 3 ½ " disk.

If you have any questions, please call Ron Lau at 956-3753.

Sincerely,


Allan Ah San
Associate Vice President for Administration

Enclosure

cc: Ron Lau, FPMO
Earl Matsukawa, Wilson Okamoto & Associates, Inc.
Michael Kawaharada, Englekirk Partners
Bryce Uyehara, Bryce E. Uyehara, AIA Inc.

2444 DOLE STREET • BACHMAN HALL • HONOLULU, HAWAII 96822 • TEL (808) 956-7651 • FAX (808) 956-7115

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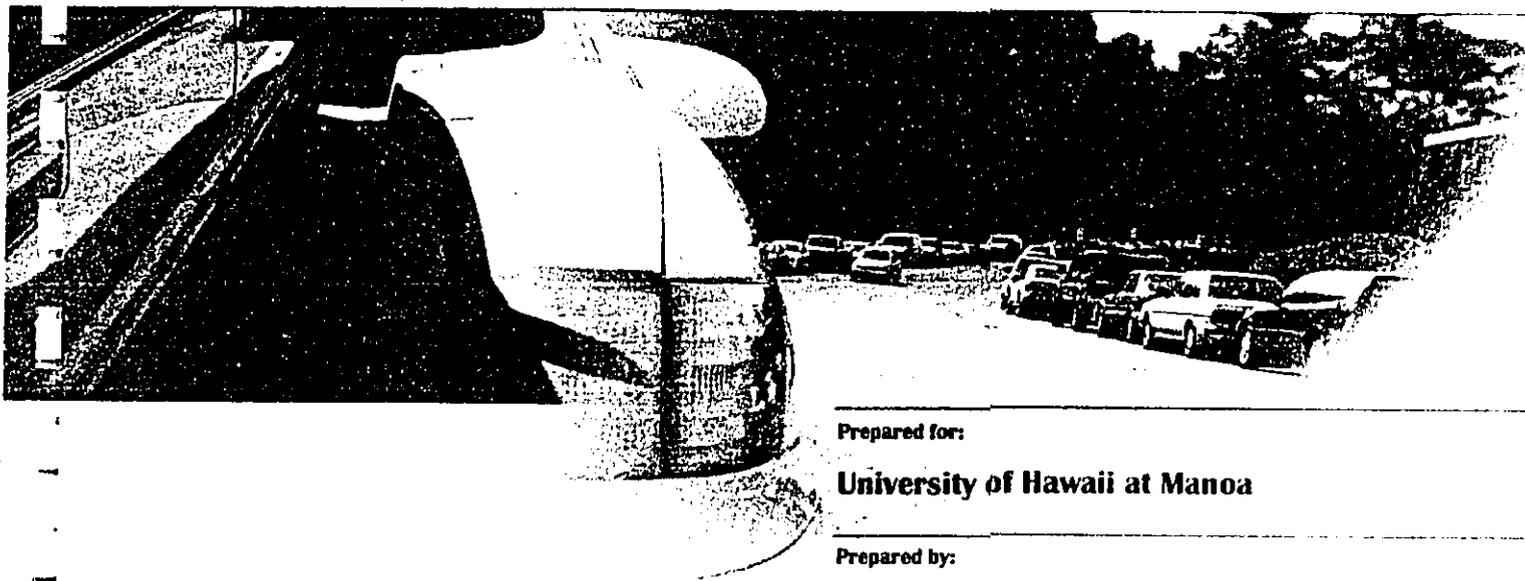
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**FINAL ENVIRONMENTAL ASSESSMENT
AND FINDING OF NO SIGNIFICANT IMPACT**
University of Hawaii (Dole Street Parking Structure)
Honolulu, Oahu, Hawaii



Prepared for:

University of Hawaii at Manoa

Prepared by:

Wilson Okamoto & Associates, Inc.

July 2002

**FINAL
ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT**

UH DOLE STREET PARKING STRUCTURE

Honolulu, Oahu, Hawaii

Proposing Agency and Applicant:

**University of Hawaii at Manoa
2444 Dole Street
Honolulu, Hawaii 96822**

Prepared By:

**Wilson Okamoto & Associates, Inc.
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826**

July 2002

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New Parking Structure, Wilson Okamoto & Associates, Inc., March
2002

Appendix B Acoustic Study for the Hawaiian Studies Building Parking Garage,
University of Hawaii at Manoa, Y. Ebisu & Associates, February 2002

PREFACE

This Final Environmental Assessment (EA) was prepared pursuant to Chapter 343, Hawaii Revised Statutes, and Title 11, Chapter 200, Hawaii Administrative Rules, Department of Health. Proposed is an agency action by the University of Hawaii to construct a new four-level parking structure on Dole Street, near the existing Center for Hawaiian Studies. The proposed parking structure was proposed in the 1987 Long Range Development Plan (LRDP) for the University of Hawaii, Manoa Campus and has been retained in the subsequent LRDP 1994 Update. The Final Environmental Assessment for the LRDP 1994 Update was prepared in August, 1994.

This Final EA has been processed as a Finding of No Significant Impact (FONSI) by the University of Hawaii, determining that preparation of an Environmental Impact Statement (EIS) is not required pursuant to Chapter 343, HRS. The Draft EA was filed with the Office of Environmental Quality Control (OEQC) on April 11, 2002, and notice of its availability for public review and comment was published in *The Environmental Notice* on April 23, 2002.

This Final EA incorporates responses to comments received on the Draft EA.

SUMMARY

PROPOSING AGENCY: University of Hawaii at Manoa
2444 Dole Street
Honolulu, HI 96822

ACCEPTING AUTHORITY: University of Hawaii at Manoa
2444 Dole Street
Honolulu, Hawaii 96822

PROJECT LOCATION: 2645 Dole Street
Honolulu, HI 96822

TAX MAP KEY: 02-08-029: portion of 001

AREA: Approximately 29,717 square feet

EXISTING USE: Unpaved parking lot

STATE LAND USE DESIGNATION: Urban

DEVELOPMENT PLAN LAND USE MAP: Public Facilities

ZONING DESIGNATION: Residential (R-5)

PROPOSED ACTION: Construct a new four-level parking structure

IMPACTS: No significant impacts are anticipated from the construction and operation of the proposed parking structure. Construction activities are anticipated to have short-term traffic, air quality and noise impacts in the surrounding area. The project will comply with all government rules and regulations during the construction.

DETERMINATION: Finding of No Significant Impact (FONSI)

PARTIES CONSULTED DURING PRE-ASSESSMENT: Federal
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State

Department of Business, Economic Development
and Tourism – Office of Planning
Department of Education
Department of Hawaiian Home Lands
Department of Health (DOH) – Environmental
Planning Office
DOH - Office of Environmental Quality Control
DOH – Environmental Management Division
Department of Land and Natural Resources
(DLNR)
DLNR – Aquatic Resources Division
DLNR – Commission on Water Resource
Management
DLNR – Division of Forestry and Wildlife
DLNR – Historic Preservation Division
Office of Hawaiian Affairs
University of Hawaii, Center for Hawaiian Studies
University of Hawaii, Environmental Studies
Center

County

Board of Water Supply
Department of Planning and Permitting
Department of Transportation Services
Fire Department
Police Department

Elected Officials

Councilmember Anne Kobayashi
Councilmember Duke Bainum
Representative Ed Case
Representative Brian Schatz
Senator Brian Taniguchi

Other Organizations

John Thomas Heinrich, Neighborhood Board No. 7
Karen Ah Mai, Neighborhood Board, No. 5

**PARTIES CONSULTED
DURING DRAFT EA:**

Federal

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State

Department of Business, Economic Development
and Tourism – Office of Planning
Department of Education
Department of Hawaiian Home Lands
Department of Health (DOH) – Environmental
Planning Office
DOH - Office of Environmental Quality Control
DOH – Environmental Management Division
Department of Land and Natural Resources
(DLNR)
DLNR – Aquatic Resources Division
DLNR – Commission on Water Resource
Management
DLNR – Division of Forestry and Wildlife
DLNR – Historic Preservation Division
Office of Hawaiian Affairs
University of Hawaii, Center for Hawaiian Studies
University of Hawaii, Environmental Studies
Center

County

Board of Water Supply
Department of Design and construction
Department of Environmental Services
Department of Parks and Recreation
Department of Planning and Permitting
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John Thomas Heinrich, Neighborhood Board No. 7
Karen Ah Mai, Neighborhood Board, No. 5
Hawaiian Electric Company

1. SETTING AND PROJECT DESCRIPTION

1.1 Project Location

The proposed project site is located on the University of Hawaii at Manoa Campus, adjacent to the Center for Hawaiian Studies on Dole Street (see Figures 1-1 and 1-3). The proposed project site encompasses approximately 29,717 square feet within Tax Map Key (TMK) 02-08-029: 001 (see Figure 1-4).

1.2 Existing and Surrounding Uses

The proposed project site is currently used as an at-grade unpaved parking lot that can presently accommodate approximately 98 cars. The parking lot has a gravel surface with concrete wheel stops and lighting fixtures (See Photos 1 to 6). A small guardhouse is located on its west side. Students and staff are the primary users of this parking lot. Uses adjacent to the project site include the Center for Hawaiian Studies to the west, Kanewai Field to the southeast, student dormitories to the south across Manoa Stream, and Waahila Faculty Apartments and residential homes to the northwest and northeast along Dole Street.

1.3 Project Need

The 1987 Long Range Development Plan (LRDP) for the University of Hawaii, Manoa Campus proposed a parking structure at the project site. The subsequent LRDP 1994 Update retained the designation of the proposed parking structure, as shown in Figure 1-5. A major urban design concept of The Long Range Development Plan (LRDP) University of Hawaii, Manoa Campus, 1994 Update is to eliminate vehicles from the heart of the Central Campus - *"Parking facilities are developed along the periphery of the Central Campus with most of the parking facilities provided on the Makai Campus."*

THE LRDP 1994 Update proposes to replace on-grade parking lots displaced by the construction of new facilities on campus with parking structures. One of its proposed strategies is to build a parking structure for student housing. The proposed structure on Dole Street is targeted for students living on campus and would alleviate the demand for on-street parking in nearby residential areas.

1.4 Project Description

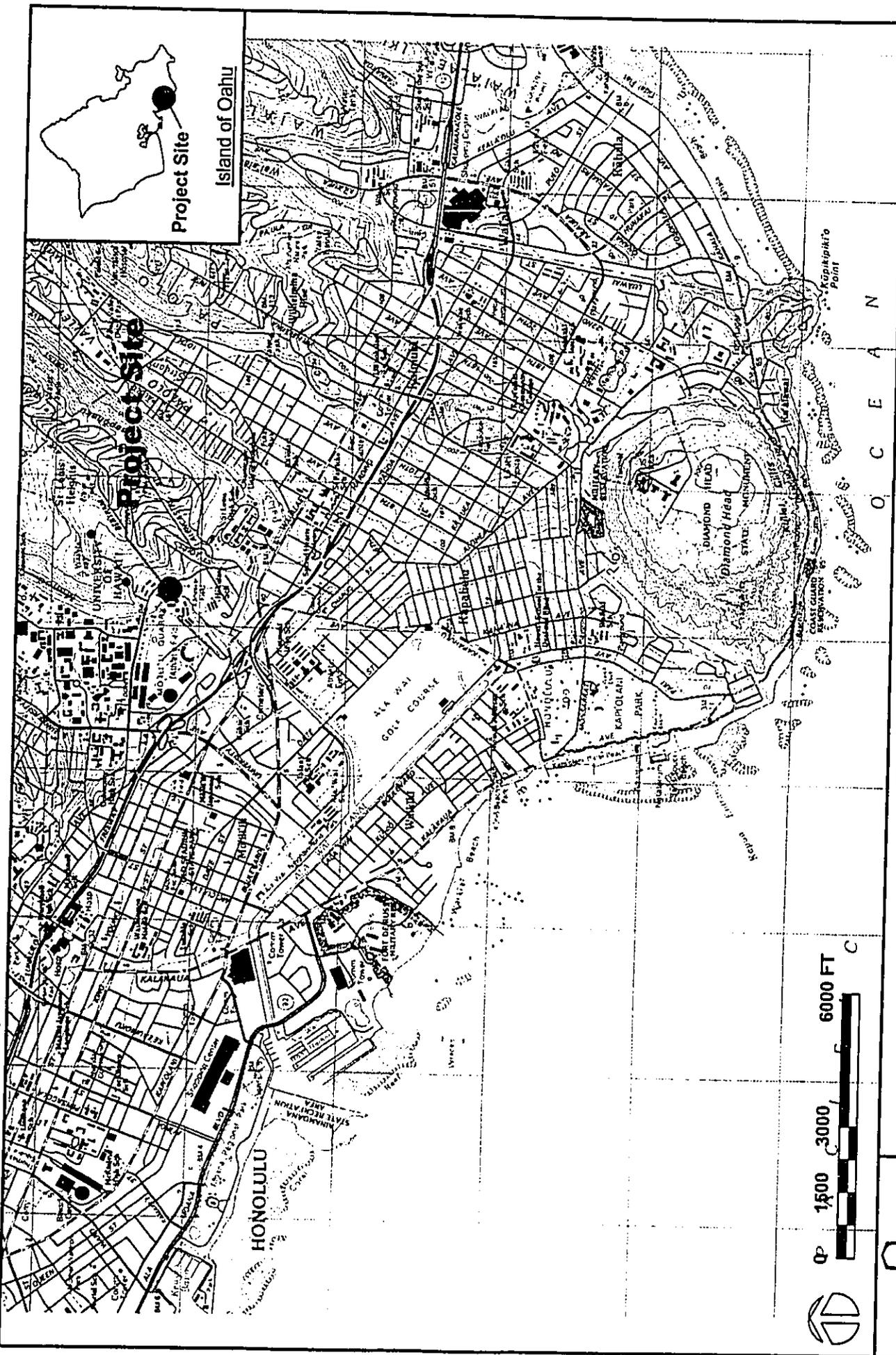
The proposed four-level parking structure will provide approximately 273 parking stalls and occupy approximately 23,650 square feet of land area within the project site. A new access/egress driveway will be provided from Dole Street, as shown in Figure 1-3. A new left-turn lane into the driveway from the ewa-bound traffic lane of Dole Street will be created by restriping the road. This will eliminate approximately 25 on-street parking spaces on the makai side of Dole Street. Elimination of this on-street parking is also required to provide necessary sight-distances for motorists to

see on-coming vehicles when exiting the proposed driveway. The proposed driveway will connect with the existing driveway for the Center for Hawaiian Studies, but this connection will normally be chained off and used only for emergency purposes. The perimeter of the proposed parking structure will be landscaped with plant selection and composition including appropriate use of native Hawaiian flora in compliance with 103D-408, HRS.

1.5 Project Schedule and Cost

The estimated construction cost for the proposed project is \$2,730,000 and construction is anticipated to span 4 months.

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UH DOLE STREET PARKING STRUCTURE

LOCATION MAP

FIGURE

1-1

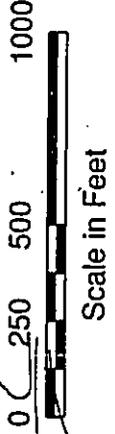
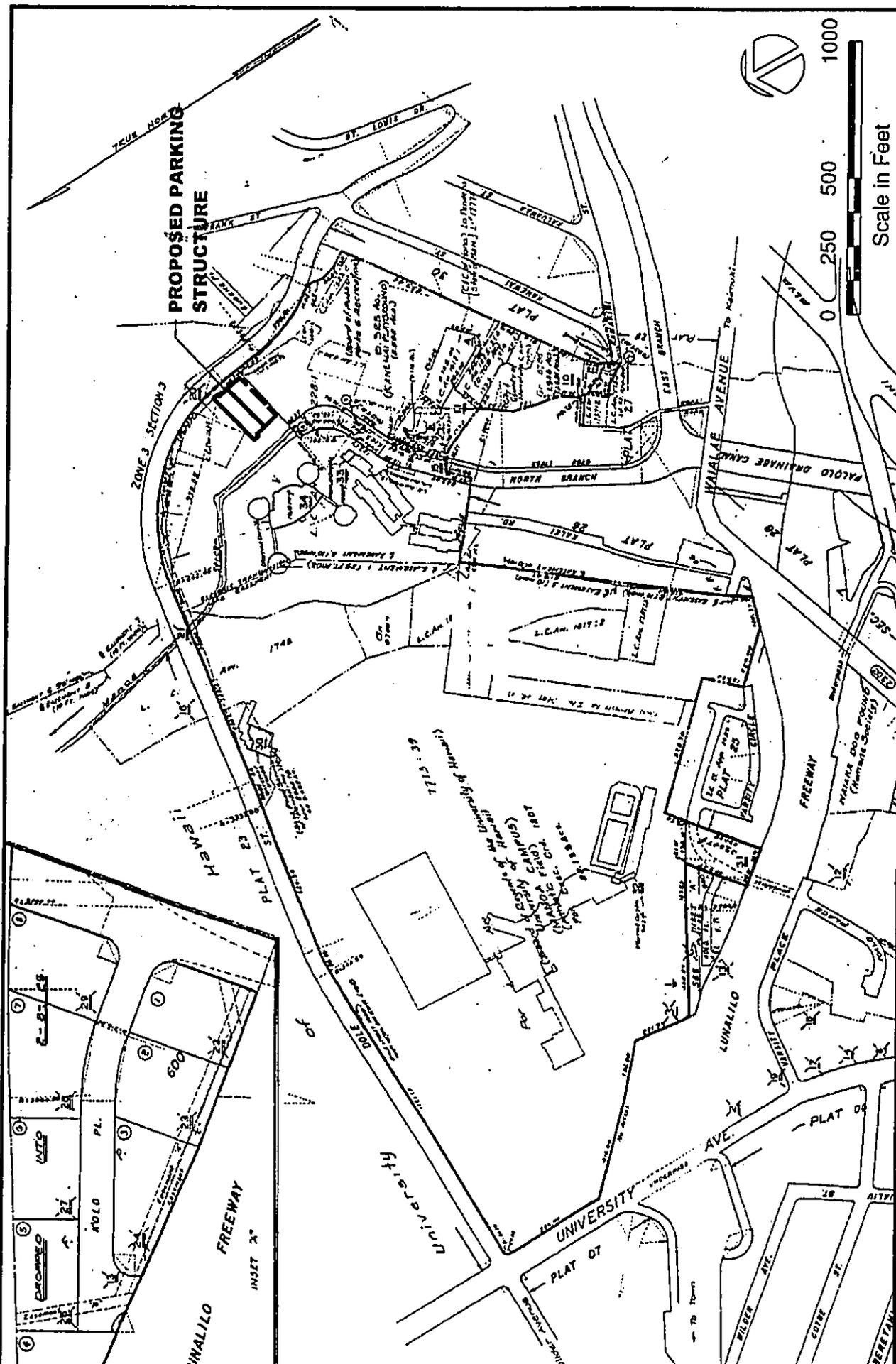

WILSON OKAMOTO & ASSOCIATES, INC.
 ENGINEERS - PLANNERS

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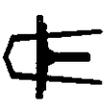
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UH DOLE STREET PARKING STRUCTURE

FIGURE
1-4

TMK MAP KEY 02-08-029: PORTION OF 001



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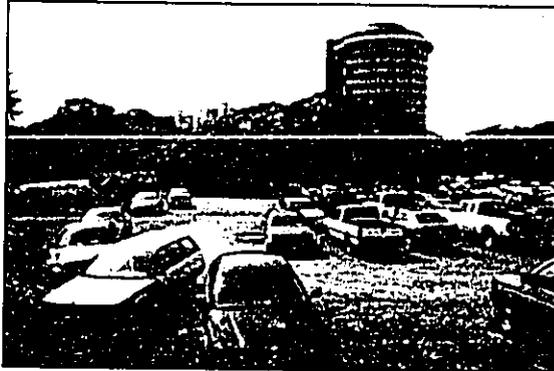


Photo 1
Facing south towards the UH
dormitories

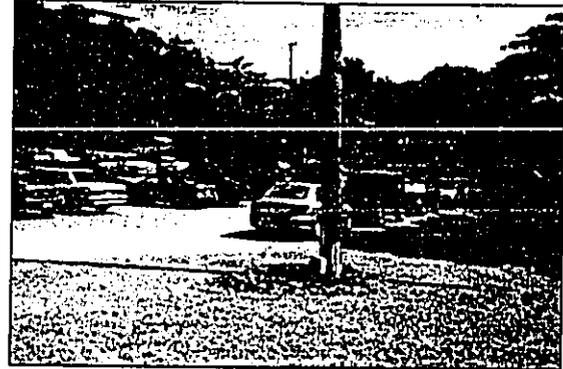


Photo 2
Facing diamond head towards
Kanewai Field



Photo 3
Facing diamond head towards
Kanewai Field



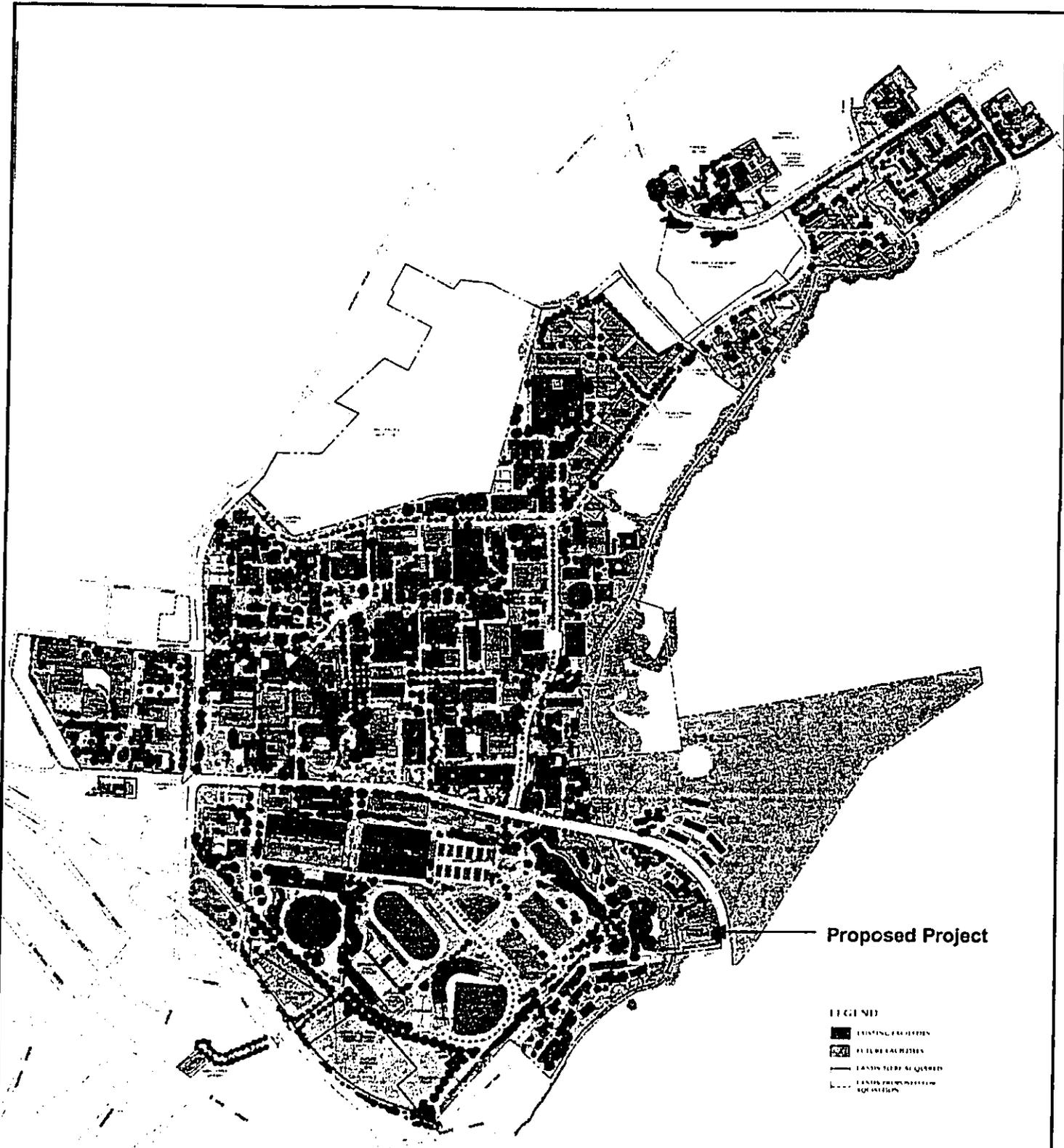
Photo 4
Facing south towards UH
dormitories



Photo 5
Facing mauka towards Dole Street



Photo 6
Facing mauka towards Dole Street



Source: University of Hawaii
UH Long Range Development Plan, 1994 Update


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& ASSOCIATES, INC.**
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UH DOLE STREET PARKING STRUCTURE

EXISTING AND PROPOSED FACILITIES

FIGURE
1-5

2. DESCRIPTION OF EXISTING ENVIRONMENT, PROJECT IMPACTS AND MITIGATION MEASURES

The following is a description of the existing environment, assessment of potential impacts and proposed measures to mitigate potential adverse impacts resulting from the proposed project.

2.1 Climate

The climate of the Honolulu area is typical of the leeward coastal lowlands of Oahu. The area is characterized by abundant sunshine, persistent tradewinds, relatively constant temperatures, moderate humidity, and the infrequency of severe storms. Northeasterly tradewinds prevail throughout the year.

Daily maximum temperatures range from the high 70's (degrees Fahrenheit) in the winter to the low 90's in the summer. Daily minimum temperatures vary from the low 60's in the winter to the low 70's in the summer.

The average annual precipitation in the vicinity of the project site is approximately 30 inches. Most of the rainfall occurs during the months of December and April.

2.2 Geology and Topography

Oahu's south-central coast, geologically referred to as the Honolulu Plain, is underlain by a broad elevated coral reef which has been partly covered by alluvium carried down from the Koolau Range. Lava flows of the Honolulu Volcanic Series are interbedded with these reef deposits which were formed during higher sea levels that occurred in prehistoric times.

The proposed project site has ground elevations ranging from 45 feet to 65 feet along Dole Street. Most of the area has been filled and graded for use as a parking lot. The site generally slopes from mauka to makai at about 5% slope.

Impacts and Mitigation Measures

No significant impact to the geology of the project site are anticipated. Construction activities will include grading and excavation within the existing fill. Support piles will be driven below the existing fill. Graded and excavated areas will be built over, paved over, or landscaped.

2.3 Soils

The Makai Campus is an abandoned quarry and the soils there are either silt from runoff above or imported fill and topsoil material. According to the U.S. Soil Conservation Services (1972), the soil type in the project area is Kaena very stony clay, 10 to 35 percent slopes (KanE) as shown in Figure 2-1. These soils occurs on talus slopes and alluvial fans, where the surface layer is very dark gray clay with

many stones on the surface and in the profile. Runoff is medium to rapid, and the erosion hazard is moderate to severe.

Impacts and Mitigation Measures

No significant impacts on soils at the project site are anticipated with the construction and operation of the proposed project. Excavation and grading activities associated with construction of the proposed project will be regulated by the City and County of Honolulu grading ordinance.

Best Management Practices (BMP) that may be employed, as appropriate, include site specific erosion and sediment control measures such as construction of berms to detain run-off and installation of silt fences to filter silt from run-off.

Following construction, exposed soils will be built over, paved over, or backfilled and landscaped.

2.4 Hydrology

2.4.1 Ground Water

The same interbedding of coral and alluvial deposits which play an important role in Oahu's geology also influence the hydrological character of Oahu's leeward coastline. The interface between upper sedimentary layers and the underlying basalt constitutes a zone of low permeability known as caprock. This caprock extends along the coastline about 800 to 900 feet below sea level, forming an impervious zone which prevents the seaward movement of potable water from the basaltic aquifers.

Impacts and Mitigation Measures

No significant impacts to groundwater underlying the project site are anticipated during construction of the proposed facilities. Construction activities are not likely to introduce to, nor release from the soil any materials which could adversely affect groundwater, including groundwater sources for domestic use. Dewatering is not anticipated for this project.

2.4.2 Surface Water

Manoa Stream borders the southern boundary of the proposed project. The Manoa Stream empties into the Ala Wai Canal which outlets into the Pacific Ocean at the Ala Wai Yacht Harbor.

Impacts and Mitigation Measures

No significant impacts to streams or drainage systems at the project site are anticipated with the construction and operation of the proposed project. Excavation and grading activities associated with construction of the

proposed project will be regulated by the City and County of Honolulu grading ordinance.

Construction materials wastes will be appropriately disposed and prevented from leaching into receiving bodies of water. Dewatering is not anticipated for this project.

2.5 Flood Hazard

The proposed project site is adjacent to Manoa Stream. According to the Flood Insurance Rate Map (FIRM), Community Panel Number 15003C0370 E (revised November 20, 2000) the proposed project is within Zone X "areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood" and Zone AE special flood hazard areas inundated by 100-year flood, where base flood elevations have been determined between 45 and 51 feet, as shown in Figure 2-2. The remainder of the site lies within Zone X (Other Areas), which is determined to be outside the 500-year floodplain.

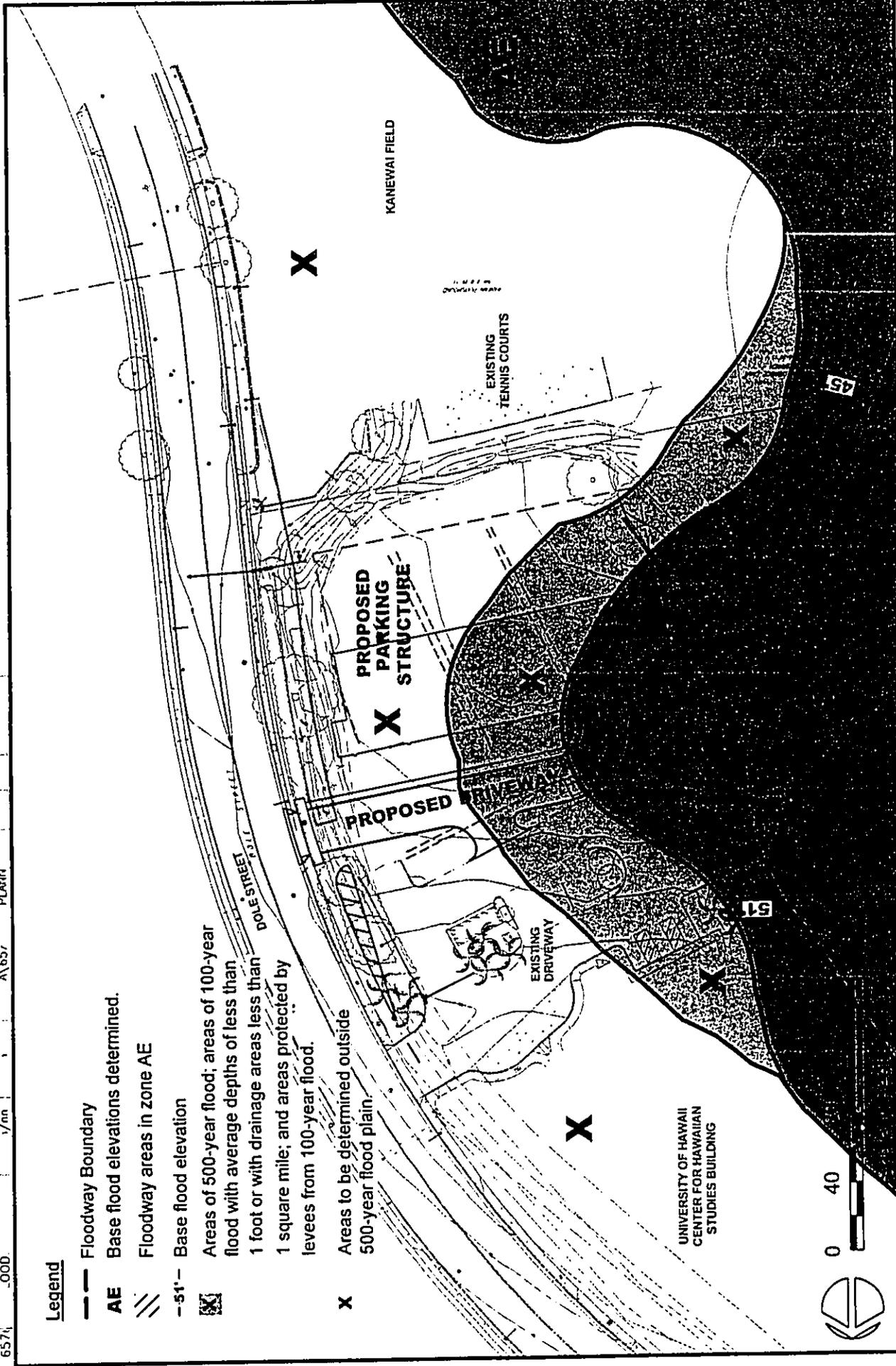
Impacts and Mitigation Measures

It is unlikely that construction and operation of the proposed structure will result in flooding of the project site or the surrounding area. The proposed project will comply with rules and regulations of the National Flood Insurance Program (NFIP) and all applicable County Ordinances. Potential flood impacts for portions of the project site within Zone AE will be mitigated by complying with the provisions of Sections 21-9.10-4 and 21-9.10-6 of the City and County of Honolulu's Land Use Ordinance, which regulate development within the flood hazard and flood fringe district. Applicable provisions include:

- *All construction and improvements of nonresidential structures shall have the lowest floor elevated to or above the regulatory flood elevation; or, together with attendant utility and sanitary facilities, be designed and constructed so that below the regulatory flood elevation, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy due to the regulatory flood.*
- *The structure above the regulatory flood elevation shall be securely anchored to the foundation to resist movement and flotation due to the regulatory flood.*
- *All construction, improvements, portions of structures and foundations below the regulatory flood elevation shall be designed to be floodproof, anchored to resist movement and flotation and be able to resist the impact and calculated forces of the regulatory flood.*

Legend

-  Floodway Boundary
- AE** Base flood elevations determined.
-  Floodway areas in zone AE
- 5'** Base flood elevation
-  Areas of 500-year flood; areas of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood.
- X** Areas to be determined outside 500-year flood plain.



UH DOLE STREET PARKING STRUCTURE

FLOOD MAP

FIGURE

2-2



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2.6 Flora and Fauna

Most of the project site is covered with gravel. Vegetation is limited to the boundaries of the parking lot. Along the bank of Manoa Stream is a thicket of hau (*Hibiscus tiliaceus*), haole koa (*Leucaena leucocephala*) and other introduced plant species, including several large trees. Along Dole Street is a planted hedge of beach naupaka (*Scaevola sericea*), a large monkeypod tree, an Albizzia tree and an African Tulip tree.

Terrestrial fauna likely includes exotic birds such as mynah, doves, sparrows, finches and cardinals; and introduced mammals, including feral cats, dogs, mongoose, rats and mice.

Several native and exotic crustaceans and fishes are found in Manoa Stream. Among these are Atyid shrimp or Opae kalaole (*Atyoida bisulcata*), crayfish (*Procambrus clarkii*), goby or oopu nakea (*Awaous stamineus*), carp or koi (*Cyprinus carpio*), mosquitofish or medaka (*Gambusia affinis*), shortfin molly (*Poecilia mexicana*), guppy (*Poecilia reticulata*), green swordtail (*Xiphophorus helleri*), tilapia (*Tilapia mossambica*), oopu owao (*Eleotris sandwicensis*), oopu naniha (*Stenogobius genivittatus*), armored catfish (*Hypostomus sp.*), Tahitian prawn (*Macrobrachium lar*), and opae oehaa (*Macrobrachium grandimanus*) (Belt Collins & Associates, 1991). These species of stream fauna are common and found in other streams on the island of Oahu. No endangered species inhabit Manoa Stream.

Impacts and Mitigation Measures

No significant impacts on flora and faunal species are anticipated. No candidate, proposed, or listed threatened or endangered species will be disturbed. Two large exotic trees, including a monkeypod, located on the southern boundary of the project site will be removed. Both appear to have sustained damage when the project site was previously cleared to develop the existing unpaved parking lot.

No work will occur in the stream channel and there will, therefore, be no direct effect on the stream habitat. Excavation and grading activities associated with construction of the proposed project will be regulated by the City and County of Honolulu's grading ordinance to minimize potential impacts on stream habitats.

2.7 Historic and Cultural Resources

There are no known historic sites on the proposed project site. However, the Ka Papa Lo'i o Kanewai (traditional agricultural terraces), also known as Kanewai Hawaiian Cultural Garden, is located on the ewa side of the Center for Hawaiian Studies. This area is used for several cultural activities and programs. In addition, The Center for Hawaiian Studies serves as a place for academics and cultural / community gatherings. According to Mr. Tino Ramirez of the Center for Hawaiian Studies, Papa Lo'i o Kanewai is heavily used for taro cultivation, making poi, awa

ceremonies, and teaching and learning crafts such as carving and weaving. Hula and chanting practices occur during the evening hours and the Center is used for ceremonies for honored guests and special events. These activities occur all week, day and night (personal communication, June 12, 2002). Mr. Pomaika'i Kanaiaupuni-Crozier, who administers Ka Papa Lo'i o Kanewai, stated that the Lo'i had 15,000 visitors this year, including many students from elementary school through college. Cultural practices taught at the Lo'i include traditional cooking methods, taro cultivation and processing, rock terrace building and stream and bank restoration, agricultural practices, and planting of native and endemic vegetation. Plant and food gathering occurs along the adjoining portion of Manoa Stream (personal communication, June 17, 2002). No cultural practices are known to occur in the area on the Diamond Head-side of the Center, which includes the project site, except that the cultural practitioners use the project site for parking (personal communication, June 12, 2002).

The proposed project site has experienced extensive grading and has been covered with fill that was used to create the existing parking lot. According to the State Historic Preservation Division letter dated March 14, 2002 (included in Section 7) it is unlikely that historic sites would still be present beneath the fill.

Impacts and Mitigation Measures

No significant impacts to historic and cultural resources are anticipated. Grading activities and excavation will not extend below the existing fill. In the unlikely event that historic sites, including human remains, are encountered, construction will stop, the finding documented, and proper mitigation measures will be taken.

Construction work is anticipated to have short-term air quality and noise impacts in the area, which may affect educational and cultural activities occurring at the Center for Hawaiian Studies and the Kanewai Hawaiian Cultural Garden. The proposed project will not affect access to Manoa Stream from Ka Papa Loi o Kanewai for cultural gathering practices. The availability of parking for cultural practitioners could be affected, depending upon operational and security requirements for the proposed parking structure.

2.8 Scenic Characteristics

Views of the existing unpaved parking lot from Dole Street are presently obscured by a tall beach naupaka hedge. Where it is visible, the unpaved parking lot and small guardhouse give the area a rather make-shift appearance with the thicket of hau along the bank of Manoa Stream in the background. Beyond the hau, the four cylindrical dormitory towers in the lower campus are prominently visible. Flanking the unpaved parking lot are the tennis courts in Kanewai Field to the east and the Center for Hawaiian Studies parking lot and buildings to the west.

Impacts and Mitigation Measures

The view from Dole Street will be altered with the proposed four-level parking structure replacing the at-grade parking lot. The proposed structure will largely obstruct views of the hau thicket and the dormitory towers. Landscaping around the parking structure will help to soften its geometric appearance to some degree. The overall visual character of the area will become more developed and less natural.

2.9 Traffic and Parking

Wilson Okamoto & Associates, Inc. (WOA) prepared a traffic impact assessment for the proposed project (Appendix A). A traffic survey was conducted on December 13, 2001, between the morning peak hours of 6:30 am and 8:30 am, and the afternoon peak hours of 3:30 pm to 5:30 pm. The following intersections were assessed to determine the relative impact of the proposed project:

- Dole Street and East-West Road
- Dole Street and St. Louis Drive

The intersections were assessed using the methodologies from the Transportation Research Board *Highway Capacity Manual* and the Highway Capacity Software developed by the Federal Highway Administration. Operating conditions at these intersections are described in terms of their level-of-service (LOS). LOS is defined by LOS "A" (best) to LOS "F" (worst).

The peak hours of traffic in the vicinity of the project site generally occur between 7:15 am and 8:15 am and between 4:30 pm and 5:30 pm.

At the intersection of Dole Street and East-West Road, Dole Street traffic operates fairly well at LOS "B" in both directions during the morning and afternoon peak hours. At the East-West Road approaches, traffic operates fairly well at LOS "B" during both peak hours.

At the intersection of Dole Street and St. Louis Drive, the Dole Street eastbound left-turn traffic movement operates poorly at LOS "F" during the morning and afternoon peak hours. The St. Louis Drive northbound left-turn traffic movement operates at LOS "C" during both peak hours.

Impacts and Mitigation Measures

No significant impacts on traffic operations are anticipated during the construction and subsequent operation of the proposed parking structure. The provision of a left-turn lane on Dole Street for westbound traffic entering the proposed driveway and elimination of on-street parking on the makai side of Dole Street on either side of the driveway site should ensure the smooth ingress and egress of vehicles.

A comparison of projected traffic operations along Dole Street with and without the proposed project in Year 2004, indicated little difference, as shown in Table 2-1.

Because the proposed driveway will be situated on a curved section of Dole Street, adequate sight distance for vehicles exiting the driveway will be required. Based on the posted speed limit, the required sight distance is approximately 295 feet on either side of the driveway. This sight distance will be provided by restricting on-street parking for this distance on the makai side of Dole Street. As a result, approximately 25 parking spaces will be eliminated. Even without the proposed project, the existing driveway for the Center for Hawaiian Studies should have a similar sight distance. Hence, the elimination of on-street parking will improve the sight distance for both driveways. Elimination of on-street parking will also increase demand for remaining public parking in the vicinity, including parking available at Kanewai Park.

Table 2-1: Comparison of Existing and Projected (With and Without Project) Traffic Operating Conditions

Intersection	Approach/ Movement	AM			PM		
		Existing	Year 2004 w/out Project	Year 2004 w/ Project	Existing	Year 2004 w/out Project	Year 2004 w/ Project
Dole Street and East- West Road	Southbound	B	B	B	B	B	B
	Westbound	B	B	B	B	B	B
	Eastbound	B	B	B	B	B	B
Dole Street and St. Louis Drive	Northbound (LT)	F	F	F	A	A	A
	Eastbound (LT)	B	B	C	B	C	C

During construction, construction vehicles will park within the project site and, thus, will not affect traffic flow along adjoining roadways except while traveling to and from the site. As appropriate, construction contractor(s) will be required to mitigate potential vehicular and pedestrian traffic impacts through appropriate traffic control measures and safety devices. Examples of measures that may be employed include:

- Publishing newspaper notices to alert the public of construction projects;
- Providing signage and other warnings to alert approaching motorists and pedestrians to construction activities ahead;

- Providing barriers, cones, signage, lighting, non-skid covering over trenches, adequate and safe sidewalk widths, adequate intersection visibility and other provisions to promote safe passage of vehicles and pedestrians through construction zones;
- Restricting transport of construction vehicles during the peak traffic hours. To the extent possible, require construction vehicles to use available main routes/roads as alternate routes to the project sites rather than local streets, to minimize the impacts on area residents;
- Providing flaggers and/or police officers, when necessary, to control traffic and pedestrian flow;
- Notifying providers of emergency services (fire, ambulance and police) prior to implementation of any required detours or street closures;
- Notifying the City Department of Transportation Services to alert Oahu Transit Services of the detours or street closures; and,
- Providing appropriate barriers as necessary to deter the public from unauthorized entry into restricted or hazardous construction zones during working and non-working hours.

2.10 Noise and Vibration

Y. Ebisu & Associates prepared a noise impact assessment for the proposed project (Appendix B). Noise level measurements were conducted in February 2002 to assess the existing acoustical environment in and around the project site. Acoustical measurements were obtained at the following two locations:

- Existing traffic turnaround area east of the Center for Hawaiian Studies Building on Dole Street
- Kanewai Field Pavillion on Dole Street

Major contributors to the existing background ambient noise levels within the project area are traffic along Dole street, recreational activities at Kanewai Field, and aircraft flying over the project site.

Impacts and Mitigation Measures

Noise from construction activities will likely be unavoidable during the entire construction period. Development of the parking structure involves excavation, grading, and construction of the structure itself. The various construction phases of the project may generate significant amounts of noise, which may impact Dole Street residences north and northeast of the project site, student housing units across Manoa Stream, and Center for Hawaiian Studies.

Construction noise impacts will be mitigated somewhat by compliance with provisions of the State DOH Administrative Rules, Title 11, Chapter 46, "Community Noise Control" noise control regulations. Heavy vehicles required for construction must comply with Title 11, Chapter 42, and "Vehicular Noise Control for Oahu". It shall be the contractor's responsibility to minimize noise

by properly maintaining noise mufflers and other noise-attenuating equipment, and to maintain noise levels within regulatory limits.

No significant increases in traffic noise are anticipated due to the proposed project. The main noise source following the completion of the parking structure will be due to traffic entering and existing the facility. The noise emanating from these vehicles could impact classes at the Center for Hawaiian Studies.

The potential for noise from car alarms or horns will increase with the net increase in parking that will be available in the vicinity of the project site as a result of the proposed project. The use of administrative controls and possible removal of vehicles with faulty or continuous alarm systems can mitigate such impacts if car alarms cause excessive complaints from surrounding residences.

Tire squeal noise can occur if the circulation roadway surfaces within the parking garage structure are smooth or slick. During the design phase, the use of coarse or brush concrete finishes, asphalt, or nonskid coatings on these circulation roadway surfaces will be considered to mitigate tire squeal.

Pile driving may be necessary to implant piles into the ground. Ground vibration from pile driving can impact nearby structures. Since the Center for Hawaiian Studies is located approximately 150 feet from the project site, the following preventative measures will be considered during the planning and design phases of the project:

- In addition to the normal planning and design concerns regarding potential damage due to settling and heaving during construction, consideration should also be given to risks of damage due to vibration from pile driving.
- If predicted vibration levels from pile driving exceed 0.2 inches/second at a building, and predicted levels cannot be reduced by sizing of the pile driver, test piles should be driven and their vibrations monitored and recorded prior to completion of the foundation design.
- If predicted vibration levels from pile driving exceed 2.0 inches/second at a building, the use of alternate types of piles or shoring should be considered for implementation during the design phase.

2.11 Air Quality

There are no point sources of airborne emissions in the immediate vicinity of the project site. The air quality in this area is considered good with the primary non-point source of emissions from vehicles traveling along Dole Street. While there is no air quality monitoring station in the vicinity of the project site, air quality is assumed to be in compliance with State and Federal standards. The State DOH's nearest air quality monitoring station is located approximately 2 miles away at 2131

Kalakaua Avenue in Waikiki. Waikiki is a busy commercial and residential area with heavy vehicular traffic. The Waikiki station monitors carbon monoxide levels, which have been well below the Federal and State Standards (Department of Health, 2002).

Impacts and Mitigation Measures

No significant impacts on ambient air quality are anticipated during construction and operation of the proposed facilities.

During construction, activities such as clearing, grubbing, grading and excavation at the project site will generate dust while vehicles and equipment will produce exhaust emissions. Dust control measures stipulated by Department of Health Administrative Rules, Title 11, Chapter 60, "Air Pollution Control" regulations will be employed, as appropriate, during construction and may include:

- Planning the different phases of construction, focusing on minimizing the amount of dust-generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- Providing an adequate water source at the site prior to start-up of construction activities;
- Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- Controlling of dust from shoulders, and access roads;
- Providing adequate dust control measure during weekends, after hours, and prior to daily start-up of construction activities; and,
- Controlling of dust from debris being hauled away from project site.

Construction activities must comply with provisions of Hawaii Administrative Rules, Section 11-6-.1-33 "Fugitive Dust" and the contractor shall prepare a dust control management plan which identifies and addresses activities having potential to generate fugitive dust.

The properties which are anticipated to be most affected by air quality impacts during construction are Center for Hawaiian Studies, residences and dormitories and Kanewai Field users located in the immediate vicinity of the proposed project site.

Emissions from construction equipment, trucks and commuting construction workers are not anticipated to significantly impact ambient air quality. Slow-moving construction vehicles, however, can disrupt peak-hour traffic, increasing congestion and resulting vehicular emissions. Traffic congestion and resulting emissions will be mitigated by transporting slower construction equipment during off-peak traffic hours.

In the long-term, operation of the proposed parking structure will have no significant impact on air quality in the vicinity of the project site. Vehicular emissions from additional traffic associated with the proposed facilities will be negligible as traffic is anticipated to operate generally well along Dole Street and surrounding roadways.

2.12 Socioeconomic Characteristics

2.12.1 Population and Housing

The 2000 Census reported the population of Honolulu area at 876,156. The project site is located within the Honolulu Census Designated Place in Census Tract 27.01, which was reported to have a population of 4,558. CT 27.01 is bounded by University Avenue, Pamona Road, Manoa Stream, Dole Street, Waialae Avenue and Lunalilo Freeway.

Of the total population of CT 27.01, people of Asian ethnicity comprise more than 60%. The median age is 22.5 years with 22.6% of the population falling between the ages of 25 and 44 years. Of the 791 households within the CT, non-family households comprise of 40.2% of this total with single occupant households comprising the majority. The overall population per household is 2.42 people, and the average population per family is 2.93.

Impacts and Mitigation Measures

No significant impacts to population or housing in the vicinity of the project site are anticipated as a result of the construction and operation of the proposed project.

Construction activities associated with the proposed project will create some adverse impacts such as temporary disruption of traffic and on-street parking, unavoidable noise impacts in the vicinity of the project sites, and dust emissions from soil excavation and emissions from construction vehicles and equipment. The properties which are anticipated to be most affected by construction activity are Center for Hawaiian Studies, residences and dormitories and Kanewai Field users located in the immediate vicinity of the proposed project site. Construction contractor(s) will be required to mitigate potential vehicular and pedestrian traffic impacts through appropriate traffic control measures and safety devices. Unavoidable construction noise impacts on nearby land uses in the vicinity of the proposed project will be mitigated to some degree by compliance with the provisions of the State DOH Administrative Rules, Title 11, Chapter 46, Community Noise Control (see Section 2.10). Potential air quality impacts during construction of the proposed facilities will be mitigated by compliance with the State DOH Administrative Rules, Title 11, Chapter 60, Air Pollution Control (see Section 2.11).

In the long-term, potential impacts will be associated with a slight increase in traffic associated with the proposed parking structure. Impacts on traffic operations will be mitigated by the proposed left-turn lane from Dole Street and the elimination of on-street parking on the makai side of Dole Street on either side of the proposed driveway (see Section 2.9). Vehicular noise and emissions associated with the increase in traffic will be insignificant (see Sections 2.10 and 2.11). Noises from car alarms could potentially increase with the net increase in parking available in the vicinity of the project site but this can be mitigated if complaints should increase (see Section 2.10). The elimination of approximately 25 on-street parking spaces along Dole Street would reduce available public parking, although many of these spaces are used by students and university staff who are anticipated to use the proposed parking structure. The net increase in parking for students and university staff may reduce competition for on-street parking in nearby residential areas.

2.12.2 Economy

As updated information from the 2000 Census regarding economic trends by CT in Hawaii are not yet available, data from the 1990 Census was reviewed. According to the 1990 Census, the median household income for the CT 27.01 was \$36,786, which is slightly lower than the median income of \$40,851 for the island of Oahu.

Impacts and Mitigation Measures

No significant impacts to the economy within the vicinity of the project site are anticipated as a result of the construction and operation of the proposed project. In the short-term, the proposed project will confer some positive benefits to the local economy. Direct economic benefits will result from construction expenditures both through the purchase of materials from local suppliers and through the employment of local labor, thereby stimulating that sector of the economy. During construction, retail businesses in the vicinity of the project site may benefit from the increased presence of workers.

2.13 Public Services

2.13.1 Police, Fire, Ambulance and Medical Services

Police: Police protection for the project site is provided by the Honolulu Police Department and the University's Campus Security. The project area is serviced by patrol officers from District 7 which is housed at the Alapai Headquarters (Main Station) on S. Beretania Street. The police operate on a 24 hour basis and is approximately 1.5 miles west of the project site. Campus Security regularly patrols the campus grounds, also on a 24-hour basis. Adequate police protection will be available for the proposed project. Campus Security already patrols the Center for Hawaiian Studies, the proposed facility is not expected to increase security work load.

Fire: There are several City and County of Honolulu Fire Stations located near the proposed project site. These include Manoa Fire Station on E. Manoa Road, Moiliili Fire Station at the corner of University Avenue and Date Street, and Kaimuki Fire Station on Koko Head Avenue and Pahoa Avenue. Fire hydrants are located along Dole Street.

Medical: The Kapiolani Medical Center is located approximately 1.5 miles away from the University of Hawaii at Manoa. The next closest medical center is Queen's Medical Center located in Downtown, Honolulu is located approximately 3 miles from the University of Hawaii at Manoa. These hospitals offer a full range of emergency and acute-care services.

Impacts and Mitigation Measures

No significant impacts to police, fire, ambulance and medical services are anticipated as a result of the construction and operation of the proposed project.

2.14 Infrastructure

2.14.1 Water

Water service for the project area is provided by the City and County of Honolulu Board of Water Supply (BWS), which maintains an integrated system of source wells, storage reservoirs and distribution lines in the Honolulu area. Major service lines in the vicinity of the project area include 20-, 12-, 6- and 4-inch waterlines along Dole Street.

Fire protection is provided by five fire hydrants located along Dole Street, between Kanewai Field and Manoa Stream.

Impacts and Mitigation Measures

No significant impacts are anticipated on the existing water system as a result of the construction and operation of the proposed structure. During design and construction, close coordination will be maintained with BWS to ensure that the water system will not be adversely impacted and to minimize interruption of water services to adjacent areas.

2.14.2 Wastewater

Wastewater service in the vicinity of the project site is provided by City and County of Honolulu and maintained by its Department of Environmental Services. A 60 foot reinforced concrete pipe runs along Dole Street.

Impacts and Mitigation Measures

No wastewater service is required for the proposed project. No significant impacts are anticipated on the existing wastewater system as a result of the

construction and operation of the proposed structure. During design and construction, coordination will be maintained to ensure that the existing wastewater system will not be adversely impacted and to minimize the potential for interrupting wastewater service to adjacent areas.

2.14.3 Electrical / Communication

Hawaiian Electric Company (HECO) provides electrical service in the project area through a network of power generators and transmission facilities. Power for the project area is provided through HECO's Pukele Substation in Palolo Valley.

Verizon Hawaii (formerly GTE Hawaiian Telephone Company) provides telephone service. Existing aerial telephone lines are located throughout the project area, serving private, residential and commercial properties. All university campus calls are routed through a central university switchboard.

Oceanic Cable provides cable communication service in the project area. Existing underground and aerial cable lines are located throughout the project area, serving private, residential and commercial properties.

Impacts and Mitigation Measures

Neither telephone service nor cable TV service is required for the proposed project. No significant impacts are anticipated on the electrical and communications system as a result of the construction and operation of the proposed structure. Close coordination will be maintained with respective utility companies to minimize any potential conflicts with services to adjacent areas.

2.14.4 Gas

Gas service for the university campus is provided by The Gas Company, primarily to laboratories and food service facilities.

Impacts and Mitigation Measures

No gas service connection will be obtained for the project site. No significant impacts are anticipated on the existing gas system as a result of the construction and operation of the proposed structure.

2.14.5 Storm Drainage

The municipal storm drainage system in the vicinity of the project area is maintained by the Department of Facility Maintenance. Storm runoff along Dole Street is collected by 6 foot by 5 foot concrete box culvert which conveys flows to a 36-inch reinforced concrete pipe which discharges into Manoa Stream. Runoff from the existing unpaved parking lot flows overland into the adjoining Manoa Stream. Manoa Stream flows into the Manoa-Palolo Drainage Canal North Branch, which

empties into the Ala Wai Canal. A ditch straddling the eastern boundary of the project site also conveys runoff from adjoining portions of the project site and Kanewai Field to Manoa Stream.

Impacts and Mitigation Measures

No significant impacts to drainage patterns in the vicinity of the project site are anticipated during construction and operation of the proposed parking structure. During construction, potential surface run-off will be addressed in accordance with the City and County of Honolulu grading ordinance.

Development of the proposed project will increase the impervious area of the project site, resulting in an increase in the volume of runoff. Drainage will continue to be directed into Manoa Stream. Following construction, exposed soils will have been built over, paved over, or landscaped to control erosion.

2.14.6 Waste Disposal

Solid waste from the Campus is collected and disposed by University personnel at County landfills.

Impacts and Mitigation Measures

No significant impacts to the municipal solid waste collection and disposal system are anticipated during construction of the proposed structure. Construction of the proposed structure will require grading and excavation activities, which may result in excess soil. It will be the responsibility of the contractor to properly dispose of excess soil and other construction wastes at a Department of Health permitted solid waste facility.

3. LAND USE PLANS, POLICIES AND CONTROLS

Construction of the proposed facilities is in consonance with the various land use plans, policies and regulatory controls, as discussed below.

3.1 State of Hawaii

3.1.1 State Land Use Designation

The State Land Use Law is intended to preserve, protect, and encourage the development of lands in the State for uses which are best suited to the public health and welfare of Hawaii's people. The Hawaii Land Use Law in Chapter 205, Hawaii Revised Statutes (HRS), classifies all land in the State into four land use districts: Urban, Agricultural, Conservation, and Rural. The proposed project site lies within the Urban district, which includes *"lands characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses."* (see Figure 3-1). The proposed project is consistent with the Urban classification.

3.2 City and County of Honolulu

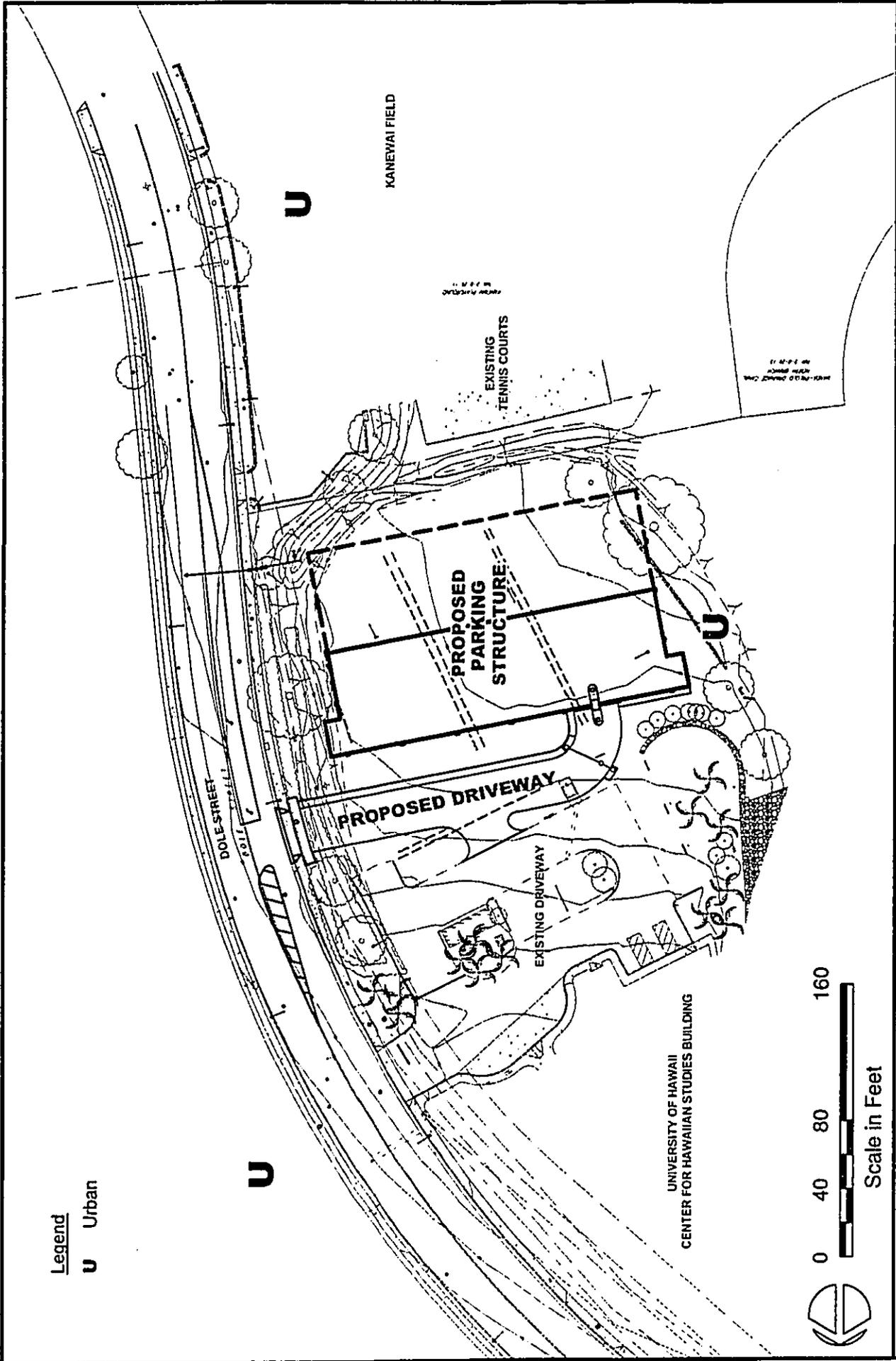
3.2.1 Development Plan Land Use Map

The City's Development Plan Land Use Map indicates the University of Hawaii Manoa Campus to be located on lands designated for Public Facilities (PF) as shown in Figure 3-2.

3.2.2 Land Use Ordinance and Zoning

The City and County of Honolulu Land Use Ordinance (LUO) regulates land use in accordance with adopted land use policies. The proposed project site is zoned Residential District (R-5), as shown in Figure 3-3. Universities are permitted in all zoning designations through approval of Plan Review Use (PRU) permit. A PRU for the University of Hawaii at Manoa was approved by the City Council by Resolution 89-411, CD-2, dated August 24, 1989. This PRU was based on the 1987 LRDP, University of Hawaii at Manoa.

A Plan Review Use Application based on the 1994 Update of the LRDP was prepared and filed July 1994.



Legend

U Urban



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UH DOLE STREET PARKING STRUCTURE

STATE LAND USE MAP

FIGURE 3-1

Legend

R-5 Residential, 5000 Sq. Ft.

R-5

R-5

KANEWAI FIELD

UNIVERSITY DRIVE

EXISTING TENNIS COURTS

PROPOSED PARKING STRUCTURE

PROPOSED DRIVEWAY

EXISTING DRIVEWAY

UNIVERSITY OF HAWAII
CENTER FOR HAWAIIAN STUDIES BUILDING

R-5



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UH DOLE STREET PARKING STRUCTURE

COUNTY ZONING

FIGURE
3-3

4. ALTERNATIVES

4.1 No Action Alternative

Under the No Action alternative. The project site would remain as an unpaved parking lot. The parking lot would remain operating at its existing capacity of approximately 98 cars. Although the elimination of approximately 25 on-street parking spaces along the makai side of Dole Street in conjunction with the proposed project would be avoided, the existing need to provide adequate sight-distance for the driveway serving the unpaved parking lot and Center for Hawaiian Studies presently warrants eliminating this parking.

This alternative would be inconsistent with the 1987 UH LRDP and the subsequent 1994 Update. The net gain in parking will help to relieve the demand for on-street parking in residential areas by university staff and students.

4.2 Alternative Sites

Figure 4-1 depicts parking structures proposed in both the 1987 UH LRDP and the 1994 Update. In addition to the proposed project, other proposed parking structures include those associated with Agricultural Sciences, Kennedy Theater, and the Korean Studies Center. These, however, are not considered alternative sites to the proposed Dole Street parking structure but as part of the overall LRDP parking policy.

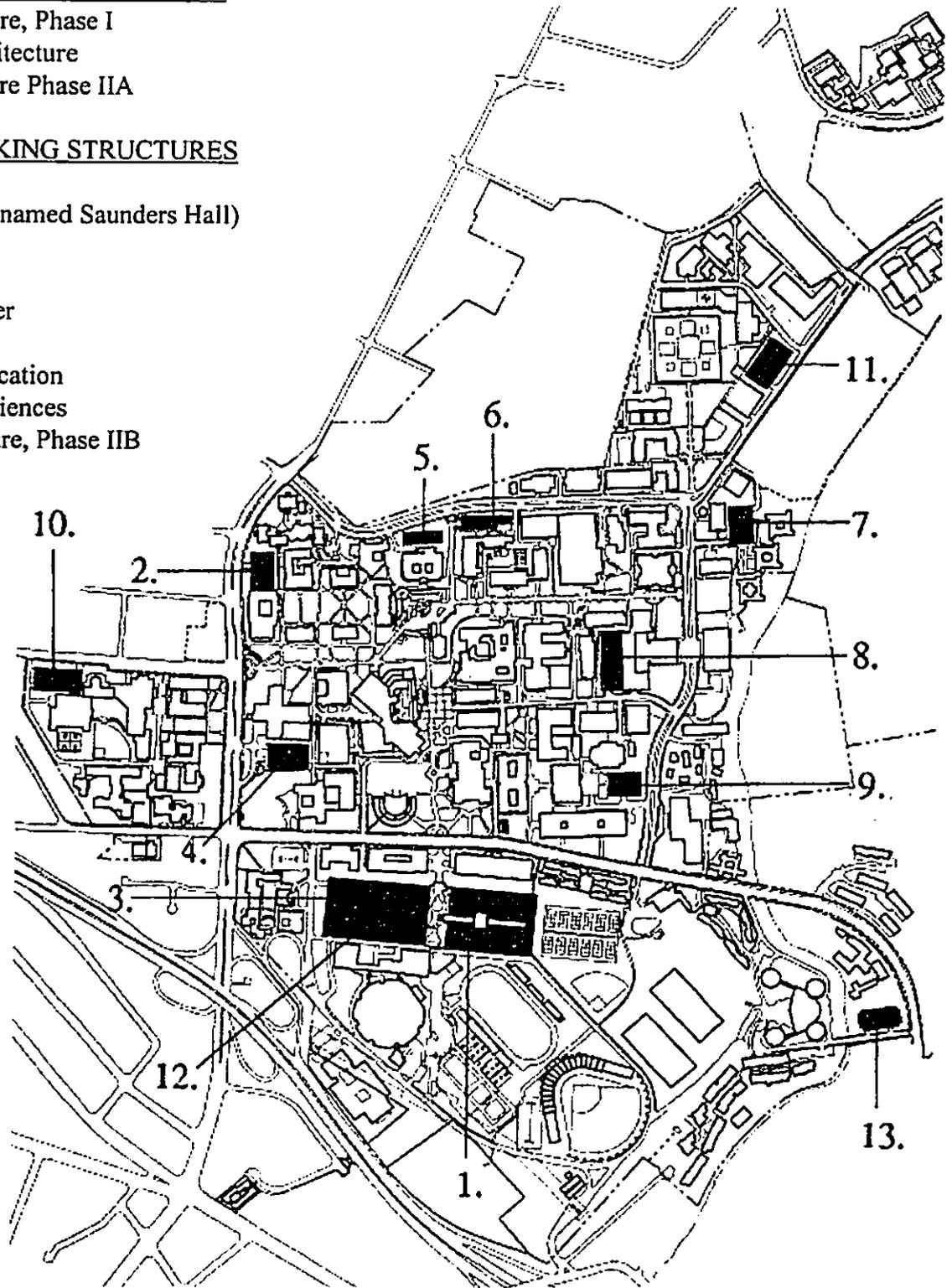
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EXISTING PARKING STRUCTURES

- 1. Parking Structure, Phase I
- 2. School of Architecture
- 3. Parking Structure Phase IIA

PROPOSED PARKING STRUCTURES

- 4. Bachman Hall
- 5. Porteus Hall (renamed Saunders Hall)
- 6. Spalding Hall
- 7. Korean Studies
- 8. Kennedy Theater
- 9. POST Center
- 10. College of Education
- 11. Agricultural Sciences
- 12. Parking Structure, Phase IIB
- 13. Dole Street



Source: University of Hawaii
UH Long Range Development Plan, 1994 Update



UH DOLE STREET PARKING STRUCTURE
EXISTING AND PROPOSED PARKING STRUCTURES

FIGURE
4-1

5. PERMITS & APPROVALS

The following permits and approvals are required:

- Environmental Assessment, Chapter 343, Hawaii Revised Statutes (HRS)
- DOH Noise Permit
- National Pollutant Discharge Elimination System General Permit
- Building Permit
- Grubbing, Grading, Excavation, Stockpiling Permit

6. DETERMINATION OF FINDING OF NO SIGNIFICANT IMPACT

This Final EA was prepared in accordance with the consultation process of Chapter 343, Hawaii Revised Statutes. Based on the significance criteria set forth in Section 200-12 of Title 11, Administrative Rules, Department of Health, State of Hawaii, it is determined that the proposed project will not have a major effect on the environment, and therefore this Finding of No significant Impact (FONSI) will be filed with the State Office of Environmental Quality Control (OEQC).

(1) Involve an irrevocable commitment to loss or destruction of any natural cultural resource;

The proposed action is not anticipated to involve any construction activity that might lead to a loss or destruction of any natural or cultural resource.

(2) Curtail the range of beneficial uses of the environment;

The proposed project will not curtail the beneficial uses of the environment.

(3) Conflict with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders;

The proposed project does not conflict with the long-term environmental policies, goals and guidelines of the State of Hawaii. As presented in this EA, the project's potential adverse impacts are not significant and primarily associated with short-term construction-related activities. These construction related impacts can be partially mitigated through adherence to standard construction mitigation practices.

(4) Substantially affect the economic or social welfare of the community or state;

The proposed project would provide some short-term economic benefits in the form of construction jobs.

(5) Substantially affect public health;

No impacts to the public's health and welfare are anticipated.

(6) Involve substantial secondary impacts, such as population changes or effects on public facilities;

No secondary effects are anticipated with the construction or operation of the proposed project.

(7) Involve a substantial degradation of environmental quality;

Construction activities associated with the proposed project are anticipated to result in relatively insignificant short-term impacts to noise, air quality, and traffic in the immediate project vicinity. With the incorporation of the recommended mitigation measures prior to and during the construction period, the project will not degrade environmental quality.

(8) Individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;

The proposed project is not anticipated to have a considerable cumulative effect upon the environment.

(9) Substantially affect a rare, threatened or endangered species, or its habitat;

There are no known rare, threatened or endangered species of flora or fauna or associated habitat on the project site that could be adversely affected by the construction and operation of the proposed project.

(10) Detrimentially affect air or water quality or ambient noise levels;

Operation of construction equipment would temporarily elevate ambient noise, concentrations of dust and exhaust emission in the immediate vicinity of the project site. Operation of the proposed project will have no significant long-term impact on air or water quality or ambient noise levels in the vicinity.

(11) Affect 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, fresh water, or coastal waters;

Construction and operation of the proposed project is not anticipated to impact environmentally sensitive areas, such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.

(12) Substantially affect scenic vistas and viewplanes identified in county or state plans or studies; or

Construction and operation of the proposed project will not affect scenic vistas and viewplanes identified in county or state plans. However, the view from the Center for Hawaiian Studies looking diamond head will be altered due the proposed four-level parking structure.

(13) Require substantial energy consumption.

Construction and operation will not require substantial increase in energy consumption.

7. CONSULTATION

7.1 Pre-Assessment Consultation

The following agencies and organization were contacted during the preparation of the Draft EA. Of the 16 parties that formally replied during the pre-assessment period, some had no comments while other provided substantive comments as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein.

Federal Agencies

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State Agencies

Department of Business, Economic Development and Tourism – Office of Planning
✓ Department of Education
✓ Department of Hawaiian Home Lands
✓✓ Department of Health (DOH) – Environmental Planning Office
✓✓ DOH - Office of Environmental Quality Control
✓✓ DOH – Environmental Management Division (DOH- Environmental Planning Office)
✓ Department of Land and Natural Resources (DLNR)
✓✓ DLNR – Land Division
DLNR – Aquatic Resources Division
✓✓ DLNR – Commission on Water Resource Management
✓ DLNR – Division of Forestry and Wildlife
✓✓ DLNR – Historic Preservation Division
✓✓ Office of Hawaiian Affairs
University of Hawaii, Center for Hawaiian Studies
✓ University of Hawaii, Environmental Studies Center

County Agencies

✓✓ Board of Water Supply
Department of Planning and Permitting
✓✓ Department of Transportation Services
✓✓ Fire Department
✓✓ Police Department

Elected Officials

✓ Councilmember Anne Kobayashi
Councilmember Duke Bainum
Representative Ed Case
Representative Brian Schatz
Senator Brian Taniguchi

Other Organizations

John Thomas Heinrich, Neighborhood Board No. 7
Karen Ah Mai, Neighborhood Board, No. 5

BENJAMIN J. CATTING
DIRECTOR
STATE OF HAWAII



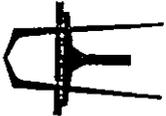
STATE OF HAWAII
DEPARTMENT OF HAWAII HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAII 96818

EM |
TF |
RAYNARD C. SOON
CHAIRMAN
HAWAIIAN HOMES COMMISSION

6576-02
April 10, 2002

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

WILSON
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& ASSOCIATES, INC.



ENGINEERS
PLANNERS

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HONOLULU, HI 96826
PH. (808) 946-2277
FAX. (808) 946-2253

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WILSON OKAMOTO & ASSOC., INC.

February 20, 2002

Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment
Pre-Assessment Consultation UH Dole Street Parking
Structure
University of Hawaii at Manoa, Honolulu, Oahu, HI
TMK: 02-08-029: portion of parcel 001

Thank you for the opportunity to review the subject application.
The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call Mr. Daniel Ornellas at
586-3836.

Aloha,

Daniel Ornellas
Raynard C. Soon, Chairman
Hawaiian Homes Commission

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Mr. Soon:

Thank you for your letter dated February 20, 2002 received during the subject
Pre-Assessment Consultation. We acknowledge that you have no comments to
offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Draft
EA. We appreciate your participation in the pre-assessment consultation phase
of the EA process.

Sincerely,

Earl Matsukawa
Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

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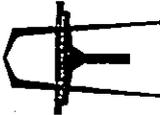


STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAII 96804

March 5, 2002

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MAY 26 2002
WILSON OKAMOTO & ASSOCIATES, INC.

WILSON OKAMOTO & ASSOCIATES, INC.



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PH: 808/945-2777
FAX: 808/945-2753

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: UH Dole Street Parking Structure
Draft Environmental Assessment
TMK: 02-08-029: portion of parcel 001

The Department of Education has no comment on the proposed Draft Environmental Assessment.

Thank you for the opportunity to respond.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:hy

cc: A. Suga, OBS

6576-02
April 10, 2002

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Ms. Yamamoto:

Thank you for your letter dated March 5, 2002 received during the subject Pre-Assessment Consultation. We acknowledge that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

BENJAMIN J. CAYetano
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENTAL QUALITY CONTROL
236 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE: (808) 548-1115
FACSIMILE: (808) 548-4118

RECEIVED
FEB 22 2002

February 20, 2002

Mr. Earl Matsukawa
Wilson Okamoto & Associates, Inc.
1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

SUBJECT: Draft Environmental Assessment, Pre-Assessment
Consultation UH Dole Street Parking Structure,
University of Hawaii at Manoa Honolulu, Oahu, HI

Dear Mr. Matsukawa,

We have reviewed the description of the subject project
provided by your letter dated February 13, 2002, and
suggest the following:

1. Consult with the neighborhood to be affected.
2. Address cumulative impacts this project may have
on other projects on campus.

We have no other comments to offer at this time, but will
reserve further comments when the documents are submitted.

Should you have any questions, please feel free to call our
office at 586-4185.

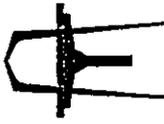
Yours truly,

Genevieve Salmonson
Genevieve Salmonson
Director

6576-02
April 10, 2002

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

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2377
FAX: (808) 946-2253

Dear Ms. Salmonson:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Thank you for your letter dated February 20, 2002 received during the subject
Pre-Assessment Consultation. We offer the following responses in the respective
order of your comments:

1. The following have been notified of the project during Pre-Assessment
Consultation and will be included as consulted parties for the Draft EA:
 - Councilmember Anne Kobayashi
 - Councilmember Duke Bainum
 - Representative Ed Case
 - Representative Brian Schatz
 - Senator Brian Taniguchi
 - Neighborhood Boards No. 5 and 7

2. The Environmental Assessment for a Long Range Development Plan
(LRDP) University of Hawaii, Manoa Campus 1994 Update (Final EA dated
August 1994) assessed the cumulative impacts of the various proposals in
the LRDP 1994 Update, which included the Dole Street Parking Structure.

Your letter, along with this response will be reproduced in the forthcoming Draft
EA. We appreciate your participation in the pre-assessment consultation phase
of the EA process.

Sincerely,

Genevieve Salmonson
Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawahara, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

BERNARD J. CATTIAGO
GOVERNOR OF HAWAII



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

RECEIVED

MAR 21 2002

HONOLULU, HAWAII 96801

March 20, 2002

EM
7
PRUCE E. ANDERSON, Ph.D., MPH
DIRECTOR OF HEALTH

In Reply, Please Refer to:
File # 02-040/cpo

Mr. Earl Matsukawa, AICP, Project Manager
March 20, 2002
Page 2

- b. Hydro-testing water, and
- c. Construction dewatering effluent.

Please note that the current NPDES general permits will expire at midnight, September 21, 2002. If the project continues after this date, you will need to reapply for all applicable NPDES general permit coverage prior to the expiration date.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Clean Air Branch (CAB)

There is a significant potential for fugitive dust emissions during the construction activities. Implementation of adequate dust control measures during all phases of construction is warranted.

Construction activities must comply with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

Fugitive Dust Control:

The contractor should provide adequate measures to control dust from the road areas and during the various phases of construction. These measures include, but are not limited to:

- a. Planning the different phases of construction, focusing on minimizing the amount of dust generating materials and activities, centralizing on-site vehicular traffic routes, and locating potentially dusty equipment in areas of the least impact;
- b. Providing an adequate water source at the site prior to start up of construction activities;
- c. Landscaping and rapid covering of bare areas, including slopes, starting from the initial grading phase;
- d. Controlling of dust from shoulders and access roads;
- e. Providing adequate dust control measures during weekends, after hours, and prior to daily start-up of construction activities; and
- f. Controlling of dust from debris being hauled away from project site.

If you have any questions, please contact the Clean Air Branch at (808) 586-4200.

Mr. Earl Matsukawa, AICP, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Pre-Consultation for a Draft Environmental Assessment (PEA)
University of Hawaii-Dole Street Parking Structure, Manoa, Oahu

Thank you for the opportunity to review and comment on the subject proposal. The PEA was routed to the various branches of the Environmental Health Administration. We have the following comments.

Clean Water Branch (CWB)

The Army corps of Engineers should be contacted to identify whether a Federal permit (including a Department of Army permit) is required for any of the future projects. If it is determined that a Federal permit is required for the subject project, then a Section 401 Water Quality Certification would also be required from our office.

If construction involves any of the following discharges into State waters, a national Pollutant Discharge Elimination System (NPDES) permit coverage is required for each discharge:

- a. Storm water runoff associated with construction activities, including clearing, grading, and excavation that result in the disturbance of equal to or greater than five (5) acres of total land area. The total land area includes a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under a larger common plan of development or scale.
[Note: After March 10, 2003, an NPDES permit will be required for discharges of storm water associated with construction activities, including clearing, grading, and excavation that result in the disturbance of one (1) acre or more.

Mr. Earl Matsukawa, AICP, Project Manager
March 20, 2002
Page 3

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Sincerely,



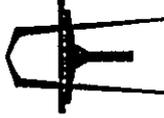
GARY GILL
Deputy Director
Environmental Health Administration

c: CWB
CAB
NRIAQ

6576-02
April 10, 2002

Mr. Gary Gill, Deputy, Director
Department of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96814

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: 808-946-2277
FAX: 808-946-7253

Dear Mr. Gill:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Thank you for your letter dated March 20, 2002 (02-020/epo) received during the subject Pre-Assessment Consultation. We offer the following responses in the respective order of your comments:

Clean Water Branch

The U.S. Army Corps of Engineers has been notified of the project during Pre-Assessment Consultation and will be included as a consulted party for the Draft EA.

A National Pollutant Discharge Elimination System (NPDES) permit will not be required for the proposed project since the project site is less than one acre and will not involve hydro-testing water or construction dewatering.

Clean Air Branch

The Draft EA will discuss the proposed project's compliance with provisions of Hawaii Administrative Rules, Chapter 11-60.1, "Air Pollution Control," Section 11-60.1-33, Fugitive Dust.

Noise, Radiation and Indoor Air Quality Branch

The Draft EA will discuss the proposed project's compliance with provisions of Hawaii Administrative Rules of the Department of Health, Chapter 11-46, on "Community Noise Control".

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

6576-02
Letter to Mr. Gary Gill
Pg. 2
April 10, 2002

WILSON
OKAMOTO
& ASSOCIATES, INC.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

FE
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AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND
RESTORATION
COMMITTEE
CONSERVATION
POLICY AND WILDLIFE
HISTORIC PRESERVATION
STATE PARKS
WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 151
HONOLULU, HAWAII 96808

March 8, 2002

RECEIVED
MAR 11 2002
WILSON OKAMOTO & ASSOC., INC.

LD-NAV
Ref.: UHDOLEPARKING.RCH2
LOG-1174/935

Wilson Okamoto & Associates, Inc.
Earl Matsukawa, AICP, Project Manager
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Review: Pre-Consultation for Draft Environmental Assessment
Applicant: University of Hawaii at Manoa
Consultant: Wilson Okamoto & Associates, Inc.
Project: UH Dole Street Parking Structure
Location: Manoa, Honolulu, Oahu, Hawaii
TMK: 1" / 2-8-029: portion of 001

This is a follow-up to our letter (Ref.: UHDOLEPARKING.RCH) to you dated March 1, 2001, pertaining to the subject matter. Attached herewith is a copy of the Land Division Engineering Branch comment.

The Department of Land and Natural Resources has no other comment to offer at this time.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

HARRY H. YADA
Acting Administrator

C: Oahu District Land Office

EM
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AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND
RESTORATION
COMMITTEE
CONSERVATION
POLICY AND WILDLIFE
HISTORIC PRESERVATION
STATE PARKS
WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION
P.O. BOX 151
HONOLULU, HAWAII 96808

March 1, 2002

RECEIVED
MAR 04 2002
WILSON OKAMOTO & ASSOC., INC.

LD-NAV
Ref.: UHDOLEPARKING.RCH
LOG-1107/935

Wilson Okamoto & Associates, Inc.
Earl Matsukawa, AICP, Project Manager
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Review: Pre-Consultation for Draft Environmental Assessment
Applicant: University of Hawaii at Manoa
Consultant: Wilson Okamoto & Associates, Inc.
Project: UH Dole Street Parking Structure
Location: Manoa, Honolulu, Oahu, Hawaii
TMK: 1" / 2-8-029: portion of 001

Thank you for your pre-consultation letter dated February 13, 2002 covering the subject proposed project.

A copy of your letter and summary description of the subject project was transmitted to the following Department of Land and Natural Resources' Divisions for their review and comment:

- Commission on Water Resource Management
- Land Division Engineering Branch
- Land Division Oahu Land Office

The Department of Land and Natural Resources has no comment to offer at this time.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

HARRY H. YADA
Acting Administrator

C: Oahu District Land Office

DLNR-LAND DIVISION
ENGINEERING BRANCH

LD/NAV/LOG935
Ref.: UHDOLEPARKING.COM

COMMENTS

For your information the project site, according to FEMA Community Panel Number 15003 C 0370 E (dated November 20, 2000), is located in Zones X (Not shaded). This is an area determined to be outside 500-year floodplain.

6576-02
April 10, 2002

Mr. Harry M. Yada, Acting Administrator
Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: 808/946-2277
FAX: 808/946-2253

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Yada:

Thank you for your letter dated March 1, 2002 (Ref.: UHDOLEPARKING.RCM) received during the subject Pre-Assessment Consultation. That letter initially indicated that you had no comments to offer. We subsequently received your letter dated March 8, 2002 (Ref.: UHDOLEPARKING.RCM2) confirming that the project site is located within Zone X (not shaded), according to FEMA Community Panel Number 15003 C 0370 E (dated November 20, 2000).

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,


Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc



STATE OF HAWAII
 DEPARTMENT OF LAND AND NATURAL RESOURCES
 DIVISION OF FORESTRY AND WILDLIFE
 1151 PUNCHBOWL STREET
 HONOLULU, HAWAII 96813
 February 25, 2002

WILLIAM J. CAYEYARD
 GOVERNOR OF HAWAII

OLUPELUA S. COLUVALAKA
 CHAIRPERSON
 BOARD OF LAND AND NATURAL RESOURCES

State of Hawaii
 DEPT.
 AGRICULTURE DEVELOPMENT
 NATURAL RESOURCES
 FORESTRY AND WILDLIFE
 RECREATION AND
 ENVIRONMENTAL AFFAIRS
 CONSTRUCTION AND
 UTILITIES
 SERVICES ENFORCEMENT
 COASTAL ZONE
 FORESTRY AND WILDLIFE
 HISTORIC PRESERVATION
 PLANNING
 WATER AND LAND DEVELOPMENT
 WATER RESOURCES MANAGEMENT

RECEIVED
 FEB 27 2002

WILSON OKAMOTO & ASSOCIATES, INC.

Mr. Earl Matsukawa, AICP
 Project Manager
 Wilson Okamoto and Associates, Inc.
 1907 South Beretania Street, Suite 400
 Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation UH Dole Street Parking Structure, University of Hawaii at Manoa Honolulu, Oahu, Hawaii
 TMK: 02-08-029: por. 001.

We appreciate you including us in your review of the subject matter above regarding the proposed parking structure at UH Manoa. We have no objections to the project, as it will not impact any of DOFAW's management programs. Thank you for the opportunity to comment on this project.

Sincerely yours,

Paul G. Gray
 for
 Michael G. Buck
 Administrator

C: Oahu DOFAW Branch

6576-02
 April 10, 2002

Mr. Michael G. Buck, Administrator
 Division of Forestry and Wildlife
 Department of Land and Natural Resources
 State of Hawaii
 1151 Punchbowl Street
 Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment, Pre-Assessment Consultation UH Dole Street Parking Structure, University of Hawaii at Manoa Honolulu, Oahu, Hawaii
 Tax Map Key: 02-08-029: portion of parcel 001

Dear Mr. Buck:

Thank you for your letter dated February 25, 2002 received during the subject Pre-Assessment Consultation. We acknowledge that you had no comments to offer at this time, as it will not impact any of DOFAW's management programs.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa
 Earl Matsukawa, AICP
 Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
 Mr. Michael Kawaharada, Englekirk Partners
 Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

WILSON
 OKAMOTO
 & ASSOCIATES, INC.



ENGINEERS
 PLANNERS
 1907 S. BERETANIA ST
 SUITE 400
 HONOLULU, HI 96826
 PH: (808) 946-2277
 FAX: (808) 946-2253



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT
HONOLULU, HAWAII 96826

February 25, 2002

WILSON OKAMOTO & ASSOCIATES, INC.

UHI Parking Lot/4

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania St., Suite 400
Honolulu, HI 96826

Dear Mr. Matsukawa:

SUBJECT: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii, Tax Map Key: 02-28-029-portion of parcel 001

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

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

- () We recommend coordination with the county government to incorporate this project into the county's Water Use and Development Plan.
- () We recommend coordination with the Land Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- () We are concerned about the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.
- () A Well Construction Permit and/or a Pump Installation Permit from the Commission would be required before ground water is developed as a source of supply for the project.
- () The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit from the Commission would be required prior to use of this source.

Mr. Earl Matsukawa
Page 2
February 25, 2002

EM
FR
BT

CLEBERT S. COLWELL-JACOBSON
DIRECTOR
BRUCE E. ANDERSON
ASSISTANT CHIEF
CLAYTON A. HANAUZ
JIMMIE C. HONOKA
HERBERT M. RICHMOND, JR.

LINNEL T. NISHIOKA
DEPUTY DIRECTOR
RECEIVED
FEB 28 2002

- () 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:

Our records show that there is an unused well (Manoa I, Well No. 1748-13) located on the parcel. The well was drilled in 1984 by the Honolulu Board of Water Supply. If the construction of the proposed project will, in effect, result in the abandonment of the well, §174C-87 Hawaii Revised Statutes and Administrative Rule §13-168-16 require that the well first be properly sealed. A permit from the Commission must be obtained prior to the start of any sealing work. If the well is destroyed or buried without being properly sealed, the CWRM may order proper abandonment and sealing, in accordance with the Hawaii Well Construction and Pump Installation Standards (1997), be done at the landowner's expense. The landowner may also be subject to fines of up to \$1000 per day for noncompliance with statutory requirements.

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

Sincerely,

LINNEL T. NISHIOKA
Deputy Director

LN:SS

6576-02
April 10, 2002

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

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Ms. Nishioka:

Thank you for your letter dated February 25, 2002 (UH Parking Lot.dr) received during the subject Pre-Assessment Consultation. The unused well (Manoa I, Well No. 174B-13) cite lies within the same parcel as the project site but in a different location. Hence, the proposed project will not affect the disposition of the well.

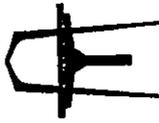
Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,


Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawahara, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

WILSON
OKAMOTO
ASSOCIATES, INC.



ENGINEERS
PLANNERS
907 S. BERETANIA ST
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-7277
FAX: (808) 946-7253

ROYAL HAWAIIAN GOVERNMENT

RECEIVED
MAR 20 2002



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
1907 S. BERETANIA STREET, SUITE 400
HONOLULU, HAWAII 96826

ROBERT E. GOLDMANN, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

DEPUTY
ERIC T. HIRAKAWA
LANCE HIRAKAWA

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
COMMISSION ON WATER RESOURCES
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCE
IDENTITY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS

March 14, 2002

Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826

LOG NO: 29396 ✓
DOC NO: 0203E107

Dear Mr. Matsukawa:

SUBJECT: Chapter 6E-8 Historic Preservation Review - Draft Environmental Assessment (DEA), Pre-Assessment Consultation UH Dole Street Parking Structure, University of Hawai'i at Manoa
Manoa, Kona, O'ahu
TMK: 2-8-029: por. 001

Thank you for the opportunity to provide comment for the DEA on the proposed University of Hawai'i at Manoa parking structure on Dole Street. Our review is based on historic reports, maps, and aerial photographs maintained at the State Historic Preservation Division; no field inspection was made of the project areas. The University of Hawai'i at Manoa, Facilities Planning and Management Office proposes to construct a new four-level parking structure on Dole Street immediately east of the Center for Hawaiian Studies. The project site is currently an open-air gravel parking lot.

A review of our records shows that there are no known historic sites at this location. However, the Ka Papa Lo'i o Kanewai (State Site 50-80-14-4498, Kanewai taro pondfields) are located on the western side of the Center for Hawaiian Studies building. Archaeological, historical and paleontological investigations conducted at the Ka Papa Lo'i o Kanewai and the Center for Hawaiian Studies provided evidence of both historic and pre-contact period of use of the area for agricultural cultivation. Also BWS waterline work resulted in the recovery of human burials from Dole Street to the east of the project area at the eastern end of the Kanewai Park parking lot. The deepest burials were found between 5-6 feet below the Dole Street

Preliminary subsurface investigations conducted by F. G. E. Ltd., geo-technical engineers, indicate that the project site is underlain by fill soils ranging in depth from 8.5 to 11.5 feet below the existing ground surface. The project site currently lies between 7 and 10 feet below Dole Street and Kanewai Park, which indicates that

Earl Matsukawa, Project Manager
Page Two

extensive grading and/or earth removal has occurred in the past. Because of the past alteration it is unlikely that human burials would be found at this parcel. The past ground disturbance and the depth of fill also make it unlikely that remains of past agricultural use would still be present. Although construction plans have not been finalized for this project, preliminary plans propose ground disturbance consisting of grading up to ten feet in depth and filling of up to five feet thick for development of the parking structure. Because the current project area appears to have undergone extensive alteration, and because it is unlikely that historic sites would still be present beneath the fill soils, we believe that this project will have "no effect" on significant historic sites.

However, in the unlikely event that historic sites, including human burials, are uncovered during routine construction activities, all work in the vicinity must stop and the State Historic Preservation Division must be contacted at 692-8015.

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

Aloha,

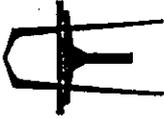
Don Hibbard, Administrator
State Historic Preservation Division

Eljk

6576-02
April 10, 2002

Mr. Don Hibbard, Administrator
Historic Preservation Division
Department of Land and Natural Resources
State of Hawaii
601 Kamokila Boulevard, Room 555
Kapolei, Hawaii 96707

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Dear Mr. Hibbard:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Thank you for your letter dated March 14, 2002 (LOG NO: 29396 DOC NO: 0203EJ07) received during the subject Pre-Assessment Consultation. We acknowledge that you believe "it is unlikely that human burials would be found on the proposed project site, due to past ground disturbance." The Draft EA will include as a mitigation measure that in the event historic sites, including human burials, are uncovered during construction activities, all work will stop and the State Historic Preservation Division will be contacted.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,


Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

6576-02
April 10, 2002

Mr. Colin C. Kippen, Deputy Administrator
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Blvd., Suite 500
Honolulu, Hawaii 96826

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Kippen:

Thank you for your letter dated February 20, 2002 (HRD02-497) received during the subject Pre-Assessment Consultation. We offer the following responses in the respective order of your comments:

- 1&2. The Draft EA will include a discussion of cultural, historical, and archaeological impacts.
3. The Draft EA will address indirect project impacts on Manoa Stream, which is adjacent to the project site and will not be directly impacted.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST
SUITE 400
HONOLULU, HI 96826
PH 808/946-2277
FAX 808/946-2253

6576-02
April 10, 2002

University of Hawai'i at Mānoa



Environmental Center
A Unit of Water Resources Research Center
Krusa Annex 18 • 2550 Dole Street • Honolulu, Hawaii 96826
Telephone: (808) 956-7381 • Facsimile: (808) 956-3940

March 12, 2002

Mr. Earl Matsukawa
Wilson Okamoto & Associates, Inc
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Dear Mr. Matsukawa:

Draft Environmental Assessment
Pre-Assessment Consultation
University of Hawai'i Dole Street Parking Structure
Honolulu, Oahu

Thank you for your letter dated February 13, 2002 regarding pre-assessment consultation Matsukawa Matsukawa for the UH Dole Street parking structure project. We received the letter on March 1, 2002. We have no comments to submit at this time. However, we are looking forward to reviewing the draft environmental assessment.

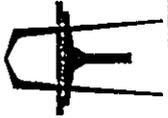
Cc: James Moncur

Sincerely,

John T. Harrison, Ph.D.
Environmental Coordinator

Dr. John Harrison, Environmental Coordinator
Environmental Center
University of Hawai'i at Manoa
2550 Campus Road, Crawford 317
Honolulu, HI 96822

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
SUITE 400
1907 S BERETANIA ST
HONOLULU, HI 96826
PH: (808) 946-7277
FAX: (808) 946-7253

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawai'i at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-028; portion of parcel 001 .

Dear Dr. Harrison:

Thank you for your letter dated March 12, 2002 received during the subject Pre-Assessment Consultation. We acknowledge that you have no comments to offer at this time.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. As required, a copy of the Draft EA will be sent to you for your review and comment. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

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



February 28, 2002

REVISED
FEB 28 2002

Mr. Earl Matsukawa
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

WILSON OKAMOTO & ASSOC., INC.

Dear Mr. Matsukawa:

Subject: Your Letter of February 13, 2002 on the Draft Environmental Assessment, Pre-Assessment Consultation for the University of Hawaii Dole Street Parking Structure. TMK: 2-8-29:1

Thank you for the opportunity to review the subject document for the proposed parking structure.

We have the following comments to offer:

1. The existing water system is presently adequate to accommodate the proposed parking structure. The availability of water will be confirmed when the Building Permit Application is submitted for our review and approval. When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.
2. The applicant is required to obtain a water allocation from the University of Hawaii.
3. The proposed project is subject to Board of Water Supply cross-connection control and backflow prevention requirements prior to issuance of the Building Permit.

If you have any questions, please contact Joseph Kaakua at 577-6123.

Very truly yours,

CLIFFORD S. JAMILE
Manager and Chief Engineer

EA
11

JEREMY HARRIS, Mayor
EDDIE FLORES, JR., Chairman
CHARLES A. TEO, Vice-Chairman
JIM KELLY, AICP
HERBERT E.K. KAOPUA, SR.
BARBARA TOM STANTON
BRUCE K. SHUAL, E-ORCA
ROSS E. SAJAMURA, E-ORCA
CLIFFORD S. JAMILE
Manager and Chief Engineer

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH (808)946-2777
FAX (808)946-2753

6576-02
April 10, 2002

Mr. Clifford S. Jamile, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Jamile:

Thank you for your letter dated February 28, 2002 received during the subject Pre-Assessment Consultation. We offer the following responses in the respective order of your comments:

1. We appreciate your determination that the existing water system is presently adequate to accommodate the proposed parking structure and acknowledge that the availability of water will be confirmed when the building permit application is submitted to you for review and approval. We further acknowledge that the State will be required to pay Water System Facilities Charges for transmission and daily storage.
2. We acknowledge that the applicant is required to obtain a water allocation from the State for the proposed project.
3. The applicant will comply with the cross-connection control and backflow prevention requirements for the project in conjunction with the building permit application.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

EM

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

PACIFIC PARK PLAZA • 711 HAPOLANI BOULEVARD, SUITE 1200 • HONOLULU, HAWAII 96813
TELEPHONE 1808-523-4525 • FAX 1808-523-4730 • INTERNET: WWW.CC.HONOLULU.HI



JEREMY HARRIS
MAYOR

RECEIVED
MAR 06 2002

WILSON CIYAMOTO & ASSOC., INC.

February 28, 2002

TPD2/02-00644R

CHERYL D. SOON
DIRECTOR

GEORGE TEOH
DEPUTY DIRECTOR

Mr. Earl Matsukawa
February 28, 2002
Page 2

Should you have any questions regarding these comments, please contact Faith Miyamoto of the Transportation Planning Division at 527-6976.

Sincerely,

CHERYL D. SOON
Director

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: UH Dole Street Parking Structure

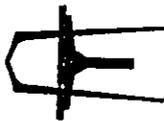
In response to your February 13, 2002 letter, the project information provided was reviewed. The following comments are offered for your consideration as you prepare the draft environmental assessment (EA):

1. The proposed project is a new four-level, 273-stall, parking structure that will generate a significant amount of additional traffic in the area. We would like the EA to include an evaluation and analysis of the use of other modes of transportation as alternatives to building the additional parking. The City is proposing substantial transit service improvements to the University of Hawaii (UH) with the Bus Rapid Transit terminal station at Sinclair Circle. It is our hope that the UH will focus its efforts on encouraging greater transit use. We look forward to working together to make transit use more convenient and attractive for UH students and commuters.
2. The traffic impact assessment that is to be prepared in conjunction with the draft EA should include an assessment of the relative change in the on-street parking usage in the surrounding neighborhood and the effects on transit use. The analysis of transit impacts should also include the net effect on the UH shuttle system and its viability.
3. Driveway access issues should be addressed in the draft EA, i.e. impact on Dole Street, sightlines, etc.

We look forward to reviewing the draft EA. To facilitate our review, please send us two copies of the document.

6576-02
April 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: 808/946-2277
FAX: 808/946-2253

Ms. Cheryl D. Soon, Director
Department of Transportation Services
City and County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

Dear Ms. Soon:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Thank you for your letter dated February 28, 2002 (TPD2/02-00644R) received during the subject Pre-Assessment Consultation. We offer the following responses in the respective order of your comments:

1. A Traffic Impact Assessment has been prepared for inclusion in the forthcoming Draft EA. The assessment indicates that the proposed project would not have significant impacts on traffic operations in the vicinity.

The applicant recommends the City's efforts to improve transit service for students and commuters to the Manoa Campus and looks forward to working with you to making such service more convenient and attractive in the future. The applicant recognizes the potential for transit service to reduce campus parking demands and looks to the City to provide them with information on projected ridership that they can use comprehensively to plan future parking improvements for the entire campus. The proposed parking structure is one of several identified in the 1987 Long Range Development Plan (LRDP) University of Hawaii Manoa Campus, and the subsequent 1994 Update as part of an overall parking strategy. This overall strategy could be re-evaluated based on the City's ridership projections with regard to the implementation of other proposed parking structures.

2. The Traffic Impact Assessment discusses the potential reduction of on-street parking available on Dole Street as a result of the proposed project. Inasmuch as the existing on-street parking is available to the general public, correlating the reduction of such parking to a change in transit use would be infeasible.

6576-02
Letter to Ms. Cheryl D. Soon
Pg. 2
April 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**

The Traffic Impact Assessment indicates that the proposed project would not have significant impacts on traffic operations in the vicinity. Hence, no impacts on the operation of the UH shuttle system would be anticipated.

3. The Traffic Impact Assessment addresses driveway access issues such as sight distance. In order to ensure the required sight distance, on-street parking will be restricted on the makai side of Dole Street on either side of the proposed driveway.

Your letter, along with this response will be reproduced in the forthcoming Draft EA, two copies of which will be provided for your review and comment. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

CITY AND COUNTY OF HONOLULU

FIRE DEPARTMENT

3373 KOAHPALA STREET, SUITE 4423 - HONOLULU, HAWAII 96819-1649
TELEPHONE: (808) 831-7711 • FAX: (808) 831-7720 • INTERNET: WWW.HONOLULU.HI



JEANETTE HARRIS
CLERK

ARTHUR H. LEONARD
FIRE CHIEF
JOHN CLARK
DEPUTY FIRE CHIEF

Mr. Earl Maisukawa, AICP
Page 2
February 26, 2002

3. Submit civil drawings to the HFD for review and approval.
Should you have any questions, please call Battalion Chief Kenneth Silva of our Fire Prevention Bureau at 831-7778.

February 26, 2002

Mr. Earl Maisukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Maisukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
University of Hawaii at Manoa Dole Street Parking Structure
Honolulu, Oahu, Hawaii
Tax Map Key: 2-8-029: Portion of Parcel 001

We received your letter dated February 13, 2002, requesting our comments for the above-mentioned project.

The Honolulu Fire Department (HFD) has no objections to the proposed project provided the following conditions are 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.

Sincerely,

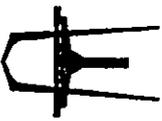

JOHN CLARK
Acting Fire Chief

JCSK:jl

6576-02
April 10, 2002

Mr. Attilio K. Leonardi, Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street, H425
Honolulu, Hawaii 96819

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANUA ST
SUITE 400
HONOLULU, HI 96826
PH: 808-946-2777
FAX: 808-946-2753

Dear Mr. Leonardi:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Thank you for your letter dated February 26, 2002 received during the subject Pre-Assessment Consultation. We offer the following responses in the respective order of your comments:

1. The water system serving the proposed parking will be designed to meet fire protection requirements in accordance with Board of Water Supply standards.
2. The internal at-grade driveway for the proposed parking structure will be designed to serve as the fire department access road in compliance with the requirements for proximity to the structure, minimum vertical height clearance, driving surface, gradient, unobstructed width and turnaround specified in your letter.
3. Civil drawings for the proposed project will be submitted to the HFD for review and approval.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 823-3111
<http://www.honolulu.gov>
www.co.honolulu.hi.us

JEREMY HARRIS
MAYOR



LEE D. DONOHUE
CHIEF
MICHAEL CARVALLO
ROBERT AD
DEPUTY CHIEFS

OUR REFERENCE CS-KP

February 21, 2002

RECEIVED
FEB 25 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96813

Dear Mr. Matsukawa:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment, Pre-Assessment Consultation, for the UH Doie Street Parking Structure.

This area is serviced by patrol officers from District 7 which is housed at the Alapai Headquarters. Although the grading and construction phases of this project may have a negative impact on police calls for service because of dust, noise, and traffic complaints, we think that there will be an overall positive impact after the proposed structure becomes operational.

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

Sincerely,

LEE D. DONOHUE
Chief of Police

By *Carol Sodehani*
KARL GODSEY
Acting Assistant Chief of Police
Support Services Bureau

6576-02
April 10, 2002

Mr. Lee D. Donohue, Chief
Police Department
City and County of Honolulu
801 S. Beretania Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
UH Doie Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Donohue:

Thank you for your letter dated February 21, 2002 (CS-KP) received during the subject Pre-Assessment Consultation. The police service area information you provided will be included in the Draft EA. Your opinion regarding the overall impact of the proposed project on police services is acknowledged.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa
Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
Mr. Michael Kawahara, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

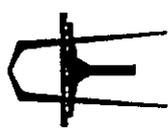


Em ✓
CITY COUNCIL
 CITY AND COUNTY OF HONOLULU
 HONOLULU, HAWAII 96813-3085 / TELEPHONE 547-7000

ANN H. KOBAYASHI
 Budget Chair
 Councilmember, District V
 (Honolulu) / (Aiea) / (Molokai)
 PH: 547-7003 FAX: 547-4220
 akobayashi@cc.honolulu.hi.us

RECEIVED
 MAR 11 2002
 WILSON OKAMOTO & ASSOCIATES, INC.

**WILSON
 OKAMOTO
 & ASSOCIATES, INC.**



ENGINEERS
 PLANNERS
 1907 S. BERETANIA ST.
 SUITE 400
 HONOLULU, HI 96826
 PH 808/946-2277
 FAX 808/946-2253

March 7, 2002

Mr. Earl Matsukawa, AICP
 Project Manager
 Wilson Okamoto & Associates, Inc.
 1907 S. Beretania St., Suite 400
 Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
 UH Dole Street Parking Structure, University of Hawaii at Manoa
 Honolulu, Oahu, Hawaii
 Tax Map Key: 02-08-029: portion of parcel 001

Thank you for sending us the summary papers of the Draft Environmental Assessment (EA) for the UH Dole Street Parking Structure proposal. We have just settled into our new Council offices and apologize for not being able to meet your comment deadline of February 28, 2002.

As parking has always been a high-priority issue at UH Manoa and its surrounding area, I am deeply interested in any proposal to help alleviate the parking situation. Please keep me informed of the status of this project.

Sincerely,

ANN H. KOBAYASHI
 Councilmember, District V

AHK:ks

6576-02
 April 10, 2002

Councilmember Anne Kobayashi
 Honolulu City Council
 City & County of Honolulu
 530 S. King Street
 Honolulu, HI 96813

Subject: Draft Environmental Assessment, Pre-Assessment Consultation
 UH Dole Street Parking Structure, University of Hawaii at Manoa
 Honolulu, Oahu, Hawaii
 Tax Map Key: 02-08-029: portion of parcel 001

Dear Councilmember Kobayashi:

Thank you for your letter dated March 7, 2002. We acknowledge your interest and concern regarding the parking situation at the University.

Your letter, along with this response will be reproduced in the forthcoming Draft EA. A copy of the Draft EA will be sent to you for your review and comment. We appreciate your participation in the pre-assessment consultation phase of the EA process.

Sincerely,

Earl Matsukawa, AICP
 Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning
 Mr. Michael Kawaharada, Englekirk Partners
 Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc

7.2 Parties Consulted During Draft EA

The following agencies and organizations were consulted and comments solicited for the Draft EA. Of those who formally replied, some had no comments, while others provided substantive comments as indicated by the ✓ and ✓✓, respectively. All written comments are reproduced herein.

Federal Agencies

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

State Agencies

- Department of Business, Economic Development and Tourism – Office of Planning
- ✓ Department of Education
- ✓ Department of Hawaiian Home Lands
- ✓✓ Department of Health (DOH) – Environmental Planning Office
- ✓✓ DOH - Office of Environmental Quality Control
- ✓✓ DOH – Environmental Management Division (DOH- Environmental Planning Office)
- ✓ Department of Land and Natural Resources (DLNR)
- ✓✓ DLNR – Land Division
- DLNR – Aquatic Resources Division
- ✓✓ DLNR – Commission on Water Resource Management
- ✓ DLNR – Division of Forestry and Wildlife
- ✓✓ DLNR – Historic Preservation Division
- ✓✓ Office of Hawaiian Affairs
- ✓✓ University of Hawaii, Center for Hawaiian Studies
- University of Hawaii, Environmental Studies Center

County Agencies

- ✓ Board of Water Supply
- ✓✓ Department of Design and Construction
- Department of Environmental Services
- ✓ Department of Parks and Recreation
- ✓✓ Department of Planning and Permitting
- ✓✓ Department of Transportation Services
- ✓✓ Fire Department
- ✓ Police Department

Elected Officials

Councilmember Anne Kobayashi
Councilmember Duke Bainum
Representative Ed Case
Representative Brian Schatz
Senator Brian Taniguchi

Other Organizations

John Thomas Heinrich, Neighborhood Board No. 7
Karen Ah Mai, Neighborhood Board, No. 5

✓ Hawaiian Electric

✓✓ Mr. Sean Browne

Libraries

University of Hawaii at Manoa, Hamilton Library
Hawaii State Library
Manoa Library

BENJAMIN J. CAVIUNO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF EDUCATION
P.O. BOX 2180
HONOLULU, HAWAII 96826

OFFICE OF THE SUPERINTENDENT

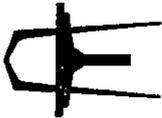
May 13, 2002

RECEIVED
MAY 14 2002

WILSON OKAMOTO & ASSOC., INC.

EA
PATRICIA HAMAMOTO
STATE SUPERINTENDENT

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: UH Dole Street Parking Structure
Draft Environmental Assessment (DEA)
TMK: 02-08-029, portion of parcel 001

The Department of Education has no comment on the DEA.

Thank you for the opportunity to respond.

Very truly yours,

Patricia Hamamoto
Patricia Hamamoto
Superintendent

PH:hy

cc: A. Suga, OBS
G. Salmonson, OEQC
R. Lau, FPMO/UH

6576-02
July 10, 2002

Ms. Patricia Hamamoto, Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, Hawaii 96804

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Ms. Hamamoto:

Thank you for your letter dated May 13, 2002 indicating that you had no
comments to offer on the subject Draft EA.

We appreciate your interest and participation in the public review phase of the
Draft EA. Your letter, along with this response, will be reproduced in the
forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

M:\Yca\6576-02\FinalEA\NO-r1\EAResponse\DOE.docc:07/10/02

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

BENJAMIN I. CANTLAND
GOVERNOR
STATE OF HAWAII



STATE OF HAWAII
DEPARTMENT OF HAWAIIAN HOMELANDS
P.O. BOX 1179
HONOLULU, HAWAII 96826

April 25, 2002

RECEIVED
APR 26 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment for the UH Dole
Street Parking Structure, TMK 02-08-029: por. of 001,
Honolulu, Oahu, Hawaii

Thank you for the opportunity to review the subject application.
The Department of Hawaiian Home Lands has no comment to offer.

If you have any questions, please call our Planning Office at
586-3836.

Aloha,

Darrell Jaganian
Darrell Jaganian
Chairman
Hawaiian Homes Commission

c: Office of Quality Control
UH-Facilities Planning & Management

6576-02
July 10, 2002

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

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Mr. Soon:

Thank you for your letter dated April 25, 2002 indicating that you had no
comments to offer on the subject Draft EA.

We appreciate your interest and participation in the public review phase of the
Draft EA. Your letter, along with this response, will be reproduced in the
forthcoming Final EA.

Sincerely,

Earl Matsukawa
Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION
P.O. BOX 651
HONOLULU, HAWAII 96826
May 23, 2002

ID-NAV
UHDOLEPARKINGDEA.RCH2
L-2772/2287/2773/2538/2485/2843

Wilson Okamoto & Associates, Inc.
Earl Matsukawa, AICP, Project Manager
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Draft Environmental Assessment
Applicant: University of Hawaii at Manoa
Consultant: Wilson Okamoto & Associates, Inc.
Project: UH Dole Street Parking Structure
Location: Manoa, Honolulu, Oahu, Hawaii
TMK: 1st/ 2-8-029: portion of 001

This is a follow-up to our letter (Ref.: UHDOLEPARKINGDEA.RCM) to you dated May 10, 2002, pertaining to the subject matter.

Attached herewith is a copy of the Commission on Water Resource Management's letter dated May 10, 2002, addressed to your office.

The Department of Land and Natural Resources has no other comment to offer on the subject matter.

Should you have any questions, please feel free to contact Nicholas A. Vaccaro of the Land Division Support Services Branch at 587-0438.

Very truly yours,

Charlene Under
G. DIERRE S. HAMIYA
Administrator

C: Oahu District Land Office

MEXIAUNU, CAIYETANO

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND
RESTORATION AND
COASTAL ZONE
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND DIVISION
WATER RESOURCE MANAGEMENT



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

HONOLULU, HAWAII 96826
MAY 10 2002

Mr. Earl Matsukawa, AICP
Wilson Okamoto & Associates, Inc.
1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Draft Environmental Assessment, University of Hawaii
Proposed Dole Street Parking Structure
Manoa, Oahu TMK 2-8-29: 001.pdf

Dear Mr. Matsukawa:

Thank you for the opportunity to review the subject document. We note that the site plan does not show the location of Manoa Stream nor were there any cross-sectional views. A site visit was conducted by our staff on April 26, 2002. It is our understanding that the proposed construction will be confined to the area of the existing gravel parking lot, with the exception of the removal of a large tree in the vegetated area between the parking lot and the stream. Care should be taken to prevent soil from entering Manoa Stream. If there is no alteration to the bed and banks of Manoa Stream, a Stream Channel Alteration Permit will not be required.

Should you have any questions, please contact David Higa of the Commission staff at 587-0249.

Sincerely,

Linnet T. Nishioka
LINNET T. NISHIOKA
Deputy Director

SKS:sd
c. OEQC
Facilities Planning & Management Office, UH
Land Division, LD/NAV/L-2287



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

LAND DIVISION
P.O. BOX 011
HONOLULU, HAWAII 96826
May 10, 2002

LANDS RESOURCES
SOUTH AND COASTAL RESOURCES
CONSERVATION AND
RESTORATION AND
RECREATION
DEVELOPMENT
COMMITTEES
LAND DIVISION
HONOLULU, HAWAII
STATE PARKS
WATER RESOURCES MANAGEMENT

LD-NAV
L-2772/2287/2773/2538/2485

Wilson Okamoto & Associates, Inc.
Earl Matsukawa, AICP, Project Manager
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

SUBJECT: Review: Draft Environmental Assessment
Applicant: University of Hawaii at Manoa
Consultant: Wilson Okamoto & Associates, Inc.
Project: UH Dole Street Parking Structure
Location: Manoa, Honolulu, Oahu, Hawaii
TRK: 1st/ 2-8-029: portion of 001

Thank you for the opportunity to review and comment on the subject
Draft Environmental Assessment (DEA).

A copy of the DEA covering the proposed project was distributed to
the following Department of Land and Natural Resources' Divisions for
their review and comment:

- Division of Aquatic Resources
- Division of Forestry and Wildlife
- Historic Preservation Division
- Commission on Water Resource Management
- Land Division Engineering Branch
- Land Division Planning and Technical Services
- Land Division Oahu Land Office

Attached herewith is a copy of the Land Division Engineering
Branch, Division of Forestry & Wildlife and Historic Preservation
Division response dated May 7, February 25 and April 23, 2002,
respectively.

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

Very truly yours,

Chalene S. Umeta

CHALENE S. UMETA
Administrator

C: Oahu District Land Office

DEPARTMENT OF LAND AND NATURAL RESOURCES

Land Division
Engineering Branch

COMMENTS

We confirm that the project site is within Zones X (Shaded and Not shaded) and AE. Zone X (Shaded) is an area of the 500-year flood; areas of the 100-year flood with average depths of less than one (1) foot or with drainage areas less than one (1) square mile; and areas protected by levees form 100-year flood. Zone X (Not shaded) is an area determined to be outside the 500-year floodplain. Zone AE is an area where flood elevations are determined.

The proposed project must comply with rules and regulations of the National Flood Insurance Program (NFIP) and all applicable County Flood Ordinances. If there are questions regarding the NFIP, please contact the State Coordinator, Mr. Sterling Yong, of the Department of Land and Natural Resources at 587-0248. If there are questions regarding flood ordinances, please contact applicable County representative.

Signed: *Andrew M. Monden*
ANDREW M. MONDEN, CHIEF ENGINEER

Date: 5/7/02

BEAULAM J. CATTIAND
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813
February 25, 2002

GERBERT S. COLMAGLIARDI
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

Earl T. Newe
COUNTY
AGRICULTURE DEVELOPMENT
ADULTIC RESOURCES
BOATING AND OCEAN RECREATION
COUNTRYSIDE DEVELOPMENT
CONSERVATION AND
RECREATION RESPONSIBILITY
COUNTRYSIDE DEVELOPMENT
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
WATER AND LAND DEVELOPMENT
WATER RESOURCES MANAGEMENT

BEAULAM J. CATTIAND
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
HISTORIC PRESERVATION DIVISION
KALANIANA'OLE BUILDING, ROOM 304
251 KALANOA BOULEVARD
SUITE 304, HAWAII 96813

GERBERT S. COLMAGLIARDI
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCES MANAGEMENT
SERVICES
ELECT HONOLULU

WATER RESOURCES
BOATING AND OCEAN RECREATION
COUNTRYSIDE DEVELOPMENT
CONSERVATION AND WATER RESOURCES
MANAGEMENT
CONSERVATION AND RESOURCES
RESPONSIBILITY
COUNTRYSIDE DEVELOPMENT
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto and Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment, Pre-Assessment Consultation UH Dole Street
Parking Structure, University of Hawaii at Manoa Honolulu, Oahu, Hawaii
TMK: 02-08-029: por. 001.

We appreciate you including us in your review of the subject matter above regarding the proposed parking structure at UH Manoa. We have no objections to the project, as it will not impact any of DOFAW's management programs. Thank you for the opportunity to comment on this project.

Sincerely yours,
Paul G. Buck
for Michael G. Buck
Administrator

C: Oahu DOFAW Branch

Log #: 29719
Doc #: 02045C15

HAWAII HISTORIC PRESERVATION
DIVISION REVIEW

Applicant/Agency: Mr. Earl Matsukawa, Project Manager
Wilson, Okamoto & Associates, Inc.
Address: 1907 South Beretania, Suite 400
Honolulu, Hawaii 96826
SUBJECT: Chapter 6E-8 Historic Preservation Review of Draft Environmental Assessment
(DEA) for the UH Dole Street Parking Structure

Alupua #: Manoa
District, Island: Kona, O'ahu
TMK: (1) 2-8-009: portion of 001

1. We believe there are no historic properties present, because:

- a) intensive cultivation has altered the land
- b) residential development/urbanization has altered the land
- c) previous grubbing/grading has altered the land
- d) an acceptable archaeological assessment or inventory survey found no historic properties
- e) other: We have previously commented that fill soils underlie the project area, which has also been graded to depths of 7 to 10 feet below nearby Dole Street. Thus, it is unlikely that significant historic sites are still present in this area.

2. This project has already gone through the historic preservation review process, and mitigation has been completed.

3. Thus, we believe that "no historic properties will be affected" by this undertaking.

Staff: *John L. Calkins* Date: *23 April 2002*
Title: Archaeologist - O'ahu (Phone: 808-692-8026)

C: Ms. Genevieve Salmonson, Director, Office of Environmental Quality Control, State of Hawaii,
235 S. Beretania Street, Room 702, Honolulu, HI 96813
Mr. Ron Lau, University of Hawaii at Manoa, Facilities Planning & Management Office, 2002
East-West Road, PPB, Honolulu, HI 96826

6576-02
July 10, 2002

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1507 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH (808)946-2777
FAX (808)946-2753

Ms. Diedre S. Mamiya Administrator
Land Division
Department of Land and Natural Resources
P.O. Box 621
Honolulu, Hawaii 96809

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Ms. Mamiya:

Thank you for your letter dated May 10, 2002 (UHDLEPARKINGDEARCM LD-NAV L-277222872773/2538/2485) and follow-up letter of May 23, 2002 (UHDLEPARKINGDEARCM LD-NAV L-277222872773/2538/2485/2843) transmitting your department's comments on the subject Draft EA. We offer the following responses to comments offered by your Engineering Branch, Historic Preservation Division and Commission on Water Resource Management. Your Division of Forestry and Wildlife indicated that they had no comments to offer.

Engineering Branch, Land Division (Andrew M. Monden, Chief Engineer - May 7, 2002)

We appreciate your confirmation of flood hazard designations for the project site. In the Final EA, the legend in Figure 2-2 will be revised to correct the description for the unshaded Zone X by omitting "Base flood elevations not determined."

We acknowledge that the proposed project must comply with rules and regulations of the National Flood Insurance Program (NFIP) and all applicable County Ordinances. Section 2.5 of the Final EA will include a statement to this effect.

Historic Preservation Division (Sara L. Collins, Archaeologist-O'ahu - April 23, 2002)

We appreciate your confirmation that significant historic sites are unlikely to be present in the area of the project site and that you believe no historic properties will be affected by the proposed project.

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& ASSOCIATES, INC.

6576-02
Letter to Ms. Mamiya
Page 2
July 10, 2002

Commission on Water Resource Management (Linnel T. Nishloka, Deputy Director - May 10, 2002)

As stated in the Draft EA, excavation and grading activities associated with the construction of the proposed project will be regulated by the City and County of Honolulu grading ordinance. For the proposed project, the ordinance requires the preparation of a grading plan and a drainage and erosion control plan citing appropriate Best Management Practices (BMP) for review and approval by the City Department of Planning and Permitting.

The proposed project is not anticipated to affect the bed and banks of Manoa Stream, based on its location relative to the stream. Should it be determined during project design that the area of soil disturbance will extend to the mauka bank of the stream, a Stream Channel Alteration Permit application will be submitted for processing.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letters, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.



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

EM
BRUCE E. ANDERSON, PH.D., M.D.
DIRECTOR OF HEALTH
IN REPLY, PLEASE REFER TO
FILE
02-104/cpo

May 21, 2002

RECEIVED
MAY 21 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, AICP, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment (DEA)
University of Hawaii - Dole Street Parking Structure
Tax map Key: 2-8-029: 001

Thank you for the opportunity to review and comment on the subject proposal. The DEA was routed to the various branches of the Environmental Health Administration. We have the following comments.

Clean Water Branch (CWB)

1. The applicant should contact the Army Corps of Engineers to identify whether a federal permit (including a Department of Army permit) is required for this project. A Section 401 Water Quality Certification is required for "Any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters...", pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act");
2. A National Pollutant Discharge Elimination System (NPDES) general permit coverage is required for the following discharges to waters of the State:
 - a. Discharge of storm water runoff associated with industrial activities, as define in Title 40, Code of Federal Regulations, Sections 122.26(b)(14)(i) through 122.26(b)(14)(ix) and 122.26(b)(14)(xi);
 - b. Discharge of storm water runoff associated with construction activities that involve the disturbance of five (5) acres or greater, including clearing, grading, and excavation;

Mr. Earl Matsukawa, AICP, Project Manager
May 21, 2002
Page 2

- c. Discharge of treated effluent from leaking underground storage tank remedial activities;
- d. Discharge of once through cooling water less than one million gallons per day;
- e. Discharge of hydro-testing water;
- f. Discharge of construction dewatering effluent;
- g. Discharge of treated effluent from petroleum bulk stations and terminals; and
- h. Discharge of treated effluent from well drilling activities.

Any person requesting to be covered by a NPDES general permit for any of the above activities should file a Notice of Intent with the Department of Health, Clean Water Branch (CWB) at least thirty (30) days prior to commencement of any discharges to State waters;

3. If construction activities involve the disturbance of one acre or greater, including clearing, grading, and excavation, and will take place or extend after March 10, 2003, an NPDES general permit coverage is required for discharges of storm water runoff into State waters; and
4. The applicant may be required to apply for an individual NPDES permit if there is any type of activity in which wastewater is discharged from the project into State waters.

If you have any questions, please contact the Clean Water Branch at (808) 586-4309.

Clean Air Branch (CAB)

Fugitive Dust Control

There is a significant potential for fugitive dust emissions during the phases of construction activities. The proposed construction activities may occur in close proximity to existing residential/educational establishments, major thoroughfares, and environmentally sensitive area, thereby exacerbating potential dust problems. It is recommended that a dust control management plan be developed which identifies and addresses activities having a potential to generate fugitive dust. The implementation of adequate dust control measures, as mentioned in the report, during all phases of construction is warranted.

Construction activities must comply with provisions of Hawaii Administrative Rules, Section 11-60.1-33, "Fugitive Dust".

If you have any questions regarding these issues on fugitive dust, please contact the Clean Air Branch at (808) 586-4200.

Mr. Earl Matsukawa, AICP, Project Manager
May 21, 2002
Page 3

Solid and Hazardous Waste Branch (SHWB)

The developer/contractor shall ensure that all solid waste generated during project construction is directed to a Department of Health permitted solid waste facility.

If you have any questions, please contact the SHWB, Office of Solid Waste Management, at (808) 586-4240.

Noise, Radiation and Indoor Air Quality (NRIAQ) Branch

All project activities shall comply with the Administrative Rules of the Department of Health, Chapter 11-39, on "Air Conditioning and Ventilating".

If you have any questions, please contact the NRIAQ at (808) 586-4701.

Sincerely,



GARY GILL
Deputy Director
Environmental Health Administration

c: CWB
CAB
SHWB
NRIAQ

6576-02
July 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BENETARIA ST.
SUITE 400
HONOLULU, HI 96826
PH. (808) 946-2277
FAX. (808) 946-2253

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

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Gill:

Thank you for your letter dated May 21, 2002(02-104/epo) commenting on the subject Draft EA. We offer the following responses to comments offered by your Clean Water Branch, Clean Air Branch, Solid and Hazardous Waste Branch and Hazard Evaluation & Emergency Response Office.

Clean Water Branch

1. The U.S. Army Corps of Engineers was a consulted party during Pre-Assessment Consultation and subsequent public review of the Draft EA; but, has offered no comments to date. It is not anticipated that a Department of Army permit will be required for the proposed project as it will not encroach within the ordinary high water mark of Manoa Stream.
2. The National Pollutant Discharge Elimination System (NPDES) General Permit may be required for the "discharge of hydro-testing water" in conjunction with the construction of water service lines. The Final EA will identify the NPDES General Permit as a required permit in Section 5.
3. An NPDES general permit for storm water runoff into State waters will not be required since the project site is less than one acre.
4. We acknowledge that an individual NPDES permit may be required if any type of activity associated with the proposed project will discharge wastewater into State waters.

WILSON
OKAMOTO
& ASSOCIATES, INC.

6576-02
Letter to Mr. Gill
Page 2
July 10, 2002

Clean Air Branch

Section 2.11 of the Draft EA discusses the potential for fugitive dust emissions during the construction phase of the proposed project. The Final EA will specify that construction activities must comply with provisions of Hawaii Administrative Rules, Section 11-60.1-33 "Fugitive Dust" and that the University of Hawaii at Manoa (UHM) will require the construction contractor to prepare a dust control management plan which identifies and addresses activities having a potential to generate fugitive dust.

Solid and Hazardous Waste Branch

The UHM will require the construction contractor to direct all solid waste generated during project construction to a Department of Health permitted solid waste facility. The Final EA will include this requirement.

Noise, Radiation and Indoor Air Quality Branch

We acknowledge that the proposed project must comply with provisions of Chapter 11-39, "Air Conditioning and Ventilation", Hawaii Administrative Rules (Department of Health).

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,



Earl Matsukaiva, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

BENJAMIN J. CATYANO
GOVERNOR



STATE OF HAWAII
OFFICE OF ENVIRONMENT QUALITY CONTROL

731 SOUTH BERETANIA STREET
SUITE 702
HONOLULU, HAWAII 96813
TELEPHONE (808) 586-4116
FACSIMILE (808) 586-4114

GENEVIEVE SALMONSON
DIRECTOR

Wallace Gretz
May 14, 2002
Page 2

May 14, 2002

Wallace Gretz
UH Facilities Planning & Management Office
2002 East-West Road
Honolulu, HI 96822

Attn: Ron Lau

Dear Mr. Gretz:

Subject: Draft environmental assessment (EA) for Dole St. Parking Structure

We have the following comments:

Two-sided pages: In order to reduce bulk and save on paper, please print on both sides of the pages in the final document.

Determination: A determination stating that an environmental impact statement will not be required is listed in section 6.0 (*Determination of Finding of no Significant Impact*) of the draft EA. The EIS law prohibits a determination of significant impact or lack of significant impact before the end of the 30-day public comment period and prior to receipt, response and analysis of all written comments. For a draft EA the proper determination is *anticipated FONSI*.

Cultural impacts assessment:

Act 50 was passed by the Legislature in April of 2000. This mandates an assessment of impacts to local cultural practices by the proposed project. The draft EA mentions possible cultural activities taking place at the Center for Hawaiian Studies, but no information-gathering on practices is noted, nor is the required analysis provided. In the final EA include such an assessment.

If the subject area is in a developed urban setting, cultural impacts must still be assessed. Many incorrectly assume that the presence of urban infrastructure effectively precludes consideration of current cultural factors. For example, persons are known to gather kauna'oa, 'ilima, 'uhaloa, nomi or ki on the grassy slopes and ramps of the H-1 freeway and some state highways on the neighbor islands. Certain landmarks and physical features are used by Hawaiian

navigators for sailing, and the lines of sight from landmarks to the coast by fisherman to locate certain fishing spots. Blocking these features by the construction of buildings or tanks may constitute an adverse cultural impact.

For assistance in the preparation refer to our *Guidelines for Assessing Cultural Impacts*. Contact our office for a paper copy or go to our homepage at <http://www.state.hi.us/health/oeqa/guidance/index.html>. You will also find the text of Act 50 linked to this section of our homepage.

Paving: Hawaii Revised Statutes 103D-407 requires the use of recycled glass in paving materials whenever possible.

Landscaping: Is any landscaping planned? HRS 103D-408 requires the use of native Hawaiian flora whenever and wherever possible.

For the text of the above two sections of HRS contact our office for a paper copy or go to our website at <http://www.state.hi.us/health/oeqa/guidance/index.html>.

Groundwater resources: Moiliili and Manoa are noted for their underground limestone caverns which have been eroded by groundwater. The draft EA notes that pile driving is required for construction. Such intrusion may precipitate a source of groundwater pollution in the future. In the final EA provide a discussion on the stability of underlying soils at this site that will prevent the piles from being driven in any of these caverns or describe mitigation measures that you will employ to prevent this type of pollution.

If you have any questions call Nancy Heinrich at 586-4185.

Sincerely,


GENEVIEVE SALMONSON
Director

c: Earl Matsukawa, Wilson Okamoto

6576-02
July 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
SUITE 600
1907 S. BERETANIA ST.
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

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

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Ms. Salmonson:

Thank you for your letter dated May 14, 2002 commenting on the subject Draft EA. We offer the following responses in the respective order of your comments:

Two-sided pages: We will print the Final EA on both sides of the pages to reduce bulk and to save paper. Please realize, however, that based on our experience, the additional labor costs involved in preparing a dual-sided document are far greater than any cost savings on paper and postage for distribution. Additional labor costs are incurred for more complex page sequencing during manuscript preparation, more quality control and corrections required to prepare a copy-ready document, and more quality control and monitoring during printing since copiers are much more prone to malfunction during dual-sided printing.

Determination: We acknowledge that Section 6 of the Draft EA should have been an "Anticipated Determination." The text for a Final EA was inadvertently used in this section.

Cultural Impact Assessment: Additional consultation on cultural practices and resources in the vicinity of the project site was pursued with the Center for Hawaiian Studies and the School for Hawaiian, Asian and Pacific Studies. According to Mr. Tino Ramirez of the Center for Hawaiian Studies and Mr. Pomalikai Kanalaupuni-Crozler, who administers Ka Papa Lot o Kanewai, a variety of cultural practices occur at the Center and at the Lol. None are known to occur elsewhere in the vicinity, although the project site is presently used for parking by the cultural practitioners. The Final EA will document this additional information.

Paving: Recycled glass aggregate will be used in paving materials as much as practicable in compliance with Section 103D-407, Hawaii Revised Statutes (HRS).

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**WILSON
OKAMOTO
& ASSOCIATES, INC.**

6576-02
Letter to Ms. Salmonson
Page 2
July 10, 2002

Landscaping: Landscaping will be provided to soften the visual impact of the proposed structure and to provide continuity of the existing physical and landscape planning design elements of the Center for Hawaiian Studies. Plant selection and composition will include appropriate use of native Hawaiian flora in compliance with Section 103D-408, HRS. This will be noted in the Final EA.

Groundwater Resources: A preliminary subsurface investigation of the proposed parking structure site included three borings to depths ranging from 35 feet to 55 feet. All borings terminated in moderately weathered or weathered basalt with no indication of underlying limestone formations.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

M:\Work\6576-02\FinalEA\DraftEA\response\OECC.DOC; 07/10/02

PHONE (808) 844-1844



STATE OF HAWAII
OFFICE OF HAWAIIAN AFFAIRS
711 KAPOLAHUA BOULEVARD, SUITE 500
HONOLULU, HAWAII 96813

FAX (808) 844-1845

HRD02-497B

RECEIVED

MAY 24 2002

WILSON OKAMOTO & ASSOCIATES, INC.

May 21, 2002

Earl Matsukawa
Wilson, Okamoto & Associates, Inc.
1907 S. Beretania St. Suite 400
Honolulu, HI 96826

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
TMK: 02-08-029; portion of parcel 001

Dear Mr. Matsukawa:

OHA is in receipt of your request for written comments on the above referenced project and offers the following concerns about the draft EA.

Cultural Resources and Practices
OHA asks that the final EA provide a thorough description and analysis of possible impacts upon cultural resources. In our pre-assessment consultation letter, we recommended archeological, ethnographic, historical, anthropological and other culturally-related documentary research on the site. We also asked that you ensure compliance with Act 50, Session Laws of Hawaii '2000, by preparing a cultural impact statement based upon actual consultation with Native Hawaiian organizations and individuals.

To this end, the draft EA provides only a letter from the State Historic Preservation Division. The document does not indicate that you have consulted with the Center for Hawaiian Studies, the Kalu for Ka Papa Lo'io Kanewai, and the School of Hawaiian, Asian and Pacific Studies. Further, the draft environmental assessment has not identified the cultural practices located in the project area; assessed the impact on these practices; examined alternatives to the proposed action; or proposed mitigation measures. OHA asks that the final EA address our cultural concerns by analyzing these issues based upon actual consultation with Native Hawaiian organizations and individuals.

Streams

In its assessment of soils in the project site, the EA reveals that runoff is medium to rapid and the erosion hazard is moderate to severe. Further, the development of the project will result in an increase in the volume of runoff. Yet, the draft EA does not offer clear mitigation measures for possible impacts on stream quality. OHA asks that you provide a detailed stream protection plan to include designation of a stream buffer and appropriate groundcover/vegetation for the buffer area to ensure the stream is not susceptible to runoff. The suggested plan and buffer should also protect stream water quality from fugitive dust generated during construction. We recommend that you contact the Ala Wai Watershed Council in your assessment of water quality impacts and mitigation.

Thank you for the opportunity to comment on the above referenced project. If you have questions, please contact Sharla Manley, policy analyst at 594-1944 or email her at sharlam@oha.org.

Sincerely,

Jalna S. Keala
Acting Director, Hawaiian Rights Division

cc: Board of Trustees
Clyde W. Namu 'o, Administrator
Genevieve Salmonson, OEQC
Ron Lau, University of Hawaii at Manoa

EM

6576-02
July 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Ms. Jaina S. Keala, Acting Director
Hawaiian Rights Division
Office of Hawaiian Affairs
State of Hawaii
711 Kapiolani Blvd., Suite 500
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Ms. Keala:

Thank you for your letter dated May 12, 2002 (HRD02-497B) commenting on the subject Draft EA. We offer the following responses in the respective order of your comments:

Cultural Resources and Practices

As discussed in Section 2.7 of the Draft EA, the project site has previously been extensively graded and filled. Therefore, any previously existing cultural resources on the site are no longer present and any cultural practices that may have been associated with those resources were terminated. With regard to current cultural resources and practices, Section 2.7 discusses those occurring at the Center for Hawaiian Studies and at Ka Papa Loi Kalo. In response to your comments, additional consultation on cultural practices and resources in the vicinity of the project site was pursued with the Center for Hawaiian Studies and the School for Hawaiian, Asian and Pacific Studies. According to Mr. Tino Ramirez of the Center for Hawaiian Studies and Mr. Pomaikai Kanaiaupuni-Crozler, who administers Ka Papa Loi o Kanewai, a variety of cultural practices occur at the Center and at the Loi. None are known to occur elsewhere in the vicinity, although the project site is presently used for parking by the cultural practitioners. The Final EA will document this additional information.

Streams

Section 2.5 of the Draft EA refers to the soil type designation and description for the project site according to a survey prepared by the U.S. Soil Conservation Service (1972). The soil type description includes runoff and erosion potential. With regard to the regulation of soil runoff and erosion to protect receiving waters, the subsequent discussion of Impacts and Mitigation Measures states that "Excavation and grading activities associated with construction of the proposed project will be regulated by the City and County of Honolulu Grading Ordinance."

**WILSON
OKAMOTO
& ASSOCIATES, INC.**

6576-02
Letter to Ms. Keala
Page 2
July 10, 2002

For the proposed project, the ordinance requires the preparation of a grading plan and a drainage and erosion control plan citing appropriate Best Management Practices (BMP) for review and approval by the City Department of Planning and Permitting.

Regarding fugitive dust emissions, the Draft EA discusses existing regulatory controls in Section 2.11. This includes compliance with Hawaii Administrative Rules, Section 11-60.1-33, "Fugitive Dust" during construction activities. A list of mitigation measures the contractor may employ is cited. Moreover, in response to a recommendation by the State Department of Health, the Final EA will state that the University of Hawaii at Manoa will require the construction contractor to prepare a dust control management plan which identifies and addresses activities having a potential to generate fugitive dust.

Pursuant to your request, a copy of the Final EA will be provided to the Ala Wai Watershed Council. We note that your previous letter of February 20, 2002 (HRD02-497), received during Pre-Assessment Consultation, did not recommend the Council as a consulted party for reviewing the Draft EA.

We appreciate your interest and participation in the public review phase of the Draft EA. Your recent letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

UNIVERSITY OF HAWAII AT MĀNOA
Center for Hawaiian Studies

May 3, 2002

Earl Matsukawa
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, HI 96826

Aloha e Mr. Matsukawa:

Mahalo nui for the opportunity to comment on the draft environmental assessment for the University of Hawaii Doie Street Parking Structure. As you know, the Kamakakōkalanani Center for Hawaiian Studies is adjacent to the planned structure and from the time of construction on, it will impact the day-to-day environment at the center. I hope our comments will be given full consideration.

First of all, we recommend building a parking structure having at least six levels. According to the Draft Environmental Assessment, Zone 7A now has 98 spaces. The new structure is to have about 273 stalls. Eliminating the 98 stalls in Zone 7A along with 25 parking spaces on Dole Street yields a gain of only 150 stalls. That means each stall gained costs about \$18,200. If the university is going to spend that kind of money, why not go higher and create more parking?

Whatever the height of the structure, our main concern is the access and egress road to the structure. In the interest of safety, we would like to see the access/egress moved from the north side of the structure to the structure's south side, adjacent to Kānewai Park.

While the current plan to eliminate 25 parking spaces on the makai side of Dole Street to provide 295 feet of sight distance is sound, the access/egress would still be in a curve of Dole Street. Placing the access/egress on the structure's south side will increase safety by placing it in a straight section of Dole Street. As anyone who uses the current entrance to the Hawaiian Studies will attest, leaving the lot is very dangerous because of the curve. It would be unfortunate not to take this opportunity to create a safer environment.

Also, if the road is moved to the south and the parking structure is moved slightly to the north, more room would be left for the new building we require to accommodate the growth of Hawaiian Studies. This building would sit in the area of Zone 7 that is now paved and is included in the university's master plan.

If the parking structure's road cannot be relocated, we ask that it be made narrower to leave room for a new building. We also ask that as few parking spaces as possible be eliminated from the area of Zone 7 that is now paved. This would include the three or so spaces in the bay on the east end of the paved area.

If the bulk of spaces in Zone 7's paved area cannot be saved, we would like at least 55 spaces in the parking structure to be reserved for the center along with adequate spaces for the general public. While the goal of the new structure is to decrease the demand for on-street parking in nearby residential areas by providing parking for students living in dormitories, we hope the center's need for parking also will be accommodated. It would be ironic if creating more parking for students in housing creates another problem by displacing those currently using Zone 7 and Zone 7A.

We now have five faculty members, five graduate students teaching and doing research, and a support staff of three. The center also houses Hālau Kō Mana New Century Public Charter School, which has 17 on staff and two vans for transporting students, and the Native Hawaiian Leadership Project, which has a staff of five.

The center is also used almost nightly for a variety of events. At least 10,000 people came to the center last year for lectures, performances, meetings, workshops, classes and other events. Among the center's missions are community outreach and bringing people to the UH-Mānoa campus. Having abundant, easily accessed parking nearby has helped us fulfill those missions.

By the time the structure is built, we expect to have a faculty of at least 12 more graduate students employed, a larger staff and more events. Hālau Kō Māna, which has a list of more than 200 students waiting to enroll, and NHLP also expect to grow.

During construction, we hope that all possible measures will be taken to keep noise to a minimum. Please avoid pile driving by planning for alternative types of piles or shoring. The center's facility is open and will amplify rather than dampen sound. And there is no air conditioning in the faculty offices, so to cool them we depend on opened windows and louvers to allow breezes to flow through.

While the draft environmental assessment recognizes that the parking structure's appearance needs to be softened by landscaping and plants, we hope the final assessment will recommend using Native plants for that purpose.

In general, we would like plants used for landscaping to be Native.

decorative, useful and able to grow without much water. With the exception of the naupaka fronting Kamakūokalani, the plants at the center also have other uses, such as food, medicine, lei-making, carving and weaving.

With our course offerings in Lā'au Lapa'au (Hawaiian Herbal Medicine) and Mālama 'Āina (Hawaiian Resource Management) expanding, and our plan to offer courses in traditional Hawaiian art, these plants will find even more use. On April 22, 2002, university president Evan Dobbelle adopted a Charter of Sustainability for UH-Mānoa: using plants that Hawaiians have used for centuries as renewable sources of food and materials would fulfill that charter and set an example for the rest of our campus.

For shrubbery to surround the structure, we would like to see pohinahina planted, while 'ilima papa would make a good ground cover. If trees are to be planted around the structure, lau hala and niu would be preferred. Rather than continue naupaka along the street, it would be better to use 'āli'i or pohinahina.

And we absolutely do not want to see monkey pod, an introduced tree, at this entrance to the university campus. It would be much more appropriate and beautiful to have 'ulu fronting the Center for Hawaiian Studies and marking the entrance to the University of Hawaii's flagship campus.

Thank-you again for asking the Center for Hawaiian Studies to comment on the draft environmental assessment for the new parking structure on Dole Street. If you or your staff would like to meet with me and visit the Center for Hawaiian Studies as the final assessment is prepared, please contact Tino Ramirez, my administrative assistant, at 973-0975 or via e-mail at ramirez@hawaii.edu.

We will work and study beside the new parking structure every day for many, many years and we welcome any opportunity to participate more fully in its planning. Mahalo for your consideration.


Lilikala Kame'ele'ihiwa, Ph.D.

Director
Kamakūokalani--Gladys K. 'Āino'a Brandt
Center for Hawaiian Studies.

Cc: Ms. Genevieve Salmonson, Office of Environmental Quality Control
UH-Mānoa Facilities Planning & Management Office

6576-02
July 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
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HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Dr. Lilikala Kame'ele'ihiwa, Ph.D.
Director
Kamakūokalani--Gladys K. 'Āino'a Brandt
Center for Hawaiian Studies
2645 Dole Street, Room 209A
Honolulu, Hawaii 96822

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Dr. Kame'ele'ihiwa:

Thank you for your letter dated May 3, 2002 commenting on the subject Draft EA. We offer the following responses in the respective order of your comments:

1. The size and capacity of the proposed parking structure was determined based on meeting parking needs of the campus, size and other development considerations of the project site, traffic operations and impacts and aesthetics.
2. As discussed in Section 2.9 of the Draft EA, because the driveway will be situated on a curved section of Dole Street, adequate sight distance for vehicles exiting the driveway will be required. The location of the driveway depicted in Figure 2-1 of the Draft EA, optimizes sight distance and traffic operations for the proposed project. Siting the driveway on the Diamond Head-side of the project site would place it in close proximity to the existing driveway for Kanewai Park. This would complicate entry and exit maneuvers for both driveways and compromise safe traffic operations.
3. To the extent possible, the proposed parking structure has been sited to provide the maximum available distance from the Center for Hawaiian Studies. Although not emphasized in the project description in the Draft EA, extensive landscaping is proposed to soften the impact of the parking structure and provide continuity of the existing physical and landscape planning design elements of the Center for Hawaiian Studies.
4. It is anticipated that about ten of the approximately thirty spaces in Zone 7 will be affected by the construction of the proposed project. The proposed parking structure will be available to accommodate function parking during the evening and weekends, much like the existing gravel parking area is

HA:\W0616576-02\FinalEAIDraft\EAResponse\HwaSIDCr.doc 07/10/02

currently utilized. The proposed parking structure is intended to accommodate daily/student parking, however, as future parking needs for faculty and staff develop an evaluation will be made to consider reallocating parking usage to accommodate faculty and staff.

5. Noise impacts during construction of the proposed project are discussed in Section 2.10 of the Draft EA based on a noise study conducted for the proposed project and which is reproduced in its entirety in Appendix B. Construction noise is unavoidable but every effort will be made by the University of Hawaii at Manoa to complete foundation work, which may include pile driving, prior to the commencement of the Fall semester.
6. Landscaping will be provided to soften the visual impact of the proposed structure and to provide continuity of the existing physical and landscape planting design elements of the Center for Hawaiian Studies. Plant selection and composition will include appropriate use of native Hawaiian flora in compliance with Section 103D-408, HRS, which requires the use of native Hawaiian flora where possible.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,



Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

BOARD OF WATER SUPPLY

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



May 7, 2002

JEREMY HARRIS, Mayor

EDDIE FLORES, JR., Chairman
CHARLES A. STED, Vice-Chairman
JANILLY ANN
HERBERT S.K. KALOPIA, Sr.

BRYAN K. MINAAL, Esq., Ofc.
ROSS S. SASAMURA, Esq., Ofc.

CLIFFORD S. JAMILE
Manager and Chief Engineer

EM

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Your Letter of April 16, 2002 on the Draft Environmental Assessment
for the UH Dole Street Parking Structure. TMK: 2-8-29: Por. 1

Thank you for the opportunity to review the subject document for the proposed parking structure.

The comments in our letter of February 28, 2002, which is included in this Draft Environmental Assessment, are still applicable.

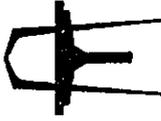
If you have any questions, please contact Joseph Kaakua at 527-6123.

Very truly yours,

for CLIFFORD S. JAMILE
Manager and Chief Engineer

cc: Genevieve Salmonson
(Office of Environmental Quality Control)
University of Hawaii at Manoa
(Facilities Planning & Management Office)

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

6576-02
July 10, 2002

Mr. Clifford S. Jamile, Manager and Chief Engineer
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Mr. Jamile:

Thank you for your letter dated May 7, 2002, stating that you have no further comments to offer on the subject Draft EA. Your previous comment letter dated February 28, 2002, which was received during Pre-Assessment Consultation, is reproduced in the Draft EA along with our response letter dated April 10, 2002.

We appreciate your interest and participation in the public review phase of the Draft EA. Your recent letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

800 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 525-4600 Fax: (808) 525-4597
Web site: www.dcd.honolulu.gov



May 23, 2002

RAE M. LOUI, P. E.
DIRECTOR
ERIC G. CRISWELL, AIA
DEPUTY DIRECTOR
GEORGE T. YAMASHIRO, P. E.
ASSISTANT DIRECTOR

RECEIVED
MAY 29 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1097 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment for the University of Hawaii Dole Street Parking Structure, Tax Map Key 02-08-029; portion of 001

Thank you for your letter of April 16, 2002 requesting comments on the above-mentioned project.

The parking structure will be located next to Kaneohe Community Park (tax map key 2-8-029:004 & 011), a heavily-used recreational facility. Since there are only 28 parking spaces and one handicap space for park users, we would like to have assurance that the contractor will not utilize these spaces during the construction phase of the project. In addition, elimination of approximately 25 on-street parking spaces on the makai side of Dole Street will increase the demand for the Kaneohe Park's parking spaces.

We would like to recommend that the Neighborhood Board be kept informed of the project.

Please call Mr. Gary Doi at 527-6699 if there are any questions.

Very truly yours,

RAE M. LOUI, P. E.
Director

RM:ci

cc: Ms. Genevieve Salmonson, OEQC
Mr. Ron Lau, UH at Manoa

6576-02
July 10, 2002

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 546-2277
FAX: (808) 546-2253

Ms. Rae M. Loui, P.E., Director
City & County of Honolulu
Department of Design and Construction
650 S. King Street, 11th Floor
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Ms. Loui:

Thank you for your letter dated May 23, 2002 commenting on the subject Draft EA. We offer the following responses in the respective order of your comments:

1. The University of Hawaii at Manoa will require the construction contractor to prevent any project-related parking in Kaneohe Community Park.
2. The Final EA will state that the elimination of approximately 25 on-street parking spaces on the makai-side of Dole Street will increase the demand for Kaneohe Park's parking spaces.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

1000 ALIHOA STREET, SUITE 309, HONOLULU, HAWAII 96813
PHONE: (808) 922-8581 • FAX: 922-5131 • INTERNET: WWW.CO.HONOLULU.HI.US



JEREMY HARRIS
MAYOR

WILLIAM D. BALFOUR, JR.
DIRECTOR

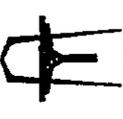
EDWARD T. "SUPIPA" DAZ
DEPUTY DIRECTOR

6576-02
April 16, 2002

Mr. William D. Balfour, Jr., Director
Department of Parks and Recreation
City & County of Honolulu
1000 Aliohala Street, Suite 309
Kapehau, Hawaii 96707

TO: APR 18 12:20

DEPT. OF PARKS
& RECREATION
C & C OF HONOLULU



WILSON
OKAMOTO
& ASSOCIATES, INC.
ENGINEERS
PLANNERS
1875 BERETANIA ST.
HONOLULU, HI 96826
PH: 808-942-2377
FAX: 808-942-2753

Subject: Draft Environmental Assessment (EA) for the UH Dole Street
Parking Structure
Tax Map Key 02-08-029; portion of 001
Honolulu, Oahu, Hawaii

Dear Mr. Balfour:

On behalf of the University of Hawaii at Manoa, we are transmitting, herewith,
the subject Draft EA for your review and comment pursuant to Chapter 343,
Hawaii Revised Statutes, and Title 11, Chapter 200 Administrative Rules,
Department of Health, State of Hawaii.

Notice of the availability of this Draft EA for public review will be published
in the April 23, 2002 issue of the Office of Environmental Quality Control's
The Environmental Notice. Please send your original comments to:

Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
Attention: Mr. Earl Matsukawa, Project Manager

Please send copies of your comments to the following:

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

and

University of Hawaii at Manoa
Facilities Planning & Management Office
2002 East-West Road, PFB
Honolulu, Hawaii 96828
Attention: Mr. Ron Laju

April 24, 2002

Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Attention: Mr. Earl Matsukawa, Project Manager

Gentlemen:

Subject: Draft Environmental Assessment (EA) for the UH Dole
Street Parking Structure
Tax Map Key: 02-08-029; portion of 001
Honolulu, Oahu, Hawaii

Thank you for the opportunity to review and comment on the Draft
Environmental Assessment relating to the UH Dole Street Parking
Structure.

The Department of Parks and Recreation has no comment on the
proposed project.

Should you have any questions, please contact Mr. John Reid,
Planner, at 692-5454.

Sincerely,

W.D. Balfour, Jr.
WILLIAM D. BALFOUR, JR.
Director

WDB:cu (10706)

cc: Ms. Genevieve Salmonson, Office of Environmental Quality
Control
University of Hawaii at Manoa, Facilities Planning and
Management Office
Mr. Don Griffin, Department of Design and Construction

6576-02
Letter to Mr. William D. Balfour, Jr.
Pg. 2
April 16, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**

Your comments must be postmarked by May 23, 2002. Your participation in the Draft EA review process is appreciated.

Sincerely,



Earl Matsukawa, AICP
Project Manager

Enclosure

cc: Mr. Ron Lau, University of Hawaii at Manoa
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA Inc.

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
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PH: (808) 946-2277
FAX: (808) 946-2283

6576-02
July 10, 2002

Mr. William D. Balfour, Jr., Director
Department of Parks and Recreations
City & County of Honolulu
1000 Ulukouia Street, Suite 309
Kapolei, Hawaii 96707

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Balfour:

Thank you for your letter dated April 24, 2002 indicating that you had no comments to offer on the subject Draft EA.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,



Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

450 SOUTH KING STREET • HONOLULU, HAWAII 96813
TELEPHONE: (808) 522-6114 • FAX: (808) 527-6743 • INTERNET: www.ci.honolulu.hi.us



JENNIFER HARRIS
DIRECTOR

RANDALL K. FUJIKI, AIA
DIRECTOR

LORETTA K. CHEE
STREET ENGINEER

2002/ELOG-1058 (1k)

May 23, 2002

Earl Matsukawa, AICP
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Draft Environmental Assessment (DEA)
University of Hawaii Dole Street Parking Structure
2645 Dole Street - Manoa
Tax Map Key 2-8-29: 1

RECEIVED

MAY 24 2002

WILSON OKAMOTO & ASSOC., INC.

We have reviewed the DEA submitted on April 17, 2002 for the 4-level, 273-space, parking structure at the above site and offer the following comments:

Plan Review Use (PRU)

The PRU File No. 88/PRU-3 (Resolution No. 89-411, CD-2) approved a, 3-story, 300-space parking structure. The proposed facility is in general conformance with the approved master plan.

Flood Hazard

1. A portion of the project site is in the AE floodway district as determined by the Federal Flood Insurance Rate Map (FIRM) Community Panel No. 150001-0370E. The applicant should clarify the scope of work proposed within the floodway district. A flood hazard variance and/or a Certification of "No Rise" Determination may be required for work within the floodway district.

2. The AE Floodway district should be identified on the Flood Map (Figure 2-2).

Traffic

1. The driveway should be constructed as a standard City dropped driveway. The driveway grade should not exceed five percent

Earl Matsukawa, AICP
Page 2
May 23, 2002

for a minimum distance of 25 feet into the driveway to the parking structure. Landscaping and structures in the vicinity of the driveway should be designed and maintained so that adequate vehicular sight distance is provided to pedestrians and other vehicles.

2. The driveway servicing the parking structure on Dole Street should be constructed at a location that will afford motorists the greatest degree of vehicular sight distance.

3. Plans for the proposed modifications to Dole Street in the vicinity of the new driveway should be submitted to the Traffic Review Branch of the Department of Planning and Permitting for review and approval. A separate deceleration and/or acceleration lane should be provided at the driveway to the parking structure.

Should you have any questions, please call Lynne Kauer of our staff at 527-6278.

Sincerely yours,

Randall K. Fujiki
RANDALL K. FUJIKI, AIA
Director of Planning and Permitting

RKF:CS

cc: Office of Environmental Quality Control

DW 134691

6576-02
July 10, 2002

WILSON
OKAMOTO
& ASSOCIATES, LLC



ENGINEERS
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1907 S. BERTANIA ST
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PH: 808/946-7271
FAX: 808/946-7253

Mr. Randall K. Fujiki AIA, Director
City & County of Honolulu
Department of Planning and Permitting
650 S. King Street
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029: portion of parcel 001

Dear Mr. Fujiki:

Thank you for your letter dated May 23, 2002 (2002/ELOG-1058(k)) commenting on the subject Draft EA. We offer the following responses in the respective order of your comments:

Plan Review Use (PRU)

We appreciate your confirmation that the proposed project is in general conformance with the approved master plan.

Flood Hazard

1. Figure 2.2 in the Draft EA was prepared by superimposing the site plan for the proposed project onto the City's Geographic Information System (GIS) depiction of Flood Hazard districts. We subsequently checked the accuracy of the GIS depiction of Federal Flood Insurance Rate Map (FIRM) Community Panel No. 150001-0370E and found that the distance of the AE floodway from the Dole Street centerline is much less than shown on the FIRM. Although the parcel in which the project site is located extends through the AE floodway to Manoa Stream, no construction activity for the proposed project will occur within the floodway. Figure 2.2 in the Final EA will be revised to more accurately depict the location of the project site in relation to the FIRM flood hazard designations.

2. Figure 2-2 in the Final EA will identify the AE Floodway District.

Traffic

1. The proposed driveway will be designed to comply with City design standards, including those for configuration, grade and maintaining adequate vehicular sight distance.

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WILSON
OKAMOTO
& ASSOCIATES, LLC

6576-02
Letter to Mr. Fujiki
Page 2
July 10, 2002

2. The proposed driveway depicted in Figure 1-3 of the Draft EA is sited to afford motorists the greatest degree of vehicular sight distance.
3. Plans for the proposed modifications to Dole Street in the vicinity of the new driveway will be submitted to the Traffic Review Branch of the Department of Planning and Permitting for review and approval. As shown in Figure 1-3 of the Draft EA, a left-turn storage lane will be provided for westbound vehicles turning into the driveway. A separate deceleration lane for eastbound entry in the proposed access driveway would not be necessary since it would involve a right-turn maneuver from the right lane of Dole Street where on-street parking on the makai side of the street is proposed to be prohibited
3. Prior to submitting the plans, we will request a meeting to discuss your recommendation for a separate deceleration and/or acceleration lane at the proposed driveway.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawahara, EngleKirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

M:\Work\6576-02\Final\EA\Draft\EAResponse\DRPP.doc: 07/10/02

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

830 SOUTH KING STREET, 3RD FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 522-4529 • FAX: (808) 523-4730 • INTERNET: www.cc.hawaii.gov



JERRY HARRIS
Mayor

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MAY 31 2002

WILSON OKAMOTO & ASSOC., INC.

CHERYL D. SOON
DIRECTOR

GEORGE "KECK" WILKINSON
SENIOR DIRECTOR

May 28, 2002

TPD4/02-01497R
TPD4/02-01414R

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Subject: University of Hawaii - Dole Street Parking Structure

This responds to your April 16, 2002 letter and the Draft Environmental Assessment (DEA 4/02):

1. Based on the relative proximity of the parking structure access to the existing Hawaiian Studies Center (approx. 120'), and because both driveways are situated along the curve of Dole Street, the possibility of developing a joint access to further mitigate potential traffic congestion on the street should be considered.
2. Relative to the westbound left-turn lane, a deceleration lane for eastbound entry may also be considered.
3. Clarify on page 2-9, the last statement (bullet-point) -- "Notifying of the City Department of Transportation Services to the City to alert Oahu Transit Services of the detours or street closures."

In concert with the City's Primary Corridor Transportation Project's Bus Rapid Transit plan, we also look forward to the reassessment of the University of Hawaii at Manoa's parking needs and further encouragement of greater transit use to possibly eliminate or significantly reduce parking at the various sites noted in the 1987 Long Range Development Plan and 1994 Update.

Thank you for this opportunity to review the University of Hawaii's plan

Mr. Earl Matsukawa
May 28, 2002
Page 2

Should there be any questions, you may contact Bruce Nagao at 527-6899.

Sincerely,

CHERYL D. SOON
Director

cc: Ms. Genevieve Salmonson
Office of Environmental Quality Control
University of Hawaii at Manoa
Facilities Planning & Management Office

6576-02
July 10, 2002

**WILSON
OKAMOTO
& ASSOCIATES, INC.**



**ENGINEERS
PLANNERS**
1907 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 945-2277
FAX: (808) 946-2253

Ms. Cheryl D. Soon, Director
Department of Transportation Services
City and County of Honolulu
650 S. King Street, 3rd Floor
Honolulu, Hawaii 96813

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Ms. Soon:

Thank you for your letter dated May 28, 2002 (Ref. No. TPD4/02-1497R,
TPD4/02-01414R) commenting on the subject Draft EA. We offer the following
responses in the respective order of your numbered comments:

1. For operational and security reasons, the University of Hawaii at Manoa (UHM) has decided to maintain separate access driveways for the proposed parking structure and the Hawaiian Studies Center, respectively.
2. A designated deceleration lane for eastbound entry in the proposed access driveway would not be necessary since it would involve a right-turn maneuver from the right lane of Dole Street where on-street parking on the makai side of the street is proposed to be prohibited.
3. Thank you for calling this misworded example to our attention. The Final EA will correct this example to read: "Notifying the City Department of Transportation Services to alert Oahu Transit Services of the detours or street closures."
4. The UHM will be reviewing campus parking requirements in conjunction with its next periodic update of its Long Range Development Plan.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

**WILSON
OKAMOTO
& ASSOCIATES, INC.**

6576-02
Letter to Ms. Soon
Page 2
July 10, 2002

Sincerely,

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

FIRE DEPARTMENT
CITY AND COUNTY OF HONOLULU
3272 KODAKS STREET, SUITE 4022
HONOLULU, HAWAII 96819-1009



JEREMY HARRIS
MAYOR

EM
FV
TH

ATTILIO K. LEONARDI
FIRE CHIEF
JOHN CLARK
DEPUTY FIRE CHIEF

Mr. Earl Matsukawa, AICP
Page 2
May 6, 2002

May 6, 2002

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

RECEIVED
MAY 08 2002

WILSON OKAMOTO & ASSOC., INC.

Dear Mr. Matsukawa:

Subject: Draft Environmental Assessment (EA)
University of Hawaii at Manoa
Dole Street Parking Structure
Honolulu, Oahu, Hawaii
Tax Map Key: 2-8-029: portion of parcel 001

We received your letter dated April 16, 2002, requesting our comments for the above-mentioned project.

The Honolulu Fire Department (HFD) has no objections to the proposed project provided the following conditions are 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.

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

Sincerely,

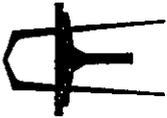
ATTILIO K. LEONARDI
Fire Chief

AKJ/DL:hh

cc: Genevieve Salmonson, Director, Office of Environmental Quality Control
Ron Lau, University of Hawaii at Manoa, Facilities Planning & Management Office

6576-02
July 10, 2002

WILSON
OKAMOTO
& ASSOCIATES, INC.



ENGINEERS
PLANNERS
1907 S. BERETANIA ST
SUITE 400
HONOLULU, HI 96826
PH. (808) 946-2277
FAX. (808) 946-2253

Mr. Attilio K. Leonard, Chief
Fire Department
City and County of Honolulu
3375 Koapaka Street, H425
Honolulu, Hawaii 96819-1869

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Chief Leonard:

Thank you for your letter dated May 6, 2002 commenting on the subject Draft EA. Your comments are similar to those offered in your previous letter dated February 26, 2002, which was received during Pre-Assessment Consultation. Hence, we reiterate the following responses, which we previously offered in our letter dated April 10, 2002, in the respective order of your numbered comments:

1. The water system serving the proposed parking will be designed to meet fire protection requirements in accordance with Board of Water Supply standards.
2. The internal at-grade driveway for the proposed parking structure will be designed to serve as the fire department access road in compliance with the requirements for proximity to the structure, minimum vertical height clearance, driving surface, gradient, unobstructed width and turnaround specified in your letter.
3. Civil drawings for the proposed project will be submitted to the HFD for review and approval.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,



Earl Matsukawa, AICP
Project Manager

WILSON
OKAMOTO
& ASSOCIATES, INC.

6576-02
Letter to Mr. Attilio Leonard
Page 2
July 10, 2002

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

POLICE DEPARTMENT
CITY AND COUNTY OF HONOLULU
801 SOUTH BERETANIA STREET
HONOLULU, HAWAII 96813 - AREA CODE (808) 929-3111
<http://www.honolulu.gov>
[www.co.honolulu.hi.us](http://www.honolulu.gov)

JEREMY HARRIS
MAYOR



LEE D. DONOHUE
CHIEF
ROBERT AU
GLICK KAJIYANA
DEPUTY CHIEF

OUR REFERENCE CS-KP

May 15, 2002

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MAY 20 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, AICP
Project Manager
Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the University of Hawaii Dole Street Parking Structure.

We have no further comment to add to our February 21, 2002, response to the Pre-Assessment Consultation for this project.

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

Sincerely,

LEE D. DONOHUE
Chief of Police

By 
KARL GODSEY
Assistant Chief of Police
Support Services Bureau

cc: Ms. Genevieve Salmonson
OEQC

Mr. Ron Lau
University of Hawaii at Manoa

Serving and Protecting with Aloha

6576-02
July 10, 2002

Mr. Lee D. Donohue, Chief
Police Department
City and County of Honolulu
801 S. Beretania Street
Honolulu, Hawaii 96813

Attention: Mr. Karl Godsey, Assistant Chief of Police
Support Services Bureau

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Chief Donohue:

Thank you for your letter dated May 15, 2002 (CS-KP) stating that you have no further comments to offer on the subject Draft EA. Your previous comment letter dated February 21, 2002, which was received during Pre-Assessment Consultation, is reproduced in the Draft EA along with our response letter dated April 11, 2002.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,


Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

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Hawaiian Electric Company, Inc. • PO Box 2750 • Honolulu, HI 96840-0001
GEN-6 (EIS/EA) *EM*



June 7, 2002

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JUN 12 2002

WILSON OKAMOTO & ASSOC., INC.

Mr. Earl Matsukawa, Project Manager
Wilson Okamoto & Associates, Inc.
1907 S. Beretania Street - Suite 400
Honolulu, Hawaii 96826

Dear Mr. Matsukawa:

Re: UH Dole Street Parking Structure

Thank you for the opportunity to comment on the April 2002 draft EA for the UH Dole Street Parking Structure, as proposed by the Facilities Planning & Management Office, University of Hawaii at Manoa. We have reviewed the subject document and have no comments at this time.

HECO reserves the opportunity to further comment on the protection of existing powerlines bordering the project area until construction plans are finalized. Again, thank you for the opportunity to comment on this draft EA.

Sincerely,

Kirk S. Tomita

Kirk S. Tomita
Senior Environmental Scientist

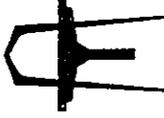
cc: Ms. Genevieve Salmonson (OEQC)
Mr. Ron Lau (UH-Manoa/FPMO)



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6576-02
July 10, 2002

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1907 S. BERETANIA ST
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Mr. Kirk S. Tomita, Senior Environmental Scientist
Hawaiian Electric Company, Inc.
P.O. Box 2750
Honolulu, Hawaii 96840-0001

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Tomita:

Thank you for your letter dated June 7, 2002 (GEN-6 (EIS/EA)) stating that you have no comments to offer on the subject Draft EA.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,

Earl Matsukawa

Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.

HA\Wca\6576-02\FinalEA\DraftEAResponse\HECO.doc 07/10/02

May 19, 2002

Wilson Okamoto & Associates, Inc.
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Attention: Mr. Earl Matsukawa, Project Manager

Dear Mr. Earl Matsukawa

Thank you for this opportunity to comment on the draft environmental assessment for the Dole Street Parking Structure. I am writing this letter because I am concerned about the permanent visual and aesthetic impact that the Parking Structure will have on the Center for Hawaiian Studies Building. In my opinion, the Center for Hawaiian Studies building is by far the most beautiful building on the UH Manoa Campus. Architects Kauahikaua and Chun created a truly heroic and spiritual work of art, using native concepts, materials, and motifs unique to the UH Manoa campus. In addition, the Landscape Architect worked wonders visually integrating the building with the surrounding environment.

To the Hawaiians, the Center for Hawaiian Studies Building has become the spiritual center of their educational universe, no different than the Acropolis was to the Athenians. We all know how important the spiritual and the aesthetic were to the Greeks. In this context, the Center for Hawaiian Studies Building is the most sacred structure on campus.

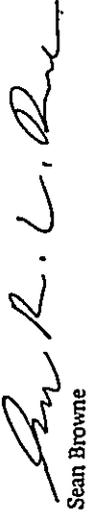
After reviewing the Environmental Assessment and accompanying blueprints, I really feel strongly that every effort should be made to:

- 1) Develop a master plan that includes both the planned parking structure and the future Hawaiian Studies Building expansion.
- 2) Consult with the original architects, Kauahikaua and Chun, and the landscape architect in developing a master plan that would integrate visual aspects of the Center for Hawaiian Studies building and it's landscaping into the new structures.

The UH Manoa campus is littered with buildings that make no visual sense to each other. The greatest fear I have is the creation of two new structures that will strip the Center for Hawaiian Studies building of it's visual and spiritual dignity because of limited vision and consequently, limited planning.

If the short-term goal is to provide parking stalls and classroom space, the long-term goal should be how to accomplish this and continue to perpetuate the sacredness of the present and future structures.

Sincerely yours,


Sean Browne

Enclosure

cc: Mr. Ron Lau
Ms. Genevieve Salmonson
Professor Lilikala Kameeleihiwa

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MAY 21 2002

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6576-02
July 10, 2002

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ENGINEERS
PLANNERS
1937 S. BERETANIA ST.
SUITE 400
HONOLULU, HI 96826
PH: (808) 946-2277
FAX: (808) 946-2253

Mr. Sean K. L. Browne
2965 Robert Place
Honolulu, Hawaii 96816

Subject: Draft Environmental Assessment
UH Dole Street Parking Structure, University of Hawaii at Manoa
Honolulu, Oahu, Hawaii
Tax Map Key: 02-08-029; portion of parcel 001

Dear Mr. Browne:

Thank you for your letter dated May 19, 2002 commenting on the subject Draft EA. We acknowledge your opinion regarding the aesthetic impact of the proposed parking structure on the architectural character of the Center for Hawaiian Studies. To the extent possible, the proposed parking structure has been sited to provide the maximum available distance from the Center for Hawaiian Studies. Although not emphasized in the project description in the Draft EA, extensive landscaping is proposed to soften the impact of the parking structure and provide continuity of the existing physical and landscape planning design elements of the Center for Hawaiian Studies.

Your recommendation for preparing a master plan that includes the proposed parking structure and future expansion of the Center for Hawaiian Studies and to involve the original architects of the Center in developing the master plan will be considered by the University of Hawaii at Manoa.

We appreciate your interest and participation in the public review phase of the Draft EA. Your letter, along with this response, will be reproduced in the forthcoming Final EA.

Sincerely,



Earl Matsukawa, AICP
Project Manager

cc: Mr. Ron Lau, UHM Facilities Planning & Management
Mr. Michael Kawaharada, Englekirk Partners
Mr. Bryce Uyehara, Bryce E. Uyehara, AIA, Inc.



WILSON OKAMOTO & ASSOCIATES, INC.
 ENGINEERS / PLANNERS
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii 96825
 Phone: (808) 946-2277 / FAX: (808) 946-2253

JOB NO. 6576-02

TELEPHONE CONVERSATION RECORD

Talked with: Mr. Tino Ramirez Date: 6-12-02 Time: 10:05 am
 Of: UH Manoa - Center for Hawaiian Studies Phone: 973-0975 pm
 Re: UH Dole Street Parking Structure - Cultural Practices

Message Contact
 WOA

What kind of cultural practices occur around the project site?

Reply Contact
 WOA

Papa Lolo Kineval is heavily used for lano cultivation, making poi, awa ceremonies, teaching and learning crafts such as carving and weaving.
 Hula and chanting practices occur during the evening hours.
 Ceremonies are held at the center for honored guests and special events.
 Activities are occurring all week, day and night.
 There are no cultural practices that occur on the diamond head side, besides provide for parking for the Center's use.

Action or follow-up necessary

Signed: Tino Ramirez

Distribution

Rev: 7/18/00



WILSON OKAMOTO & ASSOCIATES, INC.
 ENGINEERS / PLANNERS
 1907 S. Beretania Street, Suite 400
 Honolulu, Hawaii 96825
 Phone: (808) 946-2277 / FAX: (808) 946-2253

JOB NO. 6576-02

TELEPHONE CONVERSATION RECORD

Talked with: Mr. Edgar Porter, Assoc. Dean Date: 6-12-02 Time: 10:20 am
 Of: School for Hawaiian, Asian and Pacific Studies Phone: 956-8922 pm
 Re: UH Dole Street Parking Structure - Cultural Practices

Message Contact
 WOA

What kind of cultural practices occur around the project site?

Reply Contact
 WOA

Defer to Center for Hawaiian Studies.

Action or follow-up necessary

Signed: Edgar Porter

Distribution

Rev: 7/18/00



WILSON OKAMOTO & ASSOCIATES, INC.
 ENGINEERS / PLANNERS
 1907 S. Berenice Street, Suite 400
 Honolulu, Hawaii 96826
 Phone: (808) 946-2777 / FAX: (808) 946-2233

JOB NO. 6576-02

TELEPHONE CONVERSATION RECORD

Talked with: Pomalikal Kanaiaupuni-Crozler Date: 6-17-02 Time: 9:56 am
 Of: Ka Papa Lo'i o Kenewai Phone: 973-0983 pm
 Re: UH Dole Street Parking Structure - Cultural Practices

Message Contact
 WOA

What kind of cultural practices occur around the project site?

Reply Contact
 WOA

Ka Papa Lo'i o Kenewai had 15,000 visitors this year. Elementary to college students visit. The following is taught at the lo'i: traditional cooking methods, tam processing and cultivation, rock building/stream and bank restoration, agricultural practices, planting of native and endemic vegetation. Plan and food gathering occurs along Manoa Stream.

Action or follow-up necessary
Action to be taken

Signed: *Therese Ouellet*

Distribution

8. REFERENCES

1. Belt Collins & Associates. *Environmental Assessment for Proposed Center for Hawaiian Studies at the University of Hawaii at Manoa*. Prepared for the University of Hawaii. November 1991.
2. George A.L. Yuen & Associates. *State Water Resources Protection Plan*. State of Hawaii, Review Draft March 1992.
3. Group 70 International, Inc. *Final Environmental Assessment for a Long Range Development Plan University of Hawaii, Manoa Campus 1994 Update*. Prepared for the University of Hawaii. August 1994.
4. Hawaii State Department of Health. *Annual Summary Hawaii Air Quality Data*. 2000.
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6. Macdonald, Gordon A., A.T. Abbott and Frank L. Peterson. *Volcanoes in the Sea, The Geology of Hawaii, Second Edition*. 1986.
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11. U.S. Census Bureau. "Geographic Comparison Tables." *American Fact Finder*. <http://factfinder.census.gov> (March 5, 2002).
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APPENDIX A

**Traffic Impact Report for the Proposed University of
Hawaii at Manoa New Parking Structure**

Wilson Okamoto & Associates, Inc.

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**TRAFFIC IMPACT REPORT
FOR THE PROPOSED
UNIVERSITY OF HAWAII AT MANOA
NEW PARKING STRUCTURE**

Prepared for:

University of Hawaii at Manoa
Facilities Planning & Management Office
2002 East-West Road
Honolulu, HI 96822

Prepared by:

Wilson Okamoto & Associates, Inc.
1907 South Beretania Street
Honolulu, Hawaii 96826

March 2002

LIST OF FIGURES

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed University of Hawaii at Manoa new parking structure, located at the University of Hawaii at Manoa (UH) on the island of Oahu. The proposed structure will be located adjacent to the UH's Center for Hawaiian Studies on Dole Street.

B. Scope of Study

This report presents the findings and conclusions of the traffic study, the scope of which includes:

1. Description of the proposed project.
2. Evaluation of existing roadway and traffic operations in the vicinity.
3. Analysis of future roadway and traffic conditions without the proposed project.
4. Analysis and development of trip generation characteristics for the proposed project.
5. Superimposing site-generated traffic over future traffic conditions.
6. The identification and analysis of traffic impacts resulting from the proposed project.
7. Recommendations of improvements, if appropriate, that would mitigate the traffic impacts resulting from the proposed project.

II. PROJECT DESCRIPTION

A. Location

The project site is located adjacent to the Center for Hawaiian Studies on Dole Street at the University of Hawaii at Manoa, on the island of Oahu (see Figure 1). The project site encompasses approximately 29,717 square feet of Tax Map Key (TMK) 02-08-029: 001 and is bounded by Kaneawai Field to the southeast, student dormitories to the south and southwest, and faculty housing to the north. Vehicular access to the proposed project will be via a new driveway located off of Dole Street.

B. Project Characteristics

The proposed project site currently houses an existing unpaved parking lot that accommodates approximately 120 - 140 vehicles. This unpaved lot will be replaced with a new four-level parking structure which is expected to be completed by the Year 2004. The new structure will occupy approximately 23,650 square feet of land area within the project site and provide approximately 273 parking stalls. Access to the project site will be via a new driveway located off of Dole Street, south of the existing driveway for the Center for Hawaiian Studies. The new driveway will be connected to the existing Center for Hawaiian Studies driveway, but this connection will be normally be chained off and used only for emergency or maintenance purposes. Figure 2 shows the proposed project site plan.

III. EXISTING TRAFFIC CONDITIONS

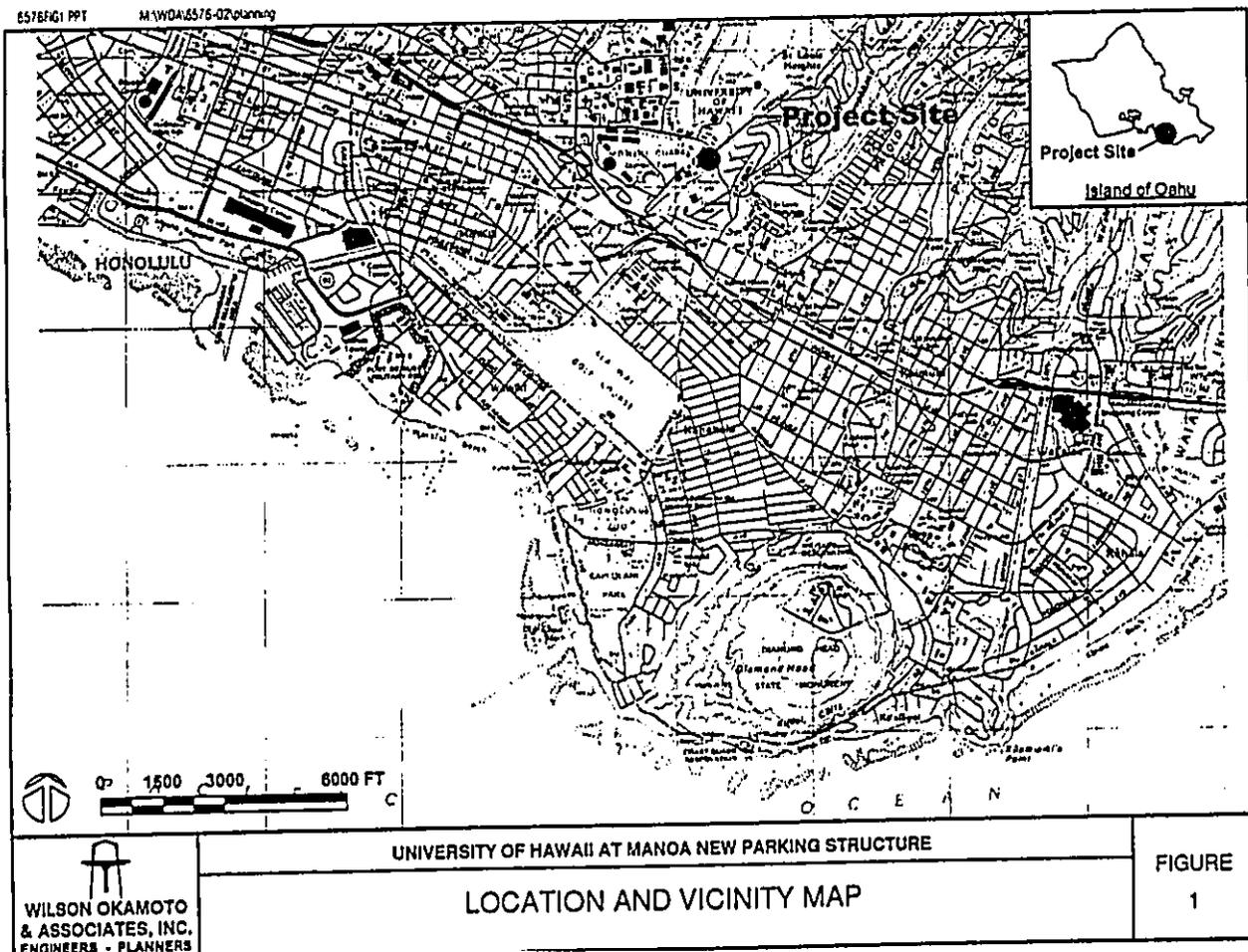
A. General

The University of Hawaii at Manoa is divided into an upper and lower campus by Dole Street. Dole Street serves as the main access road to the University's main parking structure, lower campus dormitories, and athletic arenas. The traffic volumes along Dole Street have remained relatively stable and consistent in recent years due to minimal development in the vicinity of the campus.

B. Area Roadway System

Dole Street is primarily a two-lane, two-way City and County of Honolulu roadway that runs from Punahou Street to St. Louis Drive. Northwest of the project site, Dole Street intersects with East-West Road, a primarily four-lane, two-way private roadway. At this signalized intersection, the westbound approach of Dole Street has two lanes which serve through and right-turn traffic movements. The eastbound approach has two lanes that serve through and left-turn traffic movements at this intersection. East-West Road has four lanes at this intersection that serve left-turn and right-turn traffic movements.

Approximately 2600 (0.5 miles) feet southeast of the intersection with East-West Road, Dole Street terminates at St. Louis Drive, a primarily two-lane, two-way City and County of Honolulu roadway. At this unsignalized intersection, Dole Street has four lanes that serve left-turn and right-turn traffic movements. The northbound



approach of St. Louis Drive has two lanes that serve left-turn and through traffic movements while the southbound approach has two lanes that serve through and right-turn traffic movements.

C. Traffic Volumes and Conditions

1. General

a. Field Investigation

The field investigation was conducted on December 13, 2001 and consisted of manual turning movement count surveys between the morning peak hours of 6:30 AM and 8:30 AM, and the afternoon peak hours of 3:30 PM and 5:30 PM at the following intersections:

- Dole Street and East-West Road
- Dole Street and St. Louis Drive

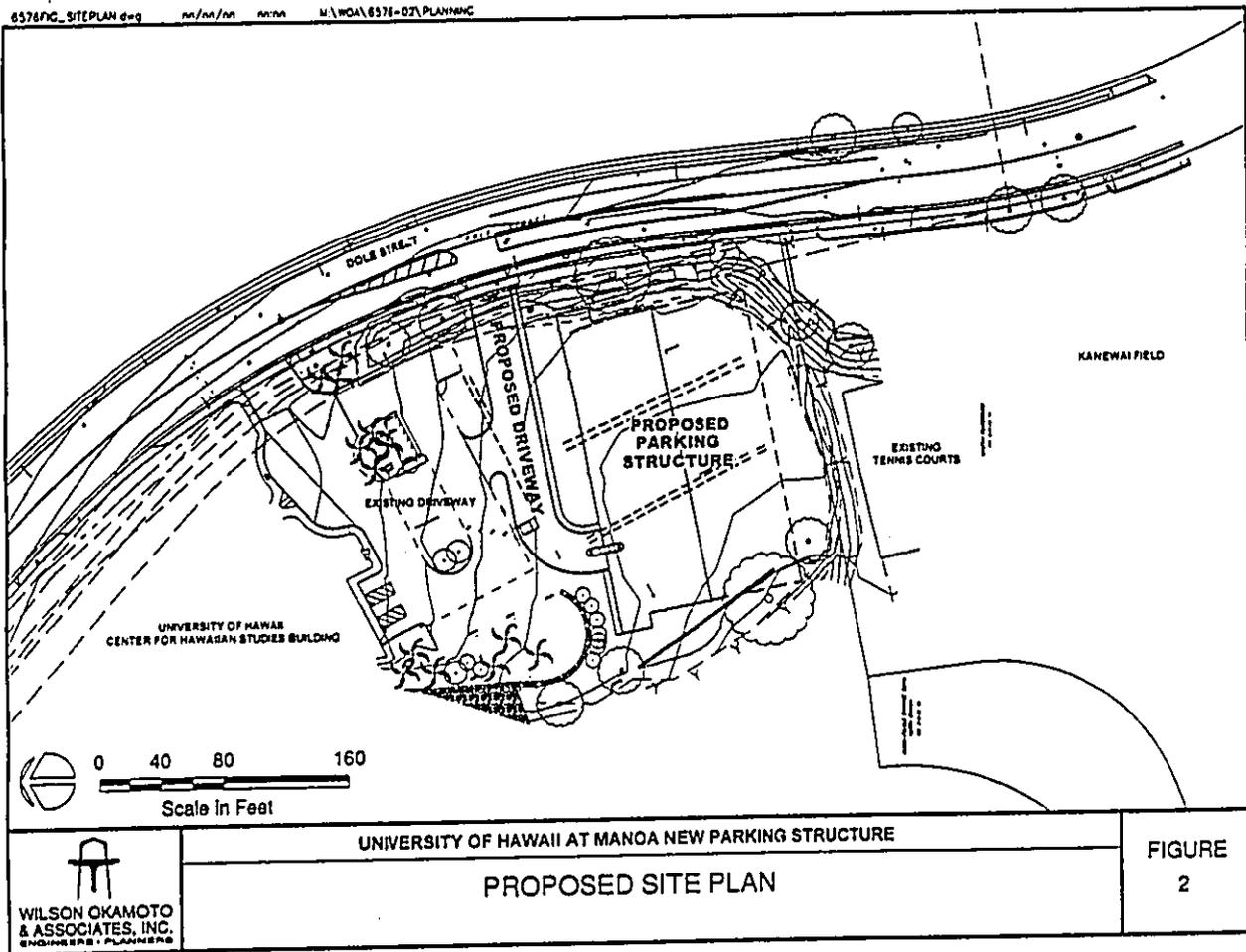
Appendix A includes the existing traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Highway Capacity Software", developed by the Federal Highway Administration. The analysis is based on the concept of Level of Service (LOS).

LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" unacceptable or potentially congested traffic operating conditions. The LOS definitions are included in Appendix B.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the road carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at capacity. A v/c ratio of greater than 1.00 indicates that the projected traffic demand exceeds the road's carrying capacity.



2. Existing Peak Hour Traffic

a. General

Figures 3 and 4 show the existing AM and PM peak hour traffic volumes and operating traffic conditions. The AM peak hour of traffic generally occurs between 7:15 AM and 8:15 AM along Dole Street in the proximity of the proposed project. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 4:30 PM and 5:30 PM. The analysis is based on these peak hour time periods to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

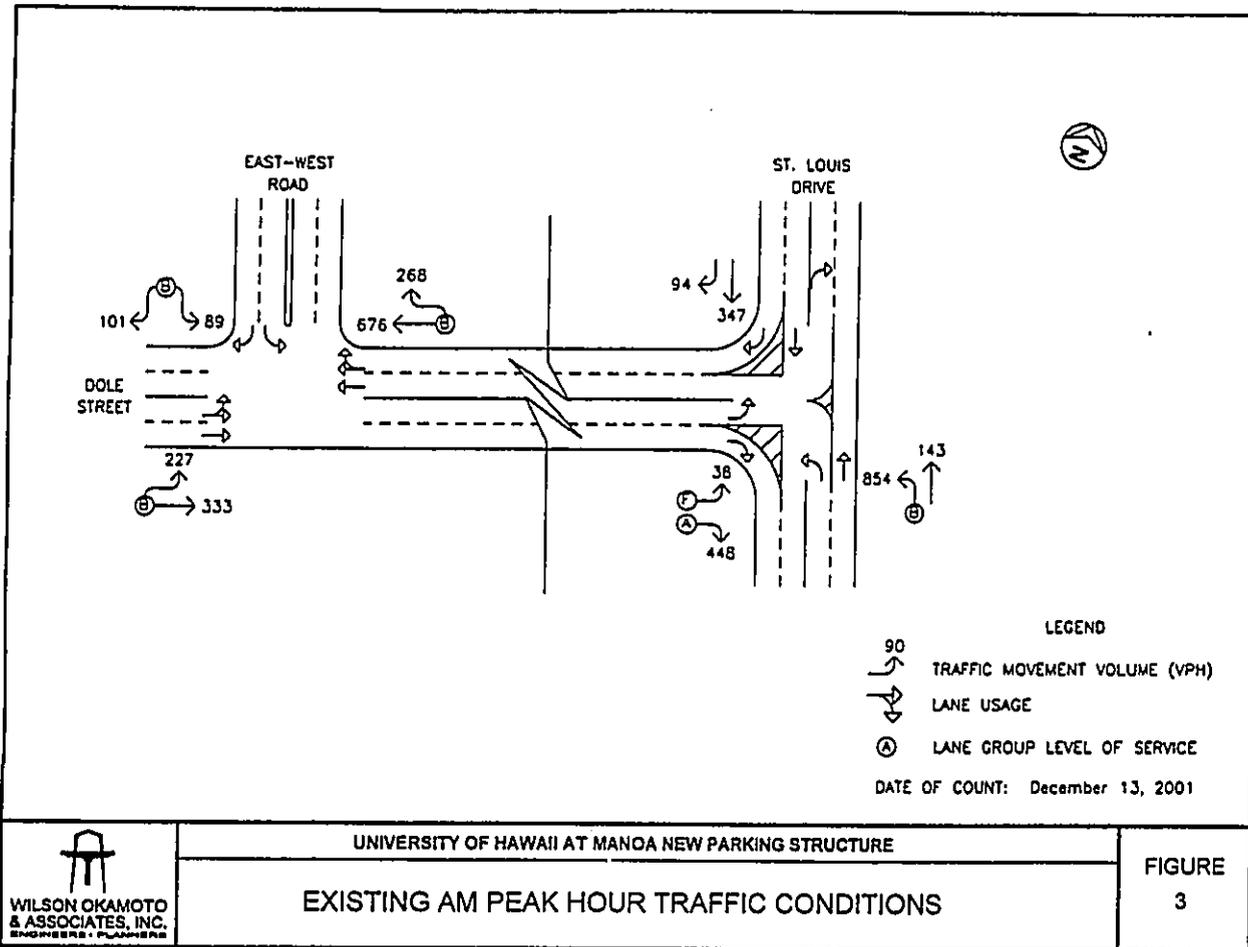
b. Dole Street and East-West Road

At the intersection of Dole Street and East-West Road, Dole Street carries 560 vehicles eastbound and 944 vehicles westbound during the AM peak period. During the PM peak hour, the total traffic volume is slightly less with 845 vehicles traveling eastbound and 430 vehicles traveling westbound. Both approaches of Dole Street operate fairly well at LOS "B" during the AM and PM peak hours.

East-West Road carries 190 vehicles and 396 vehicles southbound during the AM and PM peak hours of traffic, respectively. The East-West Road approach operates fairly well at LOS "B" during both peak hours of traffic.

c. Dole Street and St. Louis Drive

At the intersection of Dole Street and St. Louis Drive, Dole Street carries 486 vehicles and 856 vehicles eastbound during the AM and PM peak hours of traffic, respectively. The critical movement of Dole Street at this intersection is the eastbound left-turn traffic movement. This movement operates poorly at LOS "F" during the AM and PM peak hours of traffic.



St. Louis Drive carries 997 vehicles northbound and 441 vehicles southbound during the AM peak period. During the PM peak hour, the traffic volumes are less with 680 vehicles traveling northbound and 249 vehicles traveling southbound. The critical movement of St. Louis Drive at this intersection is the northbound left-turn traffic movement. This movement operates at LOS "B" and LOS "A" during the AM and PM peak hours of traffic, respectively.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

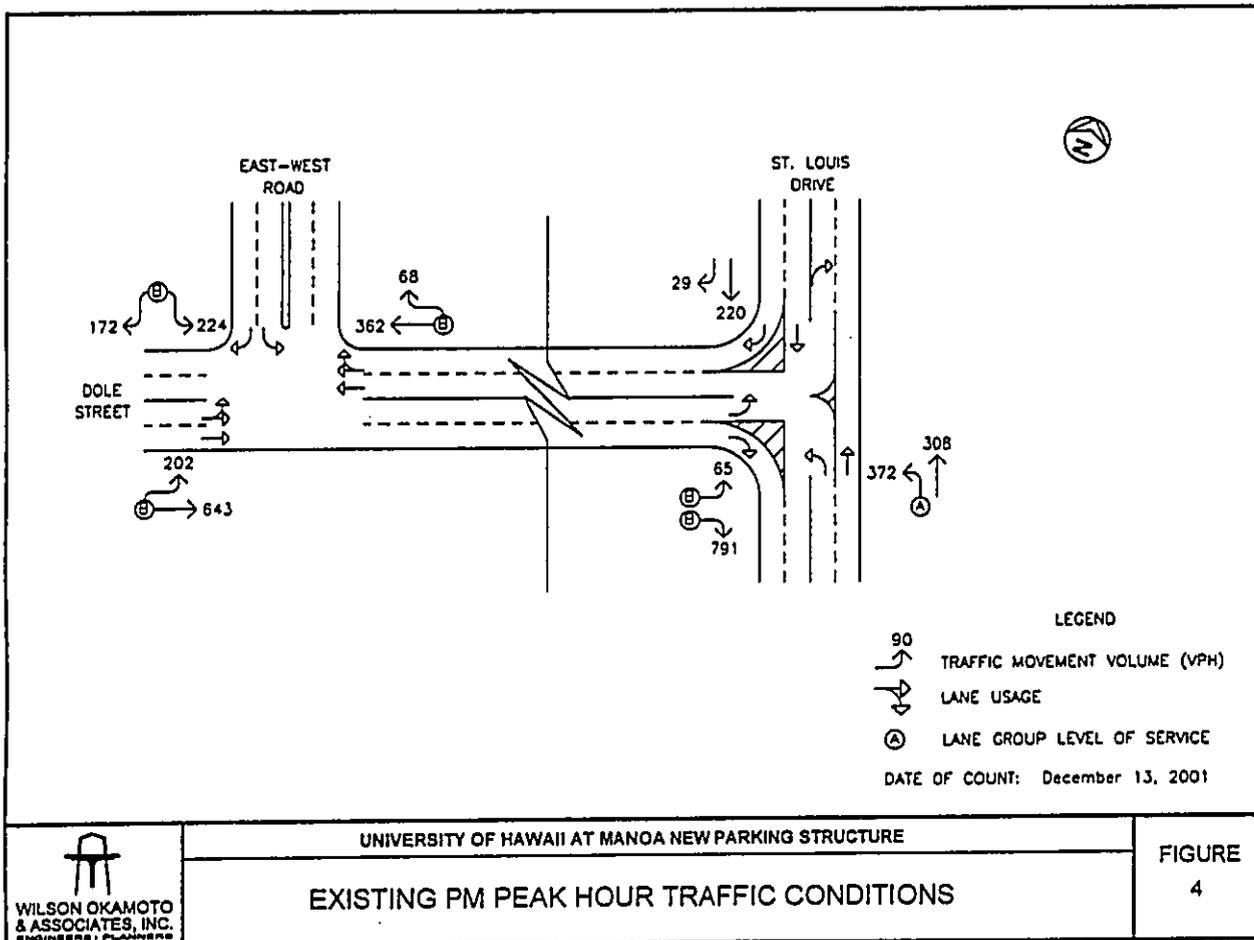
The trip generation methodology used in this study is based upon the anticipated number of occupied parking stalls at the new structure during the AM and PM peak periods of traffic. The parking generation methodology used is based upon generally accepted techniques and procedures developed by the Institute of Transportation Engineers (ITE) and published in "Parking Generation, 2nd Edition," 1987. The ITE parking rates are developed empirically by correlating the parking generation data with various land use characteristics such as the total number parking stalls. Table 1 summarizes the project site trip generation characteristics applied to the AM and PM peak hours of traffic to measure the impact resulting from the proposed University of Hawaii at Manoa new parking structure.

Table 1: Peak Hour Trip Generation

	PROJECTED TRIP ENDS	
	Enter	Exit
AM PEAK	237	-
PM PEAK	-	237

2. Trip Distribution

Access to the proposed new parking structure would be via driveway off of Dole Street. The directional distribution of all site-generated vehicular trips at the new driveway was based on the directional distribution of existing traffic along Dole Street. During the AM peak hour of traffic, 69.1% of the



vehicles were assumed to be traveling westbound, 30.9% of the vehicles traveling eastbound. During the PM peak hour of traffic, 33.2% of the vehicles were assumed to be traveling westbound, 66.8% of the vehicles traveling eastbound. At the intersection of Dole Street with East-West Road, the site-generated traffic was assumed to be through traffic. The directional distribution of traffic at the intersection of Dole Street with St. Louis Drive was assumed to remain the same as existing.

B. Through Traffic Forecasting Methodology

The travel forecast is based upon historical traffic count data obtained from the State DOT, Highways Division at a survey station located along Dole Street at the Manoa Stream Bridge. The historical data were analyzed by linear regression techniques to obtain an annual traffic growth rate of approximately 1.0% on Dole Street, using 2001 as the Base Year. The growth rate of 1.03 was applied to the existing traffic demands to simulate projected Year 2004 traffic demands.

C. Total Traffic Volumes Without Project

Figures 5 and 6 show the projected AM peak hour and PM peak hour traffic volumes and operating conditions along Dole Street in the project vicinity without the development of the proposed new parking structure. A comparison of the existing and projected (without project) levels of service are included in Table 2.

Traffic operations under Year 2004 without project conditions are expected to remain similar to existing along Dole Street in the project vicinity. All approaches of the Dole Street and East-West Road intersection continue to operate fairly well at LOS "B" during the AM and PM peak hours of traffic. At the intersection of Dole Street and St. Louis Drive, the eastbound left-turn movement continues to operate poorly at LOS "F" during the AM and PM peak hours. Similarly, the northbound left-turn movement continues to operate fairly well at LOS "B" during the AM peak hour. During the PM peak hour, the northbound left-turn movement operates at a slightly lower, but still acceptable level-of-service.

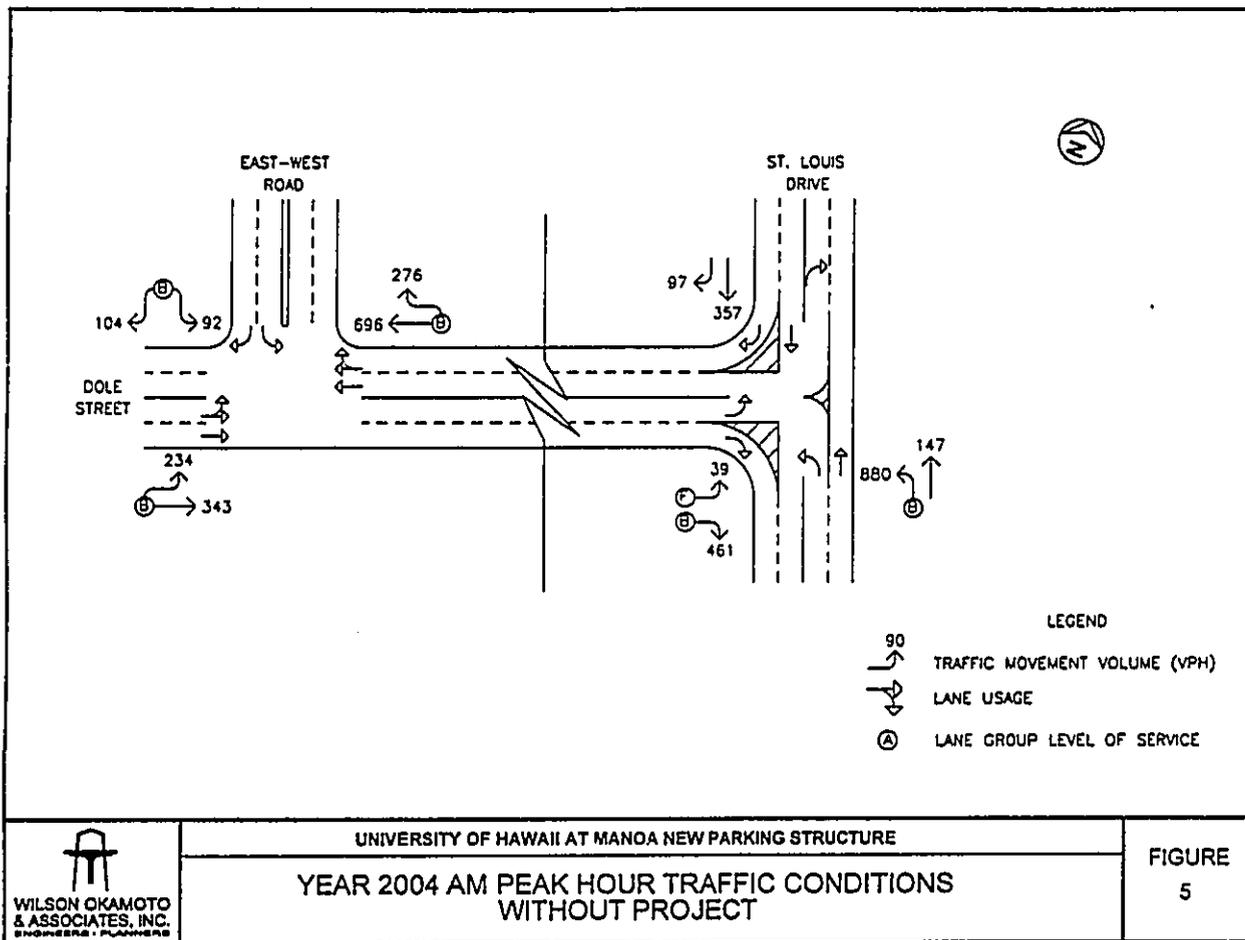


FIGURE 5

Table 2: Comparison of Existing and Projected (Without Project) LOS Traffic Operating Conditions

Intersection	Approach/Movement	AM		PM	
		Existing	Year 2004 w/out Project	Existing	Year 2004 w/out Project
Dole Street and East-West Road	Southbound	B	B	B	B
	Westbound	B	B	B	B
	Eastbound	B	B	B	B
Dole Street and St. Louis Drive	Northbound (LT)	F	F	A	A
	Eastbound (LT)	B	B	B	C

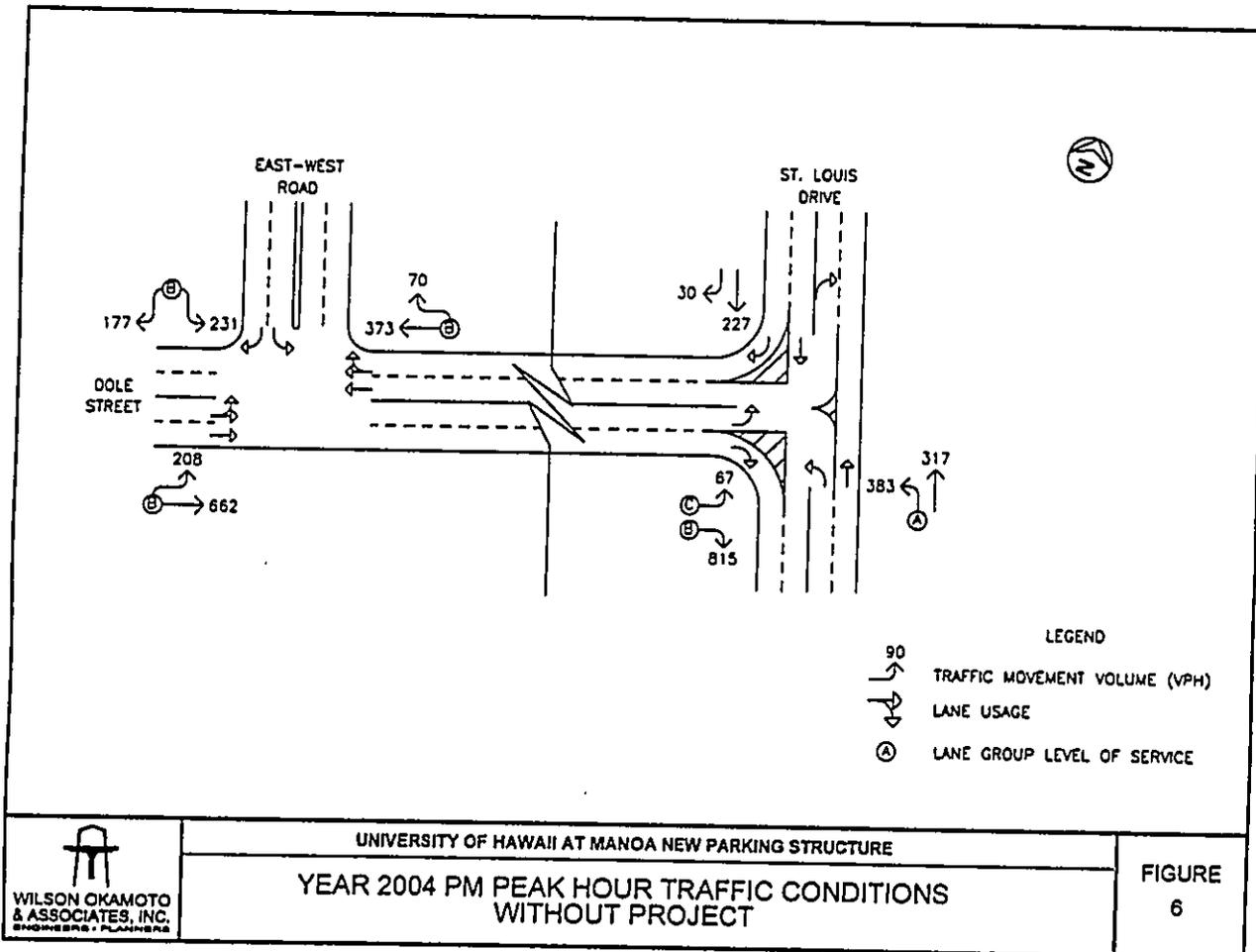
D. Total Traffic Volumes With Project

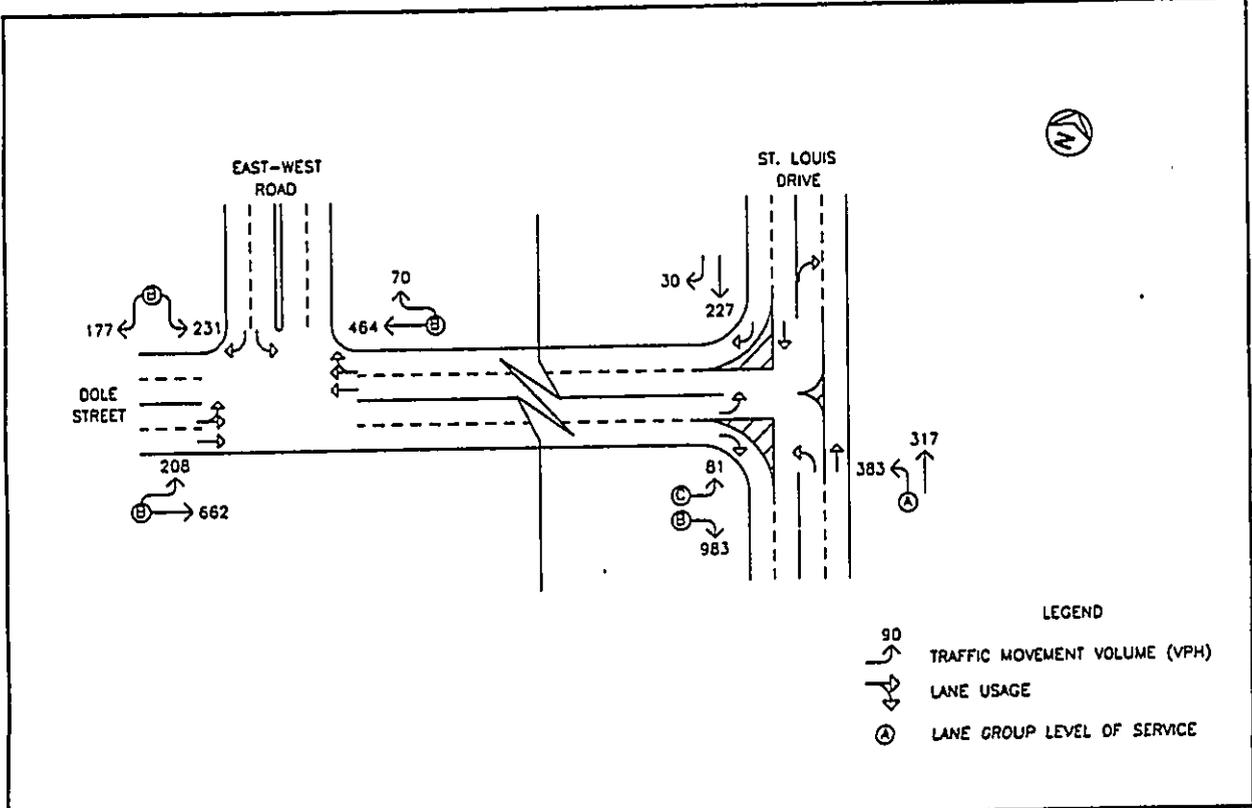
Figures 7 and 8 show the cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the development of the proposed new parking structure. The cumulative volumes consist of site-generated traffic superimposed over Year 2004 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2004 cumulative AM and PM peak hour traffic conditions with the development of the proposed new parking structure are summarized in Table 3. The existing and projected Year 2004 operating conditions without the proposed project are provided for comparison purposes.

Traffic operations under Year 2004 with project conditions are expected to remain similar to Year 2004 without project conditions along Dole Street in the project vicinity. All approaches of the Dole Street and East-West Road intersection continue to operate fairly well at LOS "B" during the AM and PM peak hours of traffic. At the intersection of Dole Street and St. Louis Drive, the eastbound left-turn movement continues to operate poorly at LOS "F" during the AM and PM peak hours. Similarly, the northbound left-turn movement continues to operate adequately at LOS "C" during the PM peak hour. During the AM peak hour, the northbound left-turn movement operates at a slightly lower, but still acceptable level-of-service.

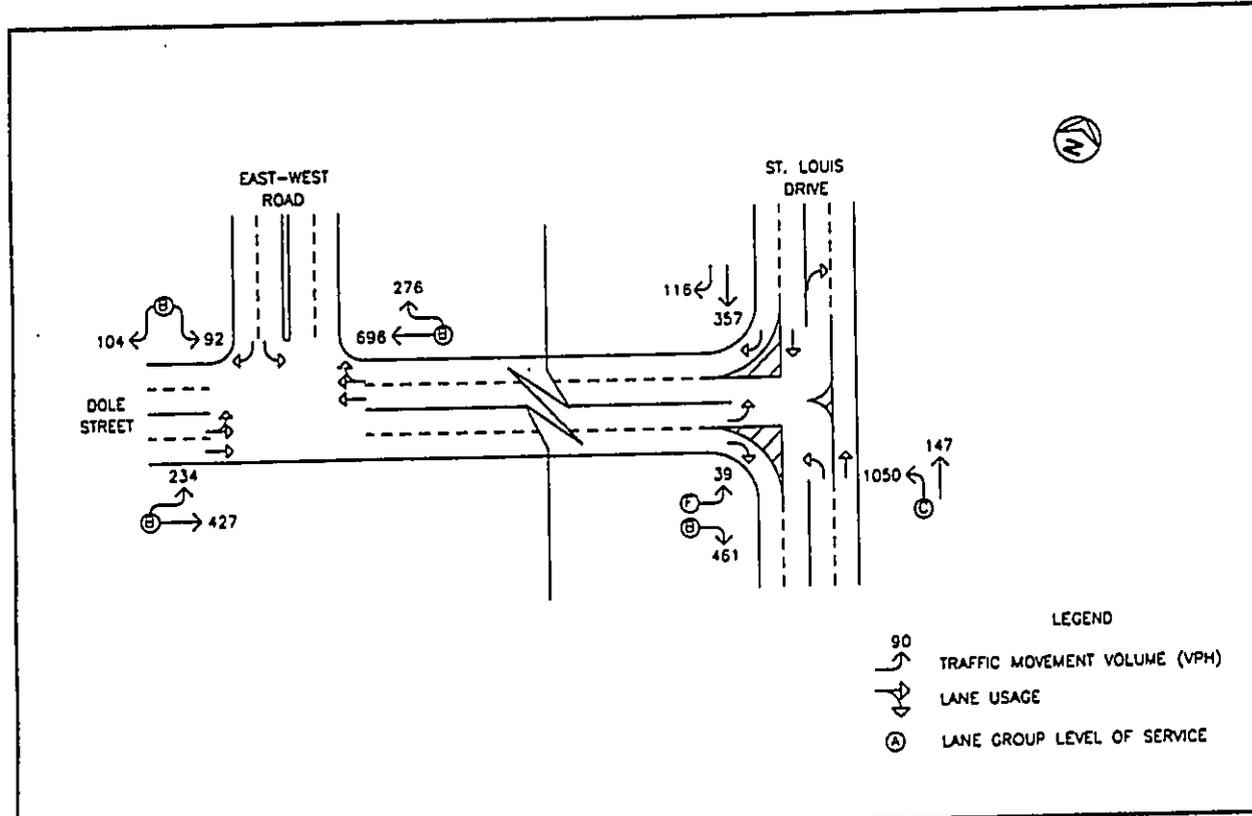




UNIVERSITY OF HAWAII AT MANOA NEW PARKING STRUCTURE

WILSON OKAMOTO & ASSOCIATES, INC. ENGINEERS-PLANNERS

FIGURE 8



UNIVERSITY OF HAWAII AT MANOA NEW PARKING STRUCTURE

WILSON OKAMOTO & ASSOCIATES, INC. ENGINEERS-PLANNERS

FIGURE 7

Table 3: Comparison of Existing and Projected (With and Without Project) Traffic Operating Conditions

Intersection	Approach/ Movement	AM		PM	
		Existing	Year 2004 w/out Project	Existing	Year 2004 w/ Project
Dole Street and East-West Road	Southbound	B	B	B	B
	Westbound	B	B	B	B
	Eastbound	B	B	B	B
Dole Street and St. Louis Drive	Northbound (LT)	F	F	A	A
	Eastbound (LT)	B	B	C	C

VI. OTHER CONSIDERATIONS

Access to the proposed new parking structure will be via a new driveway off of Dole Street. The new driveway will be situated on a curved section of Dole Street so sight distance will be a major concern. Based upon the posted speed limit, the required sight distance for vehicles exiting the driveway is approximately 295 feet to the right and left. In order to ensure the required sight distance is maintained, on-street parking restrictions should be implemented along the makai side of Dole Street on both sides of the new driveway.

VII. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study:

1. Provide a left-turn lane on the westbound approach of Dole Street for vehicles entering the project driveway. The left-turn lane should be of sufficient length to maintain through-traffic flow on westbound Dole Street without impacting the westbound traffic stream. The storage length geometrics may be determined in the design phase of the project and coordinated with the appropriate governmental agencies.
2. Provide sufficient driveway width to accommodate safe vehicle ingress and egress.
3. Implement on-street parking restrictions along Dole Street in the vicinity of the driveway to maintain adequate sight distances for motorists to safely enter and exit the project driveway.

VIII. CONCLUSION

The University of Hawaii's proposed new parking structure is not expected to have a significant impact on traffic operations in the project vicinity. The traffic operations at the intersections of Dole Street with East-West Road and St. Louis Drive with the development of the proposed project are expected to remain similar to Year 2004 without project conditions. In addition, the provision of the left-turn lane along Dole Street for vehicles entering the project and the implementation of on-street parking restrictions should ensure smooth ingress and egress of vehicles at the project driveway.

Wilson Okamoto & Associates, Inc.
 1907 S. Beretania St., Suite 400
 Honolulu, HI 96826

Counter: D1-0525/D1-0527
 Counted By: TI/RT
 Weather: Clear
 Other:

File Name : doleasa
 Site Code : 00000111
 Start Date : 12/13/2001
 Page No : 1

Groups Printed - Unshifed

Start Time	East-West Road Southbound				Dole Street Westbound				Parking Lot Dwy Northbound				Dole Street Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
06:30 AM	14	0	3	17	8	50	1	57	1	0	0	1	1	37	34	72	147
06:45 AM	14	0	10	24	30	101	0	131	0	0	0	0	0	80	39	99	254
Total	28	0	13	41	38	151	1	188	1	0	0	1	1	97	73	171	401
07:00 AM	15	0	14	29	42	200	0	242	1	0	0	1	1	87	28	98	388
07:15 AM	22	0	22	44	61	210	0	271	0	0	0	0	1	73	50	124	439
07:30 AM	27	0	18	43	68	189	2	239	0	0	0	0	0	97	65	162	444
07:45 AM	24	0	31	55	54	147	0	201	0	0	0	0	0	93	48	139	395
Total	88	0	83	171	225	726	2	953	1	0	0	1	2	330	189	521	1846
08:00 AM	28	0	20	48	65	150	0	235	0	0	0	0	0	70	66	136	419
08:15 AM	54	0	35	89	60	85	0	155	0	0	1	1	2	49	76	127	372
Grand Total	198	0	151	349	408	1122	3	1531	2	0	1	3	5	548	404	955	2838
Approch %	58.7	0.0	43.3	12.3	28.5	73.3	0.2	53.9	66.7	0.0	33.3	0.1	0.5	57.2	42.3	33.7	
Total %	7.0	0.0	5.3	12.3	14.3	39.5	0.1	53.9	0.1	0.0	0.0	0.1	0.2	19.2	14.2	33.7	

Start Time	East-West Road Southbound				Dole Street Westbound				Parking Lot Dwy Northbound				Dole Street Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1																	
Intersection	07:15 AM																
Volume	101	0	89	190	288	676	2	946	0	0	0	0	1	333	227	561	1697
Percent	53.2	0.0	46.8		28.3	71.5	0.2		0.0	0.0	0.0		0.2	59.4	40.5		
07:30 Volume	27	0	16	43	68	189	2	239	0	0	0	0	0	97	65	162	444
Peak Factor	0.956																
High Int.	07:45 AM				07:15 AM				8:15:00 AM				07:30 AM				
Volume	24	0	31	55	61	210	0	271	0	0	0	0	0	97	65	162	444
Peak Factor	0.864																

APPENDIX A
 EXISTING TRAFFIC COUNT DATA

Wilson Okamoto & Associates, Inc.
1907 S. Beretania St., Suite 400
Honolulu, HI 96826

Counter: D1-0526/D1-0528
Counted By: IQ/CL
Weather: Clear
Other:

File Name : dolstla
Site Code : 00000002
Start Date : 12/12/2001
Page No : 1

Start Time	St. Louis Drive Southbound				St. Louis Drive Northbound				Dole Street Eastbound				Int. Total	
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total		
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0			
06:30 AM	9	55	0	64	0	1	15	49	65	24	0	4	28	137
06:45 AM	15	89	0	84	0	0	22	131	153	46	0	5	53	290
Total	24	124	0	148	0	1	37	180	218	72	0	9	81	447
07:00 AM	15	70	0	85	0	0	22	211	233	77	0	9	86	404
07:15 AM	35	100	0	135	0	0	31	228	259	88	0	8	96	450
07:30 AM	23	98	0	121	0	0	30	233	263	129	0	6	135	519
07:45 AM	18	98	0	106	0	0	31	168	219	113	0	11	124	449
Total	91	356	0	447	0	0	114	860	974	407	0	34	441	1662
08:00 AM	18	61	0	79	0	0	51	205	256	118	0	13	131	466
08:15 AM	14	87	0	81	0	0	31	157	188	90	0	7	97	366
Grand Total	147	608	0	755	0	1	233	1402	1635	687	0	63	750	3141
Approch %	19.5	80.5	0.0		0.0	0.1	14.2	85.7		91.6	0.0	8.4		
Total %	4.7	19.4	0.0	24.0	0.0	0.0	7.4	44.6	52.1	21.9	0.0	2.0	23.9	

Start Time	St. Louis Drive Southbound				St. Louis Drive Northbound				Dole Street Eastbound				Int. Total	
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total		
Peak Hour From 06:30 AM to 08:15 AM - Peak 1 of 1														
Intersection	07:15 AM				07:30 AM				07:30 AM					
Volume	94	347	0	441	0	0	143	854	997	448	0	38	486	1924
Percent	21.3	78.7	0.0		0.0	0.0	14.3	85.7		92.2	0.0	7.8		519
07:30 Volume	23	98	0	121	0	0	30	233	263	129	0	6	135	0.927
Peak Factor					0.946									
High Int. Volume	35	100	0	135	0	0	30	233	263	129	0	6	135	0.900
Peak Factor	0.817								0.946					

Wilson Okamoto & Associates, Inc.
1907 S. Beretania St., Suite 400
Honolulu, HI 96826

Counter: D1-0525/D1-0527
Counted By: TI/RT
Weather: Clear
Other:

File Name : doloasp
Site Code : 00000111
Start Date : 12/13/2001
Page No : 1

Start Time	East-West Road Southbound				Dole Street Westbound				Parking Lot Dwy Northbound				Dole Street Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Factor	1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		1.0	1.0	1.0		
03:30 PM	39	0	60	119	17	106	0	123	2	1	2	5	8	121	43	172	421
03:45 PM	28	0	22	50	24	85	0	110	0	0	0	0	2	120	64	186	346
Total	67	0	82	169	41	194	0	233	2	1	2	5	10	241	107	358	767
04:00 PM	38	0	39	77	22	73	0	95	0	0	1	1	1	123	70	194	367
04:15 PM	31	0	45	76	22	76	0	98	0	0	1	1	1	108	60	169	344
04:30 PM	57	0	66	123	28	93	1	122	1	0	3	4	2	137	51	190	439
04:45 PM	37	0	62	99	19	89	0	108	0	0	0	0	0	161	59	220	427
Total	163	0	212	375	91	331	1	423	1	0	5	6	4	529	240	773	1577
05:00 PM	48	0	51	99	14	89	1	104	0	0	0	0	0	166	46	212	415
05:15 PM	30	0	45	75	7	91	0	98	0	0	0	0	1	179	46	226	399
Grand Total	328	0	390	718	153	705	2	860	3	1	7	11	15	1115	439	1569	3158
Approch %	45.7	0.0	54.3		17.8	82.0	0.2		27.3	9.1	63.6		1.0	71.1	26.0		
Total %	10.4	0.0	12.3	22.7	4.8	22.3	0.1	27.2	0.1	0.0	0.2	0.3	0.5	35.3	13.9	49.7	

Start Time	East-West Road Southbound				Dole Street Westbound				Parking Lot Dwy Northbound				Dole Street Eastbound				Int. Total
	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	RT	TH	LT	App. Total	
Peak Hour From 03:30 PM to 05:15 PM - Peak 1 of 1																	
Intersection	04:30 PM				04:30 PM				04:30 PM				05:15 PM				
Volume	172	0	224	396	68	362	2	432	1	0	3	4	3	643	202	846	1680
Percent	43.4	0.0	56.6		15.7	63.8	0.5		25.0	0.0	75.0		0.4	75.8	23.8		439
04:30 Volume	57	0	66	123	28	93	1	122	1	0	3	4	2	137	51	190	0.957
Peak Factor					0.855												
High Int. Volume	57	0	66	123	28	93	1	122	1	0	3	4	1	179	46	226	0.936
Peak Factor	0.805								0.855								

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

Table 1: Level-of-Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec/veh)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group.

Level of Service A describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level of Service (LOS) criteria are given in Table 1. As used here, control delay is defined as the total elapsed time from the time a vehicle stops at the end of the queue to the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue.

The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. If the degree of saturation is greater than about 0.9, average control delay is significantly affected by the length of the analysis period.

Table 1: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay (Sec/Veh)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

**APPENDIX C
CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK HOUR TRAFFIC ANALYSIS**

HCS2000: Signalized Intersections Release 4.1a

Analyst: CL
 Agency: 2/21/2002
 Date: 2/21/2002
 Period: AM Peak
 Project ID:
 E/W St: Dole Street
 N/S St: East-West Road

Analyst: CL
 Agency: 2/21/2002
 Date: 2/21/2002
 Period: PM Peak
 Project ID:
 E/W St: Dole Street
 N/S St: East-West Road

HCS2000: Signalized Intersections Release 4.1a

Analyst: CL
 Agency: 2/21/2002
 Date: 2/21/2002
 Period: PM Peak
 Project ID:
 E/W St: Dole Street
 N/S St: East-West Road

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
LCConfig	LT			TR			L			L		R
Volume	227	333		676	268		89			101		172
Lane Width	12.0			12.0			12.0			12.0		12.0
RTOR Vol				27						10		

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
LCConfig	LT			TR			L			L		R
Volume	202	643		362	68		224			172		172
Lane Width	12.0			12.0			12.0			12.0		12.0
RTOR Vol				7						17		

Duration 1.00 Area Type: All other areas

Phase Combination	Signal Operations			
	1	2	3	4
EB Left	A	A		
Thru	A	A		
Right				NB Left
Peds				Thru
WB Left				Right
Thru				Peds
Right				SB Left
Peds				Thru
NB Left				Right
Thru				Peds
Right				EB Right
Peds				WB Right
SB Right				
Green	5.0	35.0		30.0
Yellow	0.0	4.0		4.0
All Red	0.0	1.0		1.0

Duration 1.00 Area Type: All other areas

Phase Combination	Signal Operations			
	1	2	3	4
EB Left	A	A		
Thru	A	A		
Right				NB Left
Peds				Thru
WB Left				Right
Thru				Peds
Right				SB Left
Peds				Thru
NB Left				Right
Thru				Peds
Right				EB Right
Peds				WB Right
SB Right				
Green	5.0	35.0		30.0
Yellow	0.0	4.0		4.0
All Red	0.0	1.0		1.0

Intersection Performance Summary

Appr/Lane Grp	Lane Capacity	Adj Sat Flow Rate	Ratios			Lane Group	Approach	Delay LOS
			v/c	g/c	g/c			
Eastbound								
LT	1108	3538	0.58	0.50	14.9	B	14.9 B	
Westbound								
TR	1517	3468	0.69	0.44	19.6	B	19.6 B	
Northbound								
Southbound								
L	677	1805	0.15	0.38	16.7	B	16.8 B	
R	606	1615	0.17	0.38	16.9	B	16.9 B	
Intersection Delay = 17.7 (sec/veh) Intersection LOS = B								

Intersection Performance Summary

Appr/Lane Grp	Lane Capacity	Adj Sat Flow Rate	Ratios			Lane Group	Approach	Delay LOS
			v/c	g/c	g/c			
Eastbound								
LT	1271	3567	0.71	0.50	17.3	B	17.3 B	
Westbound								
TR	1545	3532	0.31	0.44	14.7	B	14.7 B	
Northbound								
Southbound								
L	677	1805	0.41	0.38	18.9	B	18.5 B	
R	606	1635	0.32	0.38	18.0	B	18.0 B	
Intersection Delay = 17.0 (sec/veh) Intersection LOS = B								

Intersection Performance Summary

Appr/Lane Grp	Lane Capacity	Adj Sat Flow Rate	Ratios			Lane Group	Approach	Delay LOS
			v/c	g/c	g/c			
Eastbound								
LT	1271	3567	0.71	0.50	17.3	B	17.3 B	
Westbound								
TR	1545	3532	0.31	0.44	14.7	B	14.7 B	
Northbound								
Southbound								
L	677	1805	0.41	0.38	18.9	B	18.5 B	
R	606	1635	0.32	0.38	18.0	B	18.0 B	
Intersection Delay = 17.0 (sec/veh) Intersection LOS = B								

Intersection Performance Summary

Appr/Lane Grp	Lane Capacity	Adj Sat Flow Rate	Ratios			Lane Group	Approach	Delay LOS
			v/c	g/c	g/c			
Eastbound								
LT	1271	3567	0.71	0.50	17.3	B	17.3 B	
Westbound								
TR	1545	3532	0.31	0.44	14.7	B	14.7 B	
Northbound								
Southbound								
L	677	1805	0.41	0.38	18.9	B	18.5 B	
R	606	1635	0.32	0.38	18.0	B	18.0 B	
Intersection Delay = 17.0 (sec/veh) Intersection LOS = B								

HCS2000: Unsignalized Intersections Release 4.1a

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
 Agency/Co.: 2/19/2002
 Date Performed: 2/19/2002
 Analysis Time Period: AM Peak
 Intersection: Existing
 Jurisdiction: U. S. Customary
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: Dole Street
 East/West Street: St. Louis Drive
 North/South Street: St. Louis Drive
 Intersection Orientation: NS
 Study period (hrs): 1.00

Major Street:	Vehicle Volumes and Adjustments					
	Northbound		Southbound		Eastbound	
Approach Movement	1	2	3	4	5	6
L						
T						
R						

Volume 854 143 347
 Peak-Hour Factor, PHF 0.95 0.95 0.82
 Hourly Flow Rate, HFR 898 150 423
 Percent Heavy Vehicles 2 -- --
 Median Type Undivided
 RT Channelized? 1 1 1
 Lanes L T T
 Configuration L T No
 Upstream Signal? No

Minor Street:	Vehicle Volumes and Adjustments					
	Westbound		Eastbound		Southbound	
Approach Movement	7	8	9	10	11	12
L						
T						
R						

Volume 38 448
 Peak Hour Factor, PHF 0.90 0.90
 Hourly Flow Rate, HFR 42 437
 Percent Heavy Vehicles 2 2
 Median Storage 0 0
 Flared Approach: Exists? Storage
 RT Channelized? Yes
 Lanes L 1 R
 Configuration

Approach Movement	Delay, Queue Length, and Level of Service					
	Westbound		Eastbound		Southbound	
1	4	7	8	9	10	11
L						
R						

v (vph) 898 42 1220
 C(m) (vph) 1389 86 1389
 v/c 0.65 0.49 0.41
 95% queue length 5.37 2.56 2.05
 Control Delay 12.3 85.2 10.0-
 LOS B F A
 Approach Delay 15.8
 Approach LOS C

HCS2000: Unsignalized Intersections Release 4.1a

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
 Agency/Co.: 2/19/2002
 Date Performed: 2/19/2002
 Analysis Time Period: PM Peak
 Intersection: Existing
 Jurisdiction: U. S. Customary
 Units: U. S. Customary
 Analysis Year: Existing
 Project ID: Dole Street
 East/West Street: St. Louis Drive
 North/South Street: St. Louis Drive
 Intersection Orientation: NS
 Study period (hrs): 1.00

Major Street:	Vehicle Volumes and Adjustments					
	Northbound		Southbound		Eastbound	
Approach Movement	1	2	3	4	5	6
L						
T						
R						

Volume 372 308 220
 Peak-Hour Factor, PHF 0.97 0.97 0.90
 Hourly Flow Rate, HFR 383 317 244
 Percent Heavy Vehicles 2 -- --
 Median Type Undivided
 RT Channelized? 1 1 1
 Lanes L T T
 Configuration L T No
 Upstream Signal? No

Minor Street:	Vehicle Volumes and Adjustments					
	Westbound		Eastbound		Southbound	
Approach Movement	7	8	9	10	11	12
L						
T						
R						

Volume 65 791
 Peak Hour Factor, PHF 0.92 0.92
 Hourly Flow Rate, HFR 70 859
 Percent Heavy Vehicles 2 2
 Median Storage 0 0
 Flared Approach: Exists? Storage
 RT Channelized? Yes
 Lanes L 1 R
 Configuration

Approach Movement	Delay, Queue Length, and Level of Service					
	Westbound		Eastbound		Southbound	
1	4	7	8	9	10	11
L						
R						

v (vph) 383 70 859
 C(m) (vph) 1545 448 1434
 v/c 0.25 0.16 0.60
 95% queue length 0.99 0.55 4.41
 Control Delay 8.1 14.5 11.2
 LOS B B B
 Approach Delay 11.5
 Approach LOS B

HCS2000: Signalized Intersections Release 4.1a

Analyst: CL
 Agency: Inter.:
 Date: 2/21/2002 Area Type: All other areas
 Period: AM Peak Jurisd:
 Project ID: Year : Year 2004 w/out project
 E/W St: Dole Street N/S St: East-West Road

APPENDIX D
 CAPACITY ANALYSIS CALCULATIONS
 PROJECTED YEAR 2004 PEAK HOUR TRAFFIC
 ANALYSIS WITHOUT PROJECT

SIGNALIZED INTERSECTION SUMMARY

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
LT												
Volume	234	343		696	276							104
Lane Width	12.0			12.0								12.0
RTOR Vol				28								10

Duration 1.00 Area Type: All other areas

Phase Combination	Signal Operations			
	2	3	4	
EB Left	A	A		NB Left
Thru	A	A		Thru
Right				Right
Peds				Peds
WB Left				SB Left
Thru				Thru
Right				Right
Peds				Peds
NB Right				EB Right
SB Right				WB Right
Green	5.0	37.0		28.0
Yellow	0.0	4.0		4.0
All Red	0.0	1.0		1.0

Intersection Performance Summary

Appr/ Lane Grp	Lane Capacity	Adj Sat	v/c	Ratios		Lane Group	Approach
				g/c	g/c		
Eastbound							
LT	1150	3538	0.58	0.52	13.7	B	13.7 B
Westbound							
TR	1604	3468	0.68	0.46	18.0	B	18.0 B
Northbound							
Southbound							
L	632	1805	0.17	0.35	18.1	B	18.2 B
R	565	1615	0.19	0.35	18.3	B	18.3 B

Intersection Delay = 16.5 (sec/veh) Intersection LOS = B
 Cycle Length: 80.0 secs

HCS2000: Signalized Intersections Release 4.1a

Analyst: CL Inter.:
 Agency: Area Type: All other areas
 Date: 2/21/2002 Jurisd:
 Period: AM Peak Year : Year 2004 w/ project
 Project ID: N/S St: East-West Road
 E/W St: Dole Street

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
LCConfig	LT			TR								L R
Volume	234	427		696	276							104
Lane Width	12.0			12.0			12.0			12.0		
RTOR Vol	28									10		

Duration 1.00 Area Type: All other areas

Phase	Signal Operations			
	1	2	3	4
EB Left	A	A		
Thru	A	A		
Right				
Peds				
WB Left				
Thru				
Right				
Peds				
SB Left				
Thru				
Right				
Peds				
EB Right				
WB Right				
Green	5.0	37.0		
Yellow	0.0	4.0		
All Red	0.0	1.0		

Intersection Performance Summary
 Cycle Length: 80.0 secs

Appr/ Lane	Adj Sat	Flow Rate	Capacity	v/c	g/c	Delay LOS	Approach
Eastbound							
LT	1138	3547	0.67	0.52	15.4	B	15.4 B
Westbound							
TR	1604	3468	0.68	0.46	18.0	B	18.0 B
Northbound							
Southbound							
L	632	1805	0.17	0.35	18.1	B	18.2 B
R	565	1635	0.19	0.35	18.3	B	18.3 B
Intersection Delay = 17.1 (sec/veh) Intersection LOS = B							

HCS2000: Signalized Intersections Release 4.1a

Analyst: CL Inter.:
 Agency: Area Type: All other areas
 Date: 2/21/2002 Jurisd:
 Period: PM Peak Year : Year 2004 w/ project
 Project ID: N/S St: East-West Road
 E/W St: Dole Street

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
No. Lanes	0	2	0	0	2	0	0	0	0	0	0	1
LCConfig	LT			TR								L R
Volume	208	662		464	70							177
Lane Width	12.0			12.0			12.0			12.0		
RTOR Vol	7									18		

Duration 1.00 Area Type: All other areas

Phase	Signal Operations			
	1	2	3	4
EB Left	A	A		
Thru	A	A		
Right				
Peds				
WB Left				
Thru				
Right				
Peds				
SB Left				
Thru				
Right				
Peds				
EB Right				
WB Right				
Green	5.0	35.0		
Yellow	0.0	4.0		
All Red	0.0	1.0		

Intersection Performance Summary
 Cycle Length: 80.0 secs

Appr/ Lane	Adj Sat	Flow Rate	Capacity	v/c	g/c	Delay LOS	Approach
Eastbound							
LT	1204	3567	0.77	0.50	19.4	B	19.4 B
Westbound							
TR	1551	3545	0.38	0.44	15.4	B	15.4 B
Northbound							
Southbound							
L	677	1805	0.42	0.38	19.0	B	18.6 B
R	606	1615	0.32	0.38	18.1	B	18.1 B
Intersection Delay = 18.0 (sec/veh) Intersection LOS = B							

HCS2000: Unsignalized Intersections Release 4.1a

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
 Agency/Co.: 2/19/2002
 Date Performed: 2/19/2002
 Analysis Time Period: AM Peak
 Intersection:
 Jurisdiction:
 Units: U. S. Customary Year 2004 w/ project
 Analysis Year: Year 2004 w/ project
 Project ID:
 East/West Street: Dole Street
 North/South Street: St. Louis Drive
 Intersection Orientation: NS Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Northbound			Southbound		
	1	2	3	4	5	6
Approach Movement	L	T	R	L	T	R

Volume 1050 147 357
 Peak-Hour Factor, PHF 0.95 0.95 0.82
 Hourly Flow Rate, HFR 1105 154 435
 Percent Heavy Vehicles 2 -- --
 Median Type Undivided
 RT Channelized? 1 1 1
 Lanes L T T
 Configuration L T T
 Upstream Signal? No No No

Minor Street: Approach Westbound Eastbound

Movement	Westbound			Eastbound		
	7	8	9	10	11	12
Approach Movement	L	T	R	L	T	R

Volume 39 461
 Peak Hour Factor, PHF 0.90 0.90
 Hourly Flow Rate, HFR 43 512
 Percent Heavy Vehicles 2 2
 Percent Grade (%) 0 0
 Median Storage
 Flared Approach: Exists? Storage
 RT Channelized? 1 1 Yes
 Lanes L R
 Configuration L R

Delay, Queue Length, and Level of Service

Approach Movement	Westbound			Eastbound				
	1	4	7	8	9	10	11	12
Approach Movement	L	L	L	L	L	L	L	R

v (vph) 1105 43 512
 C(m) (vph) 1379 33 1207
 v/c 0.80 1.30 0.42
 95% queue length 11.19 10.91 2.20
 Control Delay 17.8 961.5 10.2
 LOS C F B
 Approach Delay 83.9
 Approach LOS F

HCS2000: Unsignalized Intersections Release 4.1a

TWO-WAY STOP CONTROL SUMMARY

Analyst: CL
 Agency/Co.: 2/19/2002
 Date Performed: 2/19/2002
 Analysis Time Period: PM Peak
 Intersection:
 Jurisdiction:
 Units: U. S. Customary Year 2004 w/ project
 Analysis Year: Year 2004 w/ project
 Project ID:
 East/West Street: Dole Street
 North/South Street: St. Louis Drive
 Intersection Orientation: NS Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street:	Northbound			Southbound		
	1	2	3	4	5	6
Approach Movement	L	T	R	L	T	R

Volume 383 317 227
 Peak-Hour Factor, PHF 0.97 0.97 0.90
 Hourly Flow Rate, HFR 394 326 252
 Percent Heavy Vehicles 2 -- --
 Median Type Undivided
 RT Channelized? 1 1 1
 Lanes L T T
 Configuration L T T
 Upstream Signal? No No No

Minor Street: Approach Westbound Eastbound

Movement	Westbound			Eastbound		
	7	8	9	10	11	12
Approach Movement	L	T	R	L	T	R

Volume 81 983
 Peak Hour Factor, PHF 0.92 0.92
 Hourly Flow Rate, HFR 88 1068
 Percent Heavy Vehicles 2 2
 Percent Grade (%) 0 0
 Median Storage
 Flared Approach: Exists? Storage
 RT Channelized? 1 1 Yes
 Lanes L R
 Configuration L R

Delay, Queue Length, and Level of Service

Approach Movement	Westbound			Eastbound				
	1	4	7	8	9	10	11	12
Approach Movement	L	L	L	L	L	L	L	R

v (vph) 394 88 1068
 C(m) (vph) 1538 429 1424
 v/c 0.26 0.21 0.75
 95% queue length 1.03 0.77 8.59
 Control Delay 8.1 15.6 15.0-
 LOS A C B
 Approach Delay 15.0+
 Approach LOS C

APPENDIX B

**Acoustic Study for the Hawaiian Studies Building
Parking Garage, University of Hawaii at Manoa**

Y. Ebisu & Associates

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ACOUSTIC STUDY FOR THE
HAWAIIAN STUDIES BUILDING PARKING
GARAGE, UNIVERSITY OF HAWAII AT MANOA

HONOLULU, HAWAII

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CHAPTER I. SUMMARY

The existing and future traffic noise levels in the vicinity of the proposed Hawaiian Studies Parking Garage at the University of Hawaii at Manoa were evaluated for their potential impacts and their relationship to current FHAR/UD noise standards. The traffic noise level increases along the access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Dole Street or St. Louis Drive as a result of project plus non-project traffic following project completion by CY 2004. Traffic noise from Dole Street will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 DNL at existing single and multifamily residences which front Dole Street and St. Louis Drive.

Project traffic will add less than 0.6 DNL additional units of noise along Dole Street and St. Louis Drive. The increases in future traffic noise levels resulting from project generated traffic are not considered to be significant and should be difficult to perceive. Noise from overhead propeller aircraft and helicopters will continue to be the louder noise sources in the project area. These noise sources are preexisting and are not related to the project.

Unavoidable, but temporary, noise impacts may occur during the construction activities within the project area, and particularly during the site preparation, excavation, and pile driving activities on the project site. Because construction activities are predicted to be audible within the project site and at adjoining properties, the quality of the acoustic environment may be degraded to unacceptable levels during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment is recommended as a standard mitigation measure. The implementation of Hawaii State Department of Health permit procedures and curfew periods for construction activities is also expected for this project.

Because of the presence of the Hawaiian Studies Building within 150 feet from the Parking Garage, and the potential for damage to this building from vibration during pile driving operations, vibration monitoring may be warranted during test pile driving operations. In addition, it is expected that the design of the supporting piles and construction methods for the Parking Garage will be optimized to minimize risks of damage to nearby structures or paved areas from settling or heaving. Modifications to the project's foundation and pile driving plans prior to design and construction are recommended if the safe vibration limits for the adjacent structures are expected to be exceeded.

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing noise environment, and to predict the future traffic noise environment in the environs of the proposed Parking Garage at the Hawaiian Studies Building of the University of Hawaii. The Parking Garage is to be located on the existing unpaved parking lot on Dole Street between Kanewai Field and the Hawaiian Studies Building. Traffic noise level increases and impacts associated with the proposed development were to be determined along the public roadways expected to service the project traffic. A specific objective was to determine future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases. Assessments of possible future impacts from short term construction noise and vibration at the project site were also included as noise study objectives. Recommendations for minimizing identified noise and vibration impacts were also to be provided as required.

CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies (such as FHWA/HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 PM to 7:00 AM are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. A more complete list of noise descriptors is provided in APPENDIX B to this report.

TABLE 1, derived from Reference 1, presents current federal noise standards and acceptability criteria for residential land uses. Land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system are shown in FIGURE 1. As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway.

For purposes of determining noise acceptability for funding assistance from federal agencies (FHWA/HUD and VA), an exterior noise level of 65 DNL or less is considered acceptable for residences. This standard is applied nationally (Reference 2), including Hawaii. Because of our open-living conditions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 3, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHWA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 DNL are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 DNL.

On the island of Oahu, the State Department of Health (DOH) regulates noise from fixed mechanical equipment and construction activities. State DOH noise regulations are expressed in maximum allowable noise limits rather than DNL (see

TABLE 1
EXTERIOR NOISE EXPOSURE CLASSIFICATION
(RESIDENTIAL LAND USE)

NOISE EXPOSURE CLASS	DAY-NIGHT SOUND LEVEL	EQUIVALENT SOUND LEVEL	FEDERAL (1) STANDARD
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable(2)
Significant Exposure	Above 65 DNL But Not Above 75 DNL	Above 65 Leq But Not Above 75 Leq	Normally Unacceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable

Notes: (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation.

(2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if: (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours. The noise mitigation threshold used by FHWA for residences is 67 Leq.

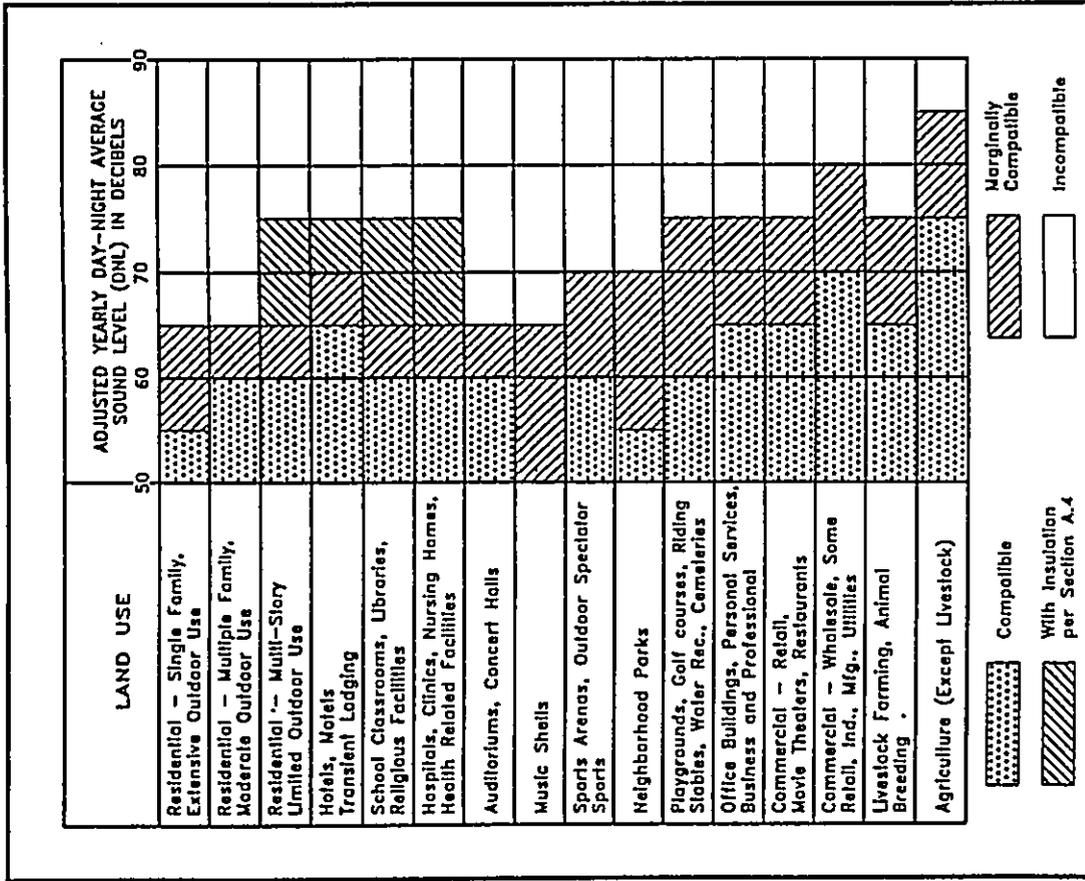


FIGURE 1

LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY-NIGHT AVERAGE SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.
 (Source: American National Standards Institute S12.9-1998/Part 5)

Reference 4). Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for single family residential lands equate to approximately 55 DNL. For multifamily residential, commercial, and resort lands, the State DOH noise limits equate to approximately 60 DNL. For light and heavy industrial lands, the State DOH noise limits equate to approximately 76 DNL.

It should be noted that the noise compatibility guidelines and relationships to the DNL noise descriptor may not be applicable to impulsive noise sources such as pile drivers. The use of penalty factors (such as adding 10 dB to measured sound levels or the use of C-Weighting filters) have been proposed. However, the relationships between levels of impulsive noise sources and land use compatibility have not been as firmly established as have the relationships for non-impulsive sources. The State DOH limits for impulsive sounds which exceed 120 impuses in any 20 minute period are 10 dB above the limits for non-impulsive sounds. If impulsive sounds do not exceed 120 impuses in any 20 minute time period, there are no regulatory limits on their sound levels under the State DOH regulations. Construction activities, which are typically noisier than the State DOH noise limits, are regulated through the issuance of permits for allowing excessive construction noise during limited time periods.

CHAPTER IV. GENERAL STUDY METHODOLOGY

Existing traffic and background ambient noise levels were measured at two locations (A and B) in the project environs to provide a basis for describing the existing noise environment in the project environs. The locations of the measurement sites were on Dole Street and are shown in FIGURE 2. Location A was in the existing traffic turnaround area east of the Hawaiian Studies Building, and Location B was at the pavilion at Kaneohe Field. The traffic and background ambient noise measurements were performed during the month of February 2002, and those results are summarized in TABLE 2.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2004 were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 1.1 (Reference 5). Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Loose Soil" propagation loss factor. The traffic data and forecasts for the project (Reference 6) were the primary sources of data inputs to the model. APPENDIX C summarizes the AM and PM peak hour traffic volumes for CY 2002 and 2004, which were used to model existing and future traffic noise along the streets servicing the Parking Garage. For existing and future traffic along the streets servicing the Parking Garage, it was assumed that the average noise levels, or Leq(h), during the AM peak traffic hour were approximately 1 dB greater than the 24-hour DNL along those roadways. This assumption was based on the Hawaii State Department of Transportation traffic counts contained in References 7 and 8.

Traffic noise calculations for both the existing and future conditions in the project environs were developed for ground level and elevated receptors. Traffic noise levels were also calculated for future conditions with (Build Alternative) and without (No Build Alternative) the proposed project. The forecasted changes in traffic noise levels over existing levels were calculated with and without the project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned dwellings. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed. Potential noise and vibration impacts from pile driving operations were also discussed, and mitigation measures recommended.

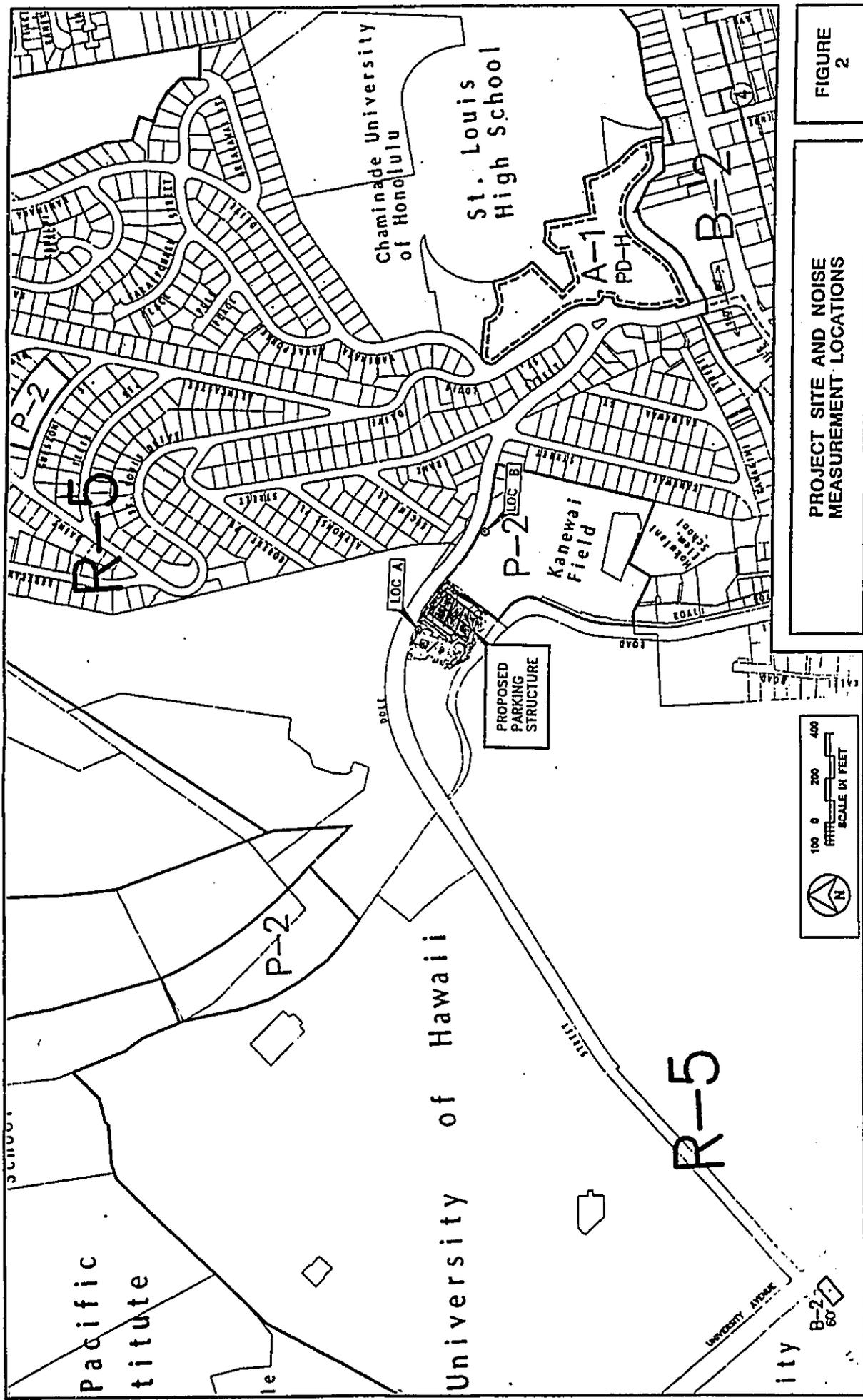


FIGURE 2

PROJECT SITE AND NOISE MEASUREMENT LOCATIONS

V. EXISTING ACOUSTICAL ENVIRONMENT

The results of the February 2002 traffic noise measurements are summarized in TABLE 2, with measurement locations identified in FIGURE 2. Both noise measurement sites were located at street level. As shown in TABLE 2, the correlation between measured and predicted traffic noise levels was good. Results of calculations of existing (CY 2002) traffic noise levels (in Leq) during the AM peak hour period are shown in TABLE 3. The results of the Leq calculations apply at 50 FT distances from the centerlines of the roadway sections in the project environs. Calculated setback distances from the centerlines of these roadways to the existing 65, 70, and 75 DNL contours are also shown in TABLE 3. Existing traffic noise levels along Dole Street are in the "Moderate Exposure, Acceptable" category at setback distances of 46 to 48 FT from the centerline. Along St. Louis Drive south of Dole Street, larger setback distances of 59 FT are required before traffic noise levels are in the "Moderate Exposure, Acceptable" category. Along St. Louis Drive north of Dole Street, smaller setback distances of 21 FT are required before traffic noise levels are in the "Moderate Exposure, Acceptable" category. The traffic noise levels shown in the TABLE 3 only apply when unobstructed line-of-sight conditions exist to the roadways. These conditions would generally occur at short (25 to 100 FT) distances to a roadway, within any flat, open space along the roadway, and at distant, but elevated locations above the roadway. The existing traffic noise levels shown in TABLE 3 should be reduced by 3 to 5 dB (or DNL) if partial shielding (line-of-sight obstruction) exists between the roadway and the receptor location. If the receptor is located behind a major obstruction (large building), the noise levels in the tables should be reduced by 5 to 10 dB.

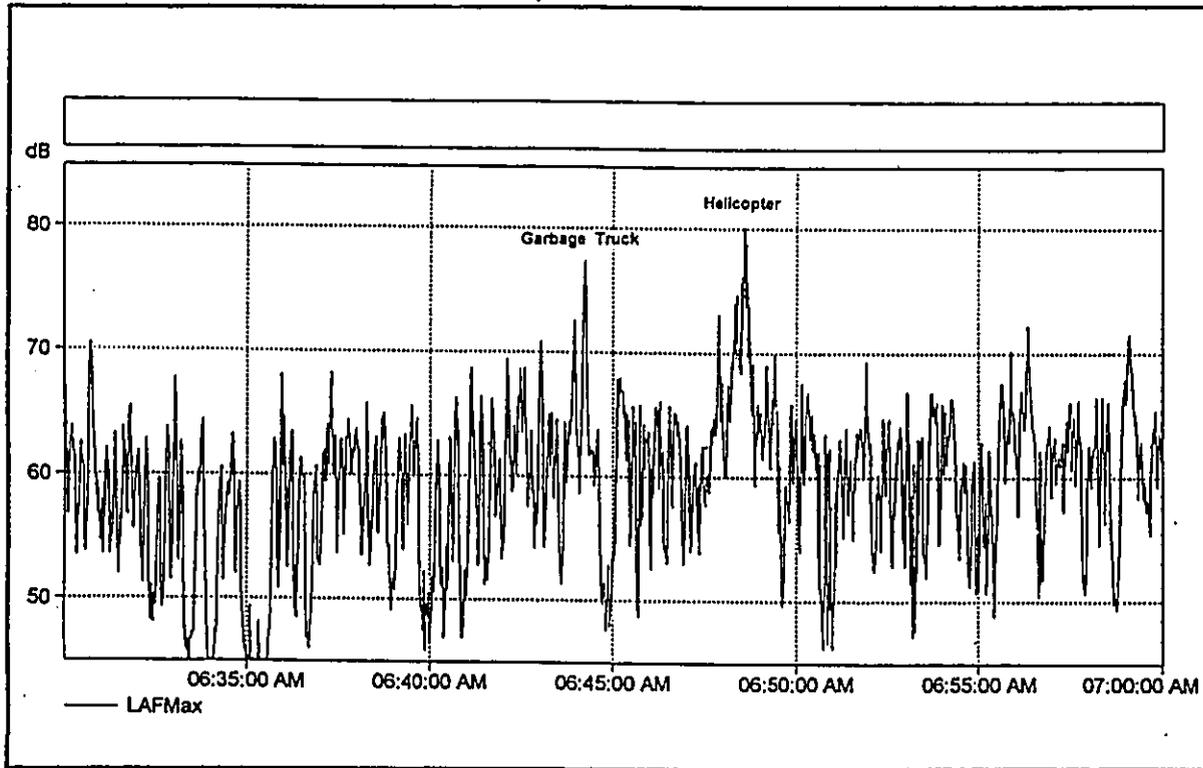
Major contributors to the existing background ambient noise levels within the project area are: traffic along Dole Street; recreational activities at Kanewal Field; and aircraft flying over the project site. Sample strip charts of the louder noise events which were recorded at the noise measurement locations are shown in FIGURES 3 through 6. These louder noise events can range from 75 to 85 dBA, and are clearly audible above the other background ambient noise sources, and tend to distort the hourly average [or Leq(h)] and 24-hour average (or DNL) noise levels.

Based on the results shown in TABLE 3, as well as the measured sound levels at Locations A and B, it was concluded that existing background noise levels in the project environs currently exceed 65 DNL at essentially all single family residences which front Dole Street since setback distances of the first row of homes typically do not exceed 40 feet from the centerline of Dole Street. The single family homes are all located east of the project site between Kanewal Field and St. Louis Drive. Student and faculty housing structures are primarily located west of the project site and at 60 to 75 feet setback from the centerline of Dole Street. Existing background ambient noise levels are in the "Significant Exposure, Normally Unacceptable" category at the first row of those single family residences which are within 46 to 48 feet of the centerline of Dole Street, with traffic noise being the dominant noise source. At the second row of buildings and beyond, traffic noise levels are in the "Moderate Exposure, Acceptable" category due to distance and noise shielding effects.

TABLE 2

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume			Measured Leq (dB)	Predicted Leq (dB)
			AUTO	M.TRUCK	H.TRUCK		
A. 69 FT from the centerline of Dole Street (2/12/02)	0615 TO 0700	30	466	1	7	60.5	61.2
	700 TO 845	30	1,379	8	6	65.1	64.7
B. 48 FT from the centerline of Dole Street (2/19/02)	1521 TO 1600	30	911	5	4	64.4	64.2
	1600 TO 1700	27	1,256	9	2	64.2	64.5



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "A" (2/12/02; 0635 TO 0700 HRS)

FIGURE 3

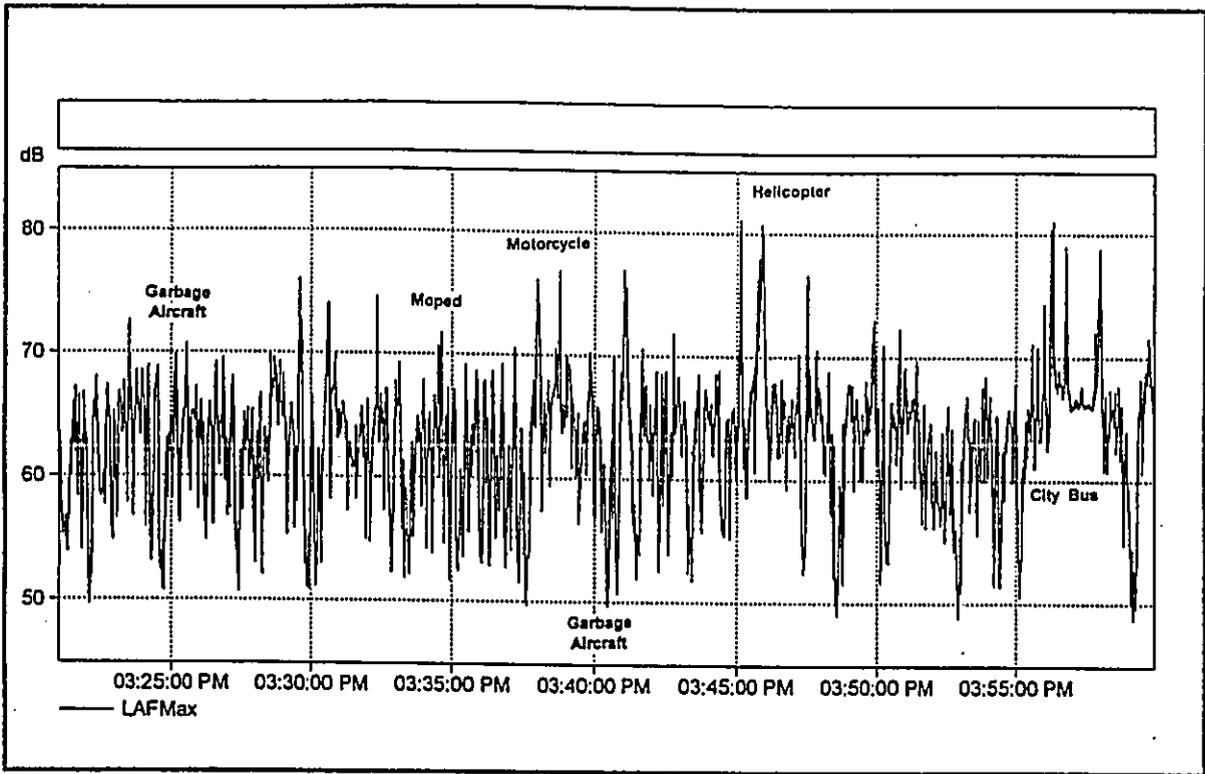
TABLE 3

EXISTING CONDITIONS; YEAR 2002; AM PEAK HR. LEQ AND DNL SETBACK DISTANCES

ROADWAY SEGMENT	SPEED (MPH)	VEHICLE MIX (%A/%MT/%HT)	TOTAL VPH	Leq @ 50' (dB)	DIST. (FT) FROM CENTERLINE		
					65 DNL	70 DNL	75 DNL
Dole Street West of East-West Road	30	(99.0 / 0.5 / 0.5)	1,337	65.6	46	16	<12
Dole Street East of East-West Road	30	(99.0 / 0.5 / 0.5)	1,366	65.6	46	16	<12
Dole Street West of St. Louis Drive	30	(99.0 / 0.5 / 0.5)	1,434	65.8	48	16	<12
St. Louis Drive North of Dole Street	30	(99.0 / 0.5 / 0.5)	622	62.1	21	<12	<12
St. Louis Drive South of Dole Street	30	(99.0 / 0.5 / 0.5)	1,792	66.8	59	20	<12

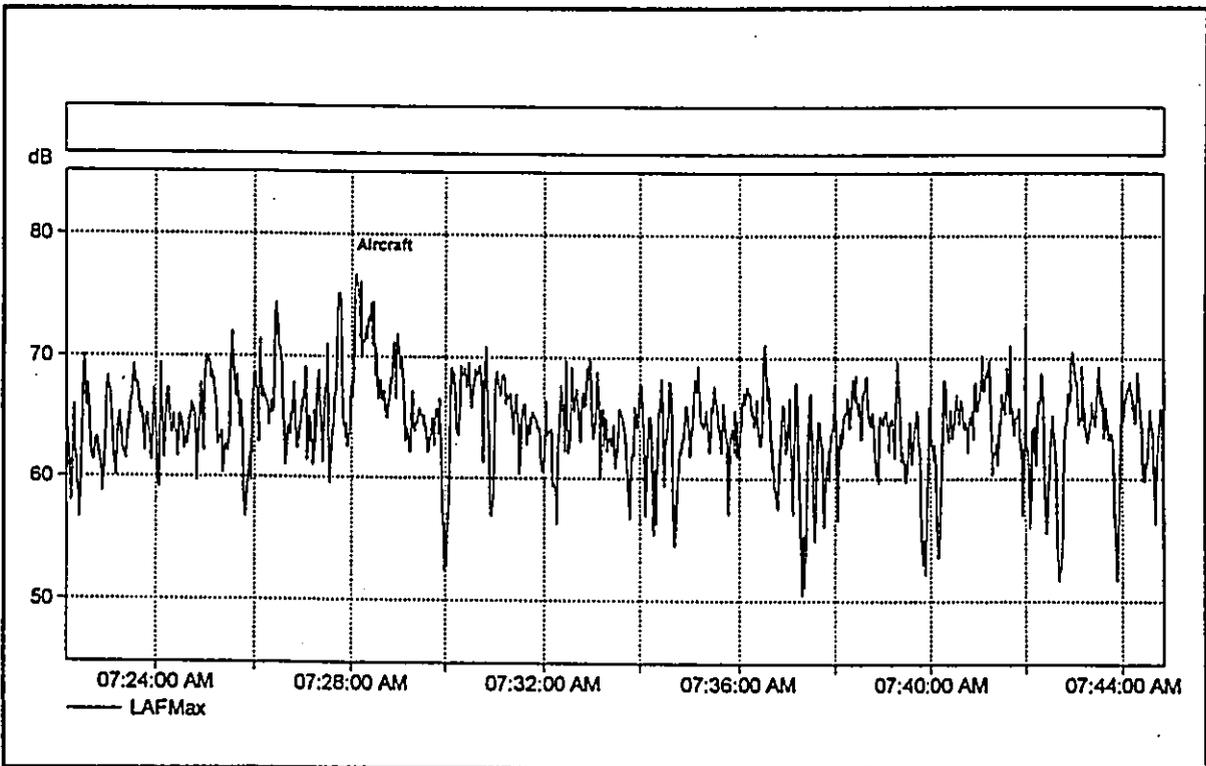
Notes:

- (1) All setback distances are from the roadways' centerlines.
- (2) Setback distances are for ground level receptors with unobstructed fields-of-view.
- (3) "Loose Soil" or soft ground conditions assumed along all roadways.



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "B" (2/19/02; 1524 TO 1600 HRS)

FIGURE 5



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "A" (2/12/02; 0712 TO 0744 HRS)

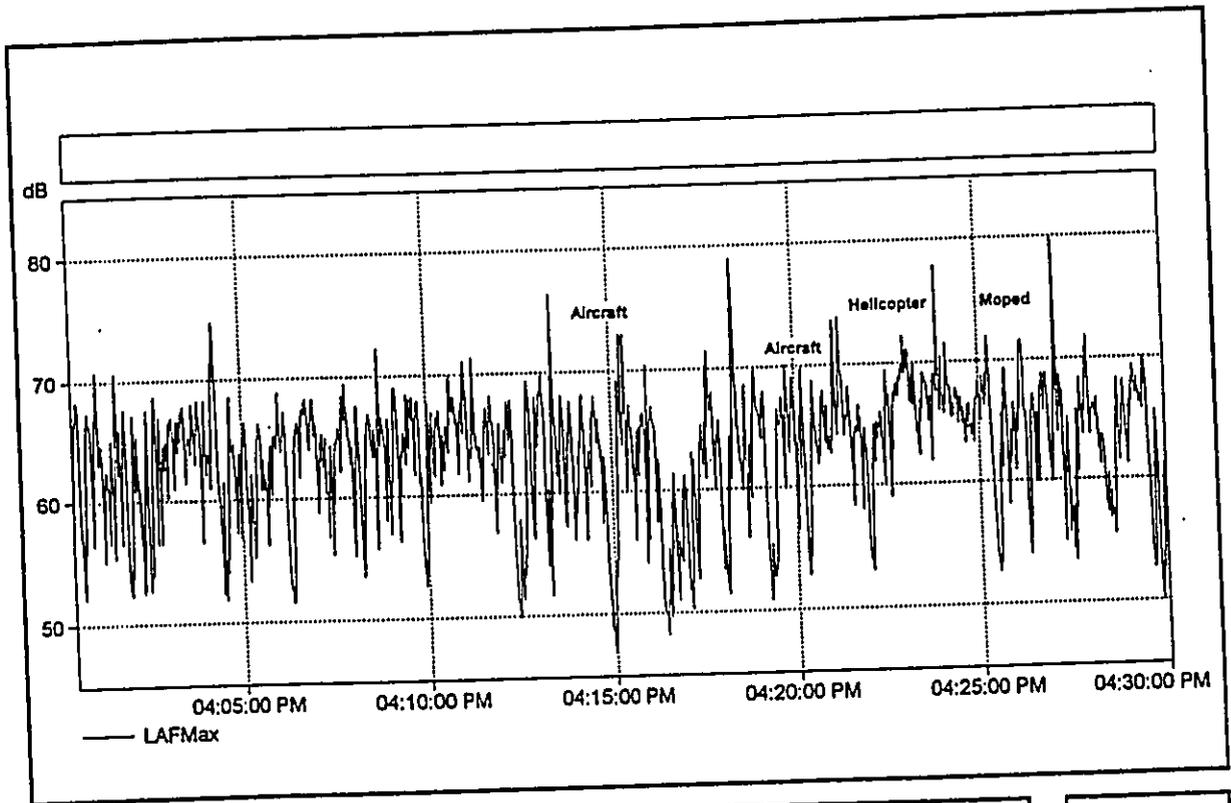
FIGURE 4

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for CY 2004 with and without construction of the new parking garage. The future projections of non-project and project traffic volumes for the No Build and Build Alternatives are shown in APPENDIX C. It should be noted that an existing unpaired parking lot exists on the project site, so that the use of the site will remain the same but will be expanded to include a multilevel parking garage. The future projections of project plus non-project traffic noise levels on the roadways which would service the project are shown in TABLE 4 for the AM peak hour of traffic. As indicated in TABLE 4, traffic noise levels are predicted to increase by 0.2 to 0.6 dB during the AM peak hour, with the largest increases expected along the section of Dole Street which is east of the project site and west of St. Louis Drive. These predictions assume that average vehicle speeds and traffic mix will not change from current conditions.

Future traffic noise levels in the project environs are not expected to change significantly along Dole Street and St. Louis Drive. TABLE 5 summarizes the predicted setback distances to the 65, 70, and 75 DNL traffic noise contour lines along Dole Street and St. Louis Drive, and attributable to both project plus non-project traffic by CY 2004. The setback distances in TABLE 5 do not include the beneficial effects of noise shielding from buildings, or the detrimental effects of additive contributions of noise from intersecting streets or reflections from building walls. Setback distances to the 65 DNL contour line will increase slightly between CY 2002 and 2004 as a result of both project and non-project traffic. TABLE 6 presents the predicted increases in traffic noise levels between CY 2002 and 2004 following project completion. TABLE 6 identifies the predicted increases in traffic noise levels associated with non-project and the project traffic by CY 2004, and as measured by the DNL descriptor system. The predicted levels of increase in traffic noise of 0.1 to 0.6 dB or less will be difficult to measure and are considered to be insignificant. This small increase in traffic noise levels will be difficult to perceive.

In CY 2004, the dominant traffic noise sources in the project area will continue to be traffic noise from Dole Street, with intermittently louder noise events associated with aircraft flybys. Traffic noise levels will continue to exceed 65 DNL along the first row of homes within 49 to 54 feet of the Dole Street centerline, and within 66 feet of the centerline of St. Louis Drive south of Dole Street. Single family homes along Dole Street and east of the project site will continue to experience traffic noise levels greater than 65 DNL. These structures will remain in the "Significant Exposure, Normally Unacceptable" category for residences. At the second row of homes and beyond, traffic noise levels should be in the "Moderate Exposure, Acceptable" category due to distance and noise shielding effects. The student and faculty housing structures west of the project site should also remain in the "Moderate Exposure, Acceptable" category.



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "B" (2/19/02; 1600 TO 1630 HRS)

FIGURE 6

TABLE 5

EXISTING AND CY 2004 DISTANCES TO 65, 70, AND 75 DNL CONTOURS

STREET SECTION	65 DNL SETBACK (FT)		70 DNL SETBACK (FT)		75 DNL SETBACK (FT)	
	EXISTING	CY 2004	EXISTING	CY 2004	EXISTING	CY 2004
Dole Street West of East-West Road	46	49	16	17	<12	<12
Dole Street East of East-West Road	46	50	16	17	<12	<12
Dole Street West of St. Louis Drive	48	54	16	19	<12	<12
St. Louis Drive North of Dole Street	21	22	<12	<12	<12	<12
St. Louis Drive South of Dole Street	59	66	20	23	<12	<12

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Notes:

- (1) All setback distances are from the roadways' centerlines.
- (2) See Tables 3 and 5A for traffic volume, speed, and mix assumptions.
- (3) Setback distances are for ground level receptors with unobstructed fields-of-view.
- (4) "Loose Soil" or soft ground conditions assumed along all roadways.

TABLE 4

FUTURE CONDITIONS; YEAR 2004; AM PEAK HR. LEQ AND DNL SETBACK DISTANCES

ROADWAY SEGMENT	SPEED (MPH)	VEHICLE MIX (%A/%M/%T/%H)	TOTAL VPH	Leq @ 50' (dB)	DIST. (FT) FROM CENTERLINE		
					65 DNL	70 DNL	75 DNL
Dole Street West of East-West Road	30	(99.0 / 0.5 / 0.5)	1,461	65.9	49	17	<12
Dole Street East of East-West Road	30	(99.0 / 0.5 / 0.5)	1,491	66.0	50	17	<12
Dole Street West of St. Louis Drive	30	(99.0 / 0.5 / 0.5)	1,666	66.4	54	19	<12
St. Louis Drive North of Dole Street	30	(99.0 / 0.5 / 0.5)	659	62.3	22	<12	<12
St. Louis Drive South of Dole Street	30	(99.0 / 0.5 / 0.5)	2,015	67.3	66	23	<12

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Notes:

- (1) All setback distances are from the roadways' centerlines.
- (2) Setback distances are for ground level receptors with unobstructed fields-of-view.
- (3) "Loose Soil" or soft ground conditions assumed along all roadways.

CHAPTER VII. DISCUSSION OF PROJECT-RELATED NOISE IMPACTS
AND POSSIBLE MITIGATION MEASURES

Traffic Noise. Risks of adverse noise impacts from project traffic are considered to be low due to the very small increases in traffic noise anticipated from project traffic. For this reason, traffic noise mitigation measures are not required. Mitigation of the preexisting traffic noise impacts are typically performed by the individual property owners, or by government agencies in conjunction with roadway improvement projects.

General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the parking garage is anticipated to be four months. It is anticipated that actual construction work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. FIGURE 7 depicts the range of noise levels of various types of construction equipment when measured at 50 FT distance from the equipment.

Typical levels of exterior noise from construction activity (excluding pile driving activity) at various distances from the job sites are shown in FIGURE 8. The impulsive noise levels of impact pile drivers are approximately 15 dB higher than the levels shown in FIGURE 8, while the intermittent noise levels of vibratory pile drivers are at the upper end of the noise level ranges depicted in the figure.

FIGURE 8 is useful for predicting exterior noise levels at short distances (within 100 FT) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing residential buildings will range from 220 FT to 400+ FT, with corresponding average noise levels of 72 to 66 dBA (plus or minus 5 dBA). For receptors along a cross-street or beyond where the visual line-of-sight is blocked by intervening buildings, the construction noise level vs. distance curve of FIGURE 8 should be reduced by approximately 8 to 15 dBA. Typical levels of construction noise inside naturally ventilated and air conditioned structures are approximately 10 and 20 dB less, respectively, than the levels shown in FIGURE 8.

The Dole Street residences north and northeast of the construction site and the student housing units across Manoa Stream are predicted to experience the highest noise levels during construction activities due to their shorter distances to the construction site. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project sites.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 FT

TABLE 6

CALCULATIONS OF PROJECT AND NON-PROJECT
TRAFFIC NOISE CONTRIBUTIONS (CY 2004)

STREET SECTION	NOISE LEVEL (DNL) INCREASE DUE TO:	
	NON-PROJECT	PROJECT TRAFFIC
Dole Street West of East-West Road	0.0	0.3
Dole Street East of East-West Road	0.1	0.3
Dole Street West of St. Louis Drive	0.1	0.5
St. Louis Drive North of Dole Street	0.2	0.0
St. Louis Drive South of Dole Street	0.1	0.4

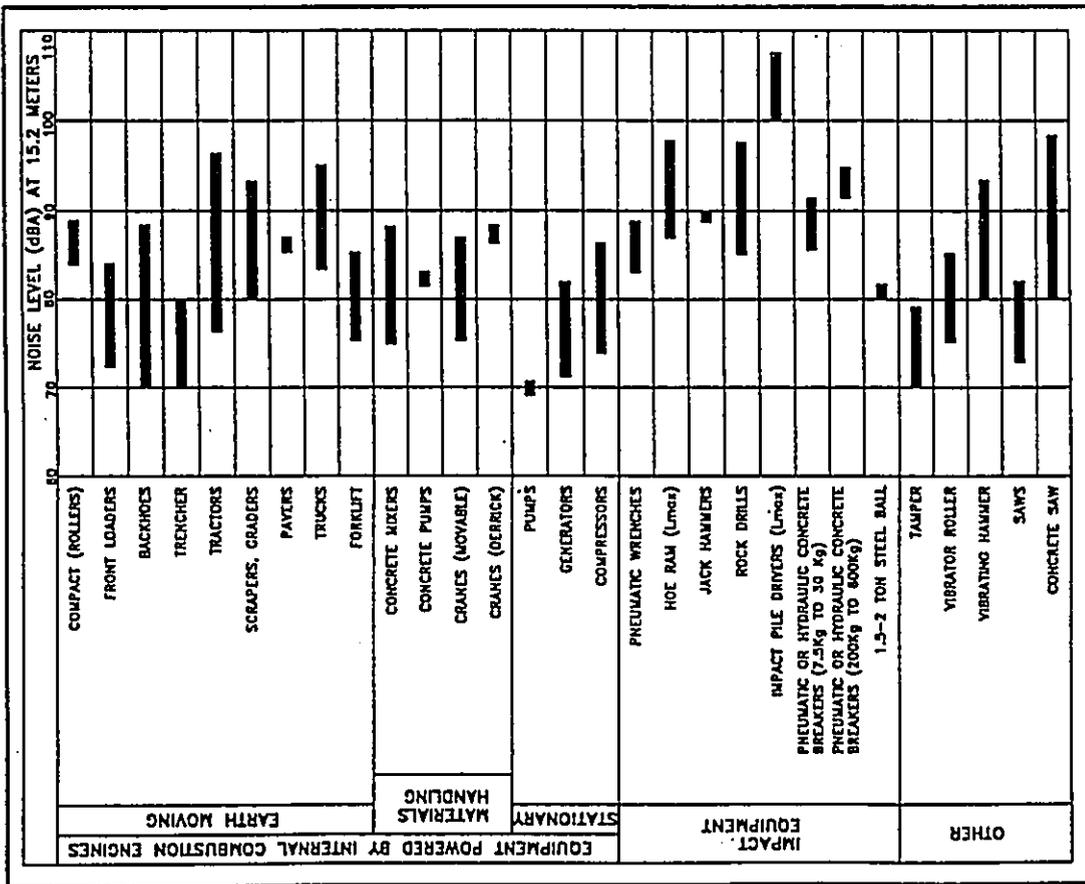
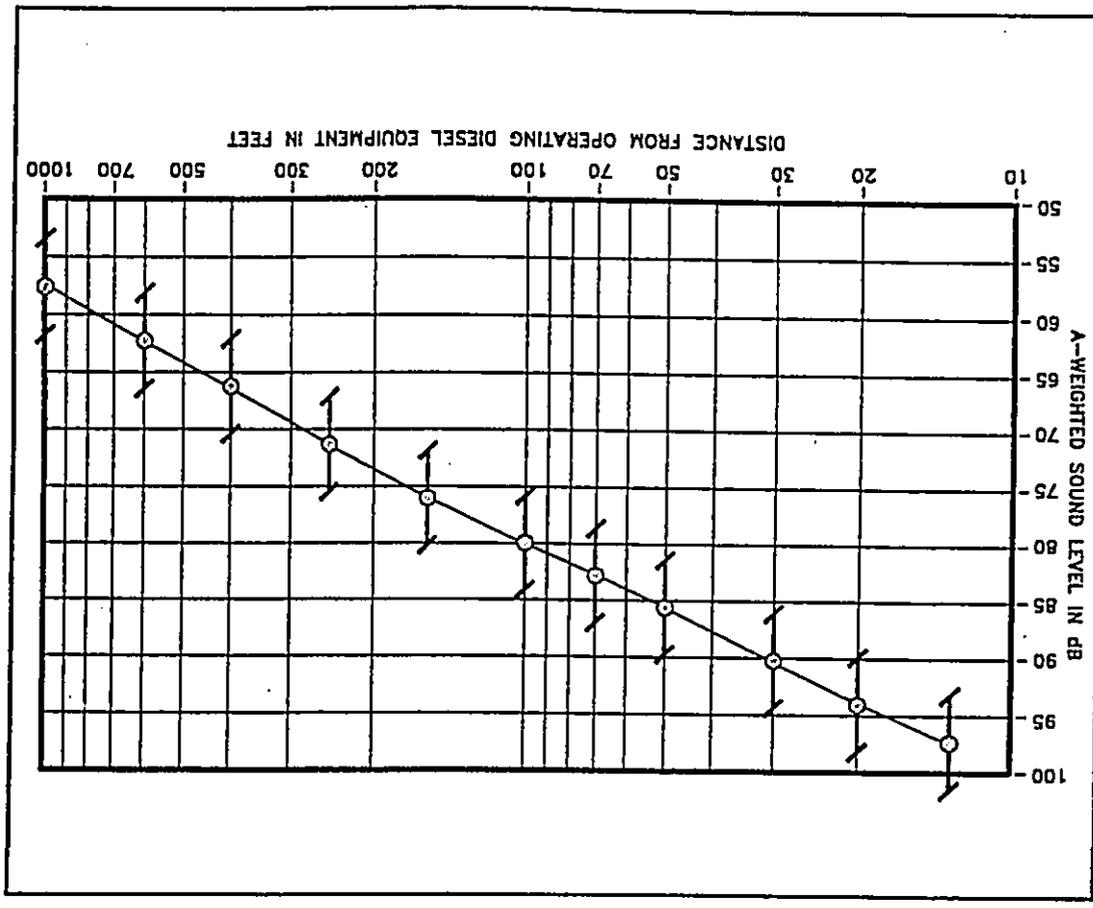


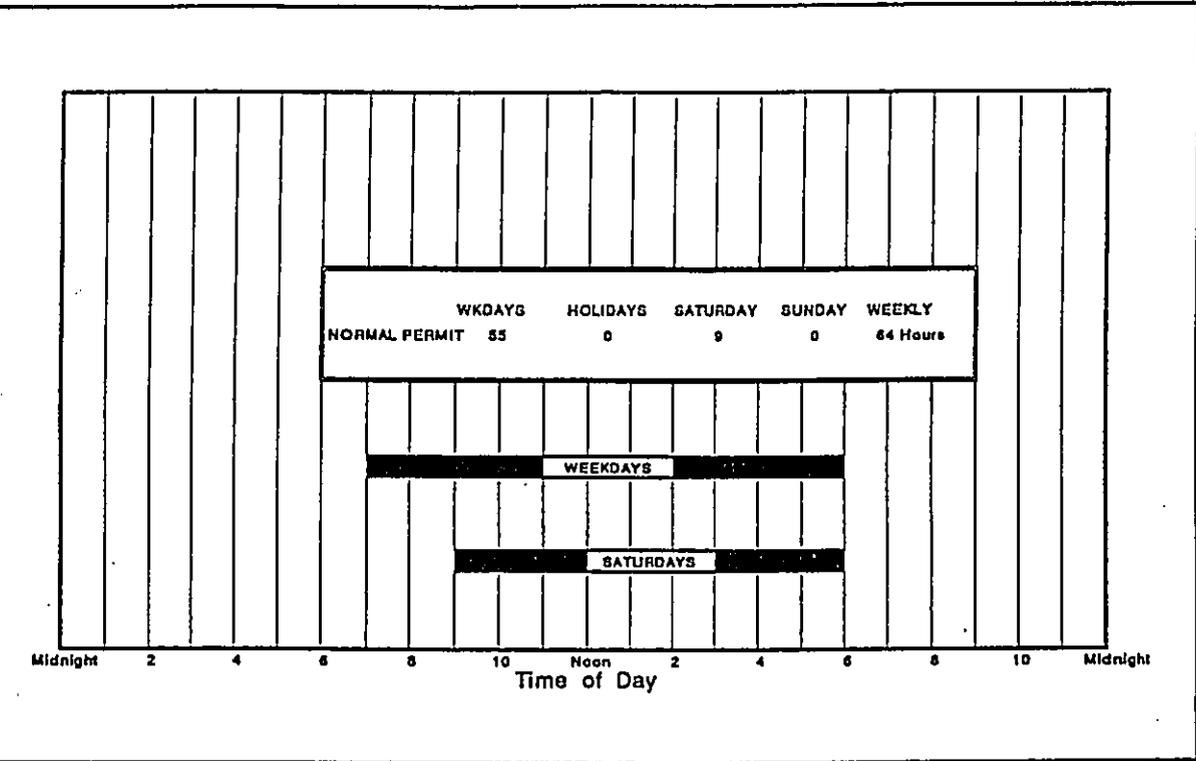
FIGURE 7

RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 8



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

FIGURE 9

distance), and due to the exterior nature of the work (demolition, excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

Noise from pile driving operations inside the Hawaiian Studies Building will probably be audible and may be disruptive at 65 to 72 dBA. Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 FT of the project construction site during other construction activities. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA (non-pile driving activities) at 70 FT to 450 FT distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities. FIGURE 9 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.

Vibration from Pile Driving. Pile driving will probably be necessary to implant piles into the ground in the new construction areas. Impact driven concrete and sheet piles may both be used on the project site. Induced ground vibrations from the pile driving operations have the potential to cause architectural and structural damage to structures.

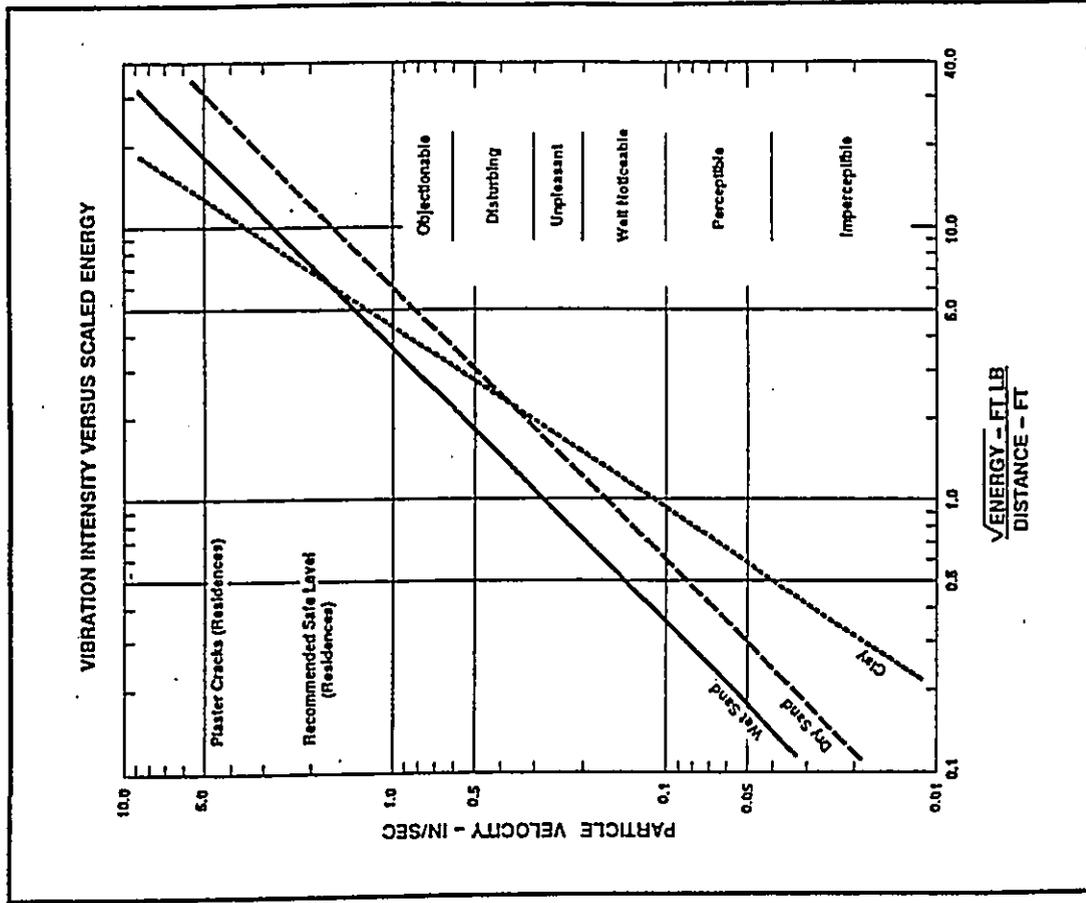
Ground vibrations generated during pile driving operations are generally described in terms of peak particle (or ground) velocity in units of inches/second. The human being is very sensitive to ground vibrations, which are perceptible at relatively low particle velocities of 0.01 to 0.04 inches/second. Damage to structures, however, occur at much higher levels of vibration as indicated in TABLE 7. The most commonly used damage criteria for structures is the 2.0 inches/second limit derived from work by the U.S. Bureau of Mines. A more conservative limit of 0.2 inches/second is also used, and is suggested for planning purposes on this project because of the repetitive nature of pile driving operations which can increase risks of damage due to fatiguing.

Based on measured vibration levels during pile driving operations under various soil conditions and at various distances, estimates of ground vibration levels vs. distances from the pile driver have been made for various soil conditions and for various energy ratings of the pile drivers. FIGURE 10, which was extracted from Reference 9, may be used to predict vibration levels for the soil conditions indicated. When coral layers must be penetrated, vibration levels can be expected to be higher than those shown in FIGURE 10, particularly if the adjacent structures are supported by the common coral layer. From FIGURE 10, and for wet sand soil conditions, the 0.2 inches/second vibration damage criteria will be exceeded at a scaled energy distance factor of approximately 0.7. The scaled energy distance factor is equal to the square

TABLE 7
SUMMARY OF BUILDING DAMAGE CRITERIA

PEAK GROUND VELOCITY (mm/sec)	PEAK GROUND VELOCITY (in/sec)	COMMENT
193.04	7.6	Major damage to buildings (mean of data).
137.72	5.4	Minor damage to buildings (mean of data).
101.16	4.0	'Engineer structures' safe from damage.
50.8	2.0	Safe from damage limit (probability of damage <5%).
33.02	1.3	No structural damage.
25.4	1.0	Threshold of risk of 'architectural' damage for houses.
15.24	0.6	No data showing damage to structures for vibration <1 in./sec.
10.16	0.4	No risk of 'architectural' damage to normal buildings.
5.08	0.2	Threshold of damage in older homes.
3.81	0.5 to 0.15	Statistically significant percentage of structures may experience minor damage (including earthquake, nuclear event, and blast data for old and new structures).
1.0	0.04	No 'architectural' damage.
0.32	0.01	Upper limits for ruins and ancient monuments.
		Vertical vibration clearly perceptible to humans.
		Vertical vibration just perceptible to humans.

Source: State-of-the-Art Review: Prediction and Control of Groundborne Noise and Vibration from Rail Transit Trains; U.S. Department of Transportation; December 1982.



MINIMUM VIBRATION INTENSITIES EXPECTED FROM PILE DRIVING

FIGURE 10

New On Site Noise Sources. Tire squeal noise can occur if the circulation roadway surfaces within the parking garage structure are smooth or slick. In general, the use of coarse or brush concrete finishes, asphalt, or nonskid coatings on these circulation roadway surfaces will prevent the inception of tire squeal noise for typical circulation speeds within the parking garage structure. The use of these type of surfaces is recommended to prevent tire squeal noise.

The noise from continuous or near continuous car alarms or horns is another possible noise source. While those alarms are potential noise sources from the existing parking lot as well as from the cars which are normally parked on Dole Street, the new parking garage structure will increase the potential for occurrences of these false alarms. The use of administrative controls and possible removal of vehicles with faulty or continuous alarm systems is recommended if car alarms cause excessive complaints from surrounding residences.

root of the energy (in foot-pounds) per blow of the hammer divided by the distance (in feet) between the pile tip and the monitoring location. For a 2,500 foot-pound small pile driver, a scaled energy distance of 0.7 equates to a required separation distance of 71 FT. Under clay soil conditions, and using the prediction procedures contained in FIGURE 10, a shorter separation distance of 47 FT is required to not exceed the 0.2 inches/second criteria when using a 2,500 foot-pound pile driver. It should be noted that 0.2 inches/second vibration levels were measured from a much larger 22,400 foot-pound pile driver at even shorter separation distances of approximately 30 FT in sandy, layered soil (Reference 10). The measurement data reported in Reference 10 are significantly lower than the vibration levels predicted by the methodology of Reference 9.

As indicated above, predictions of peak ground vibration levels vs. scaled energy distance factor from the driven pile are not precise, with initial uncertainty factor for a given location in the order of 10:1. For this reason, it is standard practice to employ seismograph monitoring of ground vibrations during pile driving operations with a 3-axis geophone or accelerometer. If sheet pile drivers of approximately 2,500 foot-pounds or smaller ratings are anticipated to be used on the job site, the initial vibration predictions indicate that there is some risk of exceeding the 0.2 inches/second vibration damage criteria at 47 to 71 FT separation distances, and monitoring during pile driving operations is warranted if pile driving are planned at those distances from any existing structures. The Hawaiian Studies Building is located approximately 140 feet from the Parking Garage, but has large glass windows. Therefore, the following preventative measures are recommended for implementation during the planning and design phases of the project:

- In addition to the normal planning and design concerns regarding potential damage due to settling and heaving during construction, consideration should also be given to risks of damage due to vibration from pile driving. A damage criteria of 0.2 inches/second should be used in conjunction with the vibration prediction method of Reference 9 to identify the potential damage risk distances to the driven piles.
- If predicted vibration levels from pile driving exceed 0.2 inches/second at a building, and predicted levels cannot be reduced by sizing of the pile driver, test piles should be driven and their vibrations monitored and recorded prior to completion of the foundation design. The monitoring of the test piles should be designed to measure the expected peak, 3-axis vibration levels at the building. The results of the monitoring should be used to define empirical distance from the driven pile to the 0.2 inches/second damage risk location, and to evaluate the risks of structural damage to the adjacent structure during actual construction.
- If predicted vibration levels from pile driving exceed 2.0 inches/second at a building, the use of alternate types of piles or shoring should be considered for implementation during the design phase.

APPENDIX B

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor: Symbol: Units

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table 1. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table 1.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table 1 was developed (Table 11). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates the type of quantity (power, level, etc., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E, etc.). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table 11 permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the Ldn with the LdnA.

Although not included in the tables, it is also recommended that "L_{dn}" and "L_{eq}" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 65 and 75 dB respectively.

Descriptor: Nomenclatures

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, L_{eq} is designated the "equivalent sound level". For L_{dn}, L_{dn}, and L_{dn}, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, dBA, dBM, and dBSPL are not to be used. Examples of this preferred usage are: the Perceived Noise Level (PNL) was found to be 75 dB; L_{dn} is 75 dB. This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of the unit except for prefixes indicating its multiples or submultiples (e.g., deci).

Units: Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighted Loss of Hearing" (PWL) shall be used consistent with CAAWA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

APPENDIX A. REFERENCES

- (1) "Guidelines for Considering Noise in Land Use Planning and Control," Federal Interagency Committee on Urban Noise; June 1980.
- (2) "Environmental Criteria and Standards, Noise Abatement and Control, 24 FR, Part 51, Subpart B," U.S. Department of Housing and Urban Development; July 12, 1979.
- (3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," Environmental Protection Agency (EPA 550/9-74-004); March 1974.
- (4) "Title 11, Administrative Rules, Chapter 48, Community Noise Control," Hawaii State Department of Health; September 23, 1996.
- (5) "FHWA Traffic Noise Model User's Guide," FHWA-PD-96-009, DOT-VNTSC-FHWA-98-1, Federal Highway Administration; Washington, D.C.; January 1998 and Version 1.1 Addendum dated September 2000.
- (6) Existing and Future AM and PM Peak Hour Traffic Turning Movements for the Parking Garage at the Hawaiian Studies Building Project; Transmittal from Wilson Okamoto & Associates, Inc. dated February 22, 2002.
- (7) 24-Hour Traffic Counts at Station SL-57, Dole Street at Manoa Stream Bridge, October 12, 2000; Hawaii State Department of Transportation, Highway Division.
- (8) 24-Hour Traffic Counts at Station SL-57, Dole Street at Manoa Stream Bridge, September 4, 2001; Hawaii State Department of Transportation, Highway Division.
- (9) Wiss, John F., Janney, Eisner and Assoc.; "Damage of Pile Driving Vibration," Highway Research Record, Number 155.
- (10) Gutowski, T.G.; Wittig, L.E.; and Dym, C.L.; "Some Aspects of the Ground Vibration Problem," Noise Control Engineering; May-June 1978.

APPENDIX B (CONTINUED)

TABLE II
RECOMMENDED DESCRIPTOR LIST

TERM	A-WEIGHTING	ALTERNATIVE(1)	OTHER(2)	UNWEIGHTED
		A-WEIGHTING	WEIGHTING	
1. Sound (Pressure) Level	L _A	L _{pA}	L _B , L _{pB}	L _p
2. Sound Power Level	L _{WA}	L _{WB}	L _{WB}	L _W
3. Max. Sound Level	L _{max}	L _{Amax}	L _{Bmax}	L _{pmax}
4. Peak Sound (Pressure) Level	L _{Apk}	L _{Apk}	L _{Bpk}	L _p
5. Level Exceeded x% of the Time	L _x	L _{Ax}	L _{Bx}	L _{px}
6. Equivalent Sound Level	L _{eq}	L _{Aeq}	L _{Baq}	L _{peq}
7. Equivalent Sound Level Over Time (T)	L _{eq(T)}	L _{Aeq(T)}	L _{Baq(T)}	L _{peq(T)}
8. Day Sound Level	L _d	L _{Ad}	L _{Bd}	L _{pd}
9. Night Sound Level	L _n	L _{An}	L _{Bn}	L _{pn}
10. Day-Night Sound Level	L _{dn}	L _{Adn}	L _{Bdn}	L _{pdn}
11. Yearly Day-Night Sound Level	L _{dn(Y)}	L _{Adn(Y)}	L _{Bdn(Y)}	L _{pdn(Y)}
12. Sound Exposure Level	L _S	L _{SA}	L _{SB}	L _{Sp}
13. Energy Average Value Over (Non-Time Domain) Set of Observations	L _{eq(e)}	L _{Aeq(e)}	L _{Baq(e)}	L _{peq(e)}
14. Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	L _{x(e)}	L _{Ax(e)}	L _{Bx(e)}	L _{px(e)}
15. Average L _x Value	L _x	L _{Ax}	L _{Bx}	L _{px}

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E-weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is L_{eq(1)}). Time may be specified in non-quantitative terms (e.g., could be specified as L_{eq(WASH)}) to mean the washing cycle noise for a washing machine.

APPENDIX B (CONTINUED)

TABLE I
A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

TERM	SYMBOL
1. A-Weighted Sound Level	L _A
2. A-Weighted Sound Power Level	L _{WA}
3. Maximum A-Weighted Sound Level	L _{max}
4. Peak A-Weighted Sound Level	L _{Apk}
5. Level Exceeded x% of the Time	L _x
6. Equivalent Sound Level	L _{eq}
7. Equivalent Sound Level over Time (T) (1)	L _{eq(T)}
8. Day Sound Level	L _d
9. Night Sound Level	L _n
10. Day-Night Sound Level	L _{dn}
11. Yearly Day-Night Sound Level	L _{dn(Y)}
12. Sound Exposure Level	L _{SE}

(1) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is L_{eq(1)}). Time may be specified in non-quantitative terms (e.g., could be specified as L_{eq(WASH)}) to mean the washing cycle noise for a washing machine.

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

APPENDIX C

SUMMARY OF BASE YEAR AND CY 2004
TRAFFIC VOLUMES IN PROJECT ENVIRONS

ROADWAY LANES	**** CY 2002 ****		CY 2004 (NO BUILD)		CY 2004 (BUILD)	
	AM VPH	PM VPH	AM VPH	PM VPH	AM VPH	PM VPH
Dole St. West of East-West Rd. (EB)	560	845	577	870	561	870
Dole St. West of East-West Rd. (WB)	777	534	800	550	800	641
Two-Way	1,337	1,379	1,377	1,420	1,461	1,511
Dole St. East of East-West Rd. (EB)	422	667	435	693	519	693
Dole St. East of East-West Rd. (WB)	944	430	972	443	972	534
Two-Way	1,366	1,297	1,407	1,336	1,491	1,427
Dole St. West of St. Louis Dr. (EB)	486	656	500	882	500	1,064
Dole St. West of St. Louis Dr. (WB)	948	401	977	413	1,166	413
Two-Way	1,434	1,257	1,477	1,295	1,666	1,477
St. Louis Dr. North of Dole St. (NB)	181	373	186	384	186	398
St. Louis Dr. North of Dole St. (SB)	441	249	454	257	473	257
Two-Way	622	622	640	641	659	655
St. Louis Dr. South of Dole St. (NB)	997	680	1,027	700	1,197	700
St. Louis Dr. South of Dole St. (SB)	795	1,011	816	1,042	818	1,210
Two-Way	1,792	1,691	1,845	1,742	2,015	1,910