FINAL ENVIRONMENTAL ASSESSMENT

ALA WAI GARDEN PLAZA

Waikiki, District of Honolulu, Oahu, Hawaii

Prepared in Partial Fulfillment of the Requirements
of Chapter 343, Hawaii Revised Statutes and
Title 11, Chapter 200, Hawaii Administrative Rules,
Department of Health, State of Hawaii

Prepared for

SBI Hawaii Property One, Inc.
c/o Hirate Investment Group, Inc.
1314 South King Street, Suite 758
Honolulu, Hawaii 96814

Prepared by

Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

October 2007

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
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MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2007/ED-8(gu)

November 16, 2007

The Honorable Laurence K. Lau, Acting Director
Office of Environmental Quality Control
Department of Health
State of Hawaii
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Lau:

Subject: Chapter 343, HRS, Final Environmental Assessment (FEA)
Finding of No Significant Impact (FONSI) for:

Project:	Ala Wai Garden Plaza
Applicant:	SBI Hawaii Property One, Inc.
Agent:	Gerald Park Urban Planner
Request:	Waikiki Special District Permit (Major)
Proposal:	Construct a New 6-Story Multi-Family Residential Rental Project
Location:	2055 Ala Wai Boulevard - Waikiki
Tax Map Keys:	2-6-16: 56, 57, 58, 59 and 60

The Department of Planning and Permitting has reviewed the comments received during the 30-day public comment period, which began on August 23, 2007. The agency has determined that this project will not have significant environmental effects and has issued a FONSI. Please publish notice of availability for this project in the next available OEQC Environmental Notice.

We have enclosed a completed OEQC Publication Form and four (4) copies of the FEA. Should you have any questions, please contact Geri Ung of our Urban Design Branch at 768-8034.

Very truly yours,

Henry Eng, FAICP, Director
Department of Planning and Permitting

HE:pl
Encl.

Doc. 560030

PROJECT PROFILE

Proposed Action:	Ala Wai Garden Plaza
Street Address:	2055 Ala Wai Boulevard
Applicant:	SBI Hawaii Property One, Inc. c/o Hirate Investment Group, Inc. 1314 South King Street, Suite 758 Honolulu, Hawaii 96814
Approving Agency:	Department of Planning and Permitting City and County of Honolulu 650 South King Street Honolulu, Hawaii 96813
Tax Map Key:	2-6-016: 056, 057, 058, 059, 060
Land Area:	056: 4,500 sf, 057: 4,750 sf, 058: 4,500 sf, 059: 5,000 sf, 060: 5,000 sf
Total Area:	23,750 sf
Owner:	SBI Hawaii Property One, Inc. c/o Hirate Investment Group, Inc. 1314 South King Street, Suite 758 Honolulu, Hawaii 96814
Existing Use:	Abandoned Swimming Pool, Vacant
State Land Use Designation:	Urban
Development Plan Area:	Primary Urban Center
Development Plan Land Use Map:	Medium and Higher-Density Residential/Mixed Use
Special District:	Waikiki
Zoning:	Apartment Precinct
Special Management Area:	Outside Special Management Area
Need for Assessment:	Any use within the Waikiki area of Oahu Section 11-200-6 (b)(1)(E) Hawaii Administrative Rules
Contact Person:	Ken Hirate Hirate Investment Group, Inc. 1314 South King Street, Suite 758 Honolulu, Hawaii 96813 Telephone: 591-0105

Note: Substantive revisions to the text of the Draft Environmental Assessment are shown in ***bold italic*** type. Deleted text is [underscored and bracketed].

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DESCRIPTION OF THE PROPOSED PROJECT 1

SBI Hawaii Property One, Inc. proposes to develop a multi-family residential project on land situated in Waikiki, Oahu, Hawaii. The subject property (also referred to as parcel, lot, or project site) is bordered by a multi-story building to the north, Ala Wai Boulevard and the Ala Wai Canal to the east, a three-story and 24-story building to the south, and a three-story building to the west. A Location Map and Vicinity Map are shown in Figures 1 and 2.

The subject property is identified as tax map key 2-6-016: 056, 057, 058, 059, and 060 encompassing an area of 23,750 square feet. A Tax Map I shown in Figure 3.

A. Purpose of the Project

The purpose of the project is to redevelop vacant land for a use compatible with its surroundings and the zoning for the property. There is a general shortage of rental housing on the island of Oahu and this project will help to alleviate the need for rentals in Waikiki.

B. Technical Characteristics

1. Development Concept

Applicant proposes to construct a 6-story multi-family building on the subject property. Five (5) parcels comprise the subject property for which a Conditional Use Permit was approved in 1993 for a previous landowner ***(File No. 92/CUP1-41).*** The Conditional Use Permit, which is still in effect, allowed for Joint Development of the five parcels. Applicant will develop the properties as one which is permitted by Joint Development.

The proposed project consists of four residential levels (the tower) on top of two parking levels (the podium). The podium and tower are sited on the northern half of the property with the long axis of the tower oriented east to west parallel with Namahana Street.

The allowable floor area for the project is calculated at 37,430.7 square feet. Based on general building and residential characteristics listed below, the total floor area to be developed is estimated at 36,742 square feet. As designed, the building is approximately 689 square feet under the allowable floor area.

The structure is setback 15 feet from Namahana Street and Ala Wai Boulevard and 10 feet from all other property lines. At a height of 70'11½" (say 71 feet), the building is well within the 300-foot building height envelope for the Apartment Precinct. A Site Plan and Exterior Elevations are shown in Figures 4 and 5a, 5b, 5c, and 5d.

2. Building Characteristics

The rectangular shaped building (157' L X 56' W) has a ground floor footprint of approximately 9,860 square feet and a residential footprint (Floors 3-6) of approximately 8,489 square feet per floor.

The structure will be posted on piles (and pile caps) with a poured in place concrete foundation and ground floor. Concrete columns and walls will support pre-tensioned

suspended concrete slabs (flooring). The exterior walls feature metal studs with stucco coating on the exterior. Wood trusses will support a metal roof (See Figure 6d).

3. Parking and Access

Parking is proposed on the ground level and a second level (See Figure 6a and 6b). Vehicle ingress and egress is proposed from Namahana Street. Parking for 46 vehicles will be provided (28 standard, 16 compact, and 2 van accessible). Parking stalls are distributed at 21 spaces on the ground level and 25 stalls on the second level.

A loading stall is provided on the west side of the building. ***The Department of Planning and Permitting commented that the location of the on-site loading stall will require delivery vehicles to reverse onto Namahana Street which is not permitted. Applicant will revise the site plan to provide an on-site maneuvering area within the property boundary.***

4. Dwelling Units

Forty-four (44), one-bedroom residential apartments are planned. Four floors are proposed for residential use and the units are distributed eleven (11) units per floor. The units are double loaded along a shared hallway with units on the north side of the building facing Namahana Street and units on the south side facing the direction of Olohana Street.

The typical unit is approximately 613 gross square feet (See Figure 6c). All units come with a kitchen, bathroom, living room, bedroom, and closet space. All units will be designed for compliance with the Federal Fair Housing Act.

5. Infrastructure

Water will be drawn from an existing lateral in Namahana Street. Average daily demand is estimated at 17,600 gallons per day exclusive of irrigation requirements.

Wastewater will be discharged into an existing 8" sewer lateral on Namahana Street. Wastewater flow is estimated at 7,040 gallons per day.

Residential units, the parking garage, and common areas inside the building will be equipped with fire sprinklers and smoke detectors.

Runoff quantities generated by the project in excess of existing flow will be retained on-site in the planting and open space areas. Stormwater equal to existing runoff will be allowed to daylight at the existing curb and into the existing catch basin at Namahana Street and Ala Wai Boulevard.

6. Landscaping

Living and non-diseased trees and palms over 15'0" in height will be retained *in situ* or relocated within the project site. A combination of native Hawaiian shrubs and ornamentals will supplement the *in situ* trees and palms. A Preliminary Landscape Plan is shown in Figure 7.

7. Amenities

A [single contiguous] rectangular area of approximately [8,000] 3,745 square feet on [and along] the south side of the property will be set aside for a private park to comply with the City's Park Dedication Ordinance. The park will include a swimming pool, jacuzzi, barbecue area, and landscap***ing*** [ed] open space. ***A contiguous area of about 2,370 square feet within the space delineated by the pool safety fence and adjacent to the private park will be included as outdoor recreation space for residents of the projects and their guests. The outdoor recreation space would total 6,115 square feet (Department of Parks and Recreation Comment)..***

Planned site security measures included an entry phone at the lobby, keypad entry at the garage, and keys for gates. The property will be fenced and the parking area gated. ***The locations of secured gates are shown on Figure 7 (Department of Planning and Permitting Comment).***

C. Economic Characteristics

1. Land Tenure

The property is owned by SBI Hawaii Property One who acquired the property in January 2007.

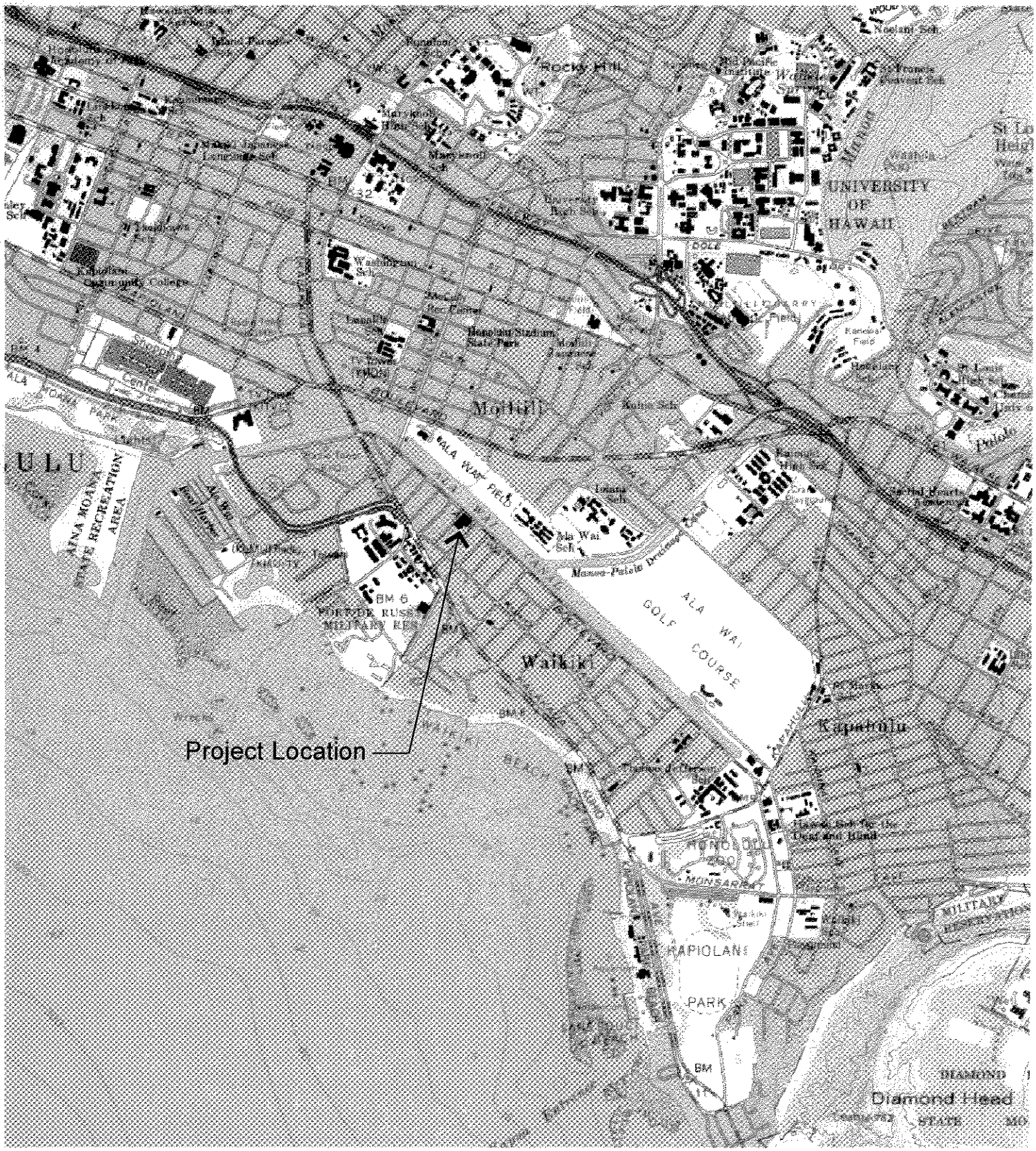
2. Construction Cost and Phasing

The total cost for the project is $26 million and will be funded by the property owner.

Construction will commence after all necessary permits and approvals are received. A fourteen (14) month construction period is projected from start-up to completion.

D. Social Characteristics

The property is currently vacant and the proposed action will not displace any business or residence.



Source: USGS, Honolulu Quadrangle

Figure 1
Location Map

Ala Wai Garden Plaza

City & County of Honolulu — Waikiki, Island of Oahu

NORTH

LINEAL SCALE (FEET)

1000 500 0 500 1000 2000

Gerald Park
Urban Planner

February 2007

Figure 2
Vicinity Map

Ala Wai Garden Plaza

Waikiki, Island of Oahu

NORTH

LINEAL SCALE (FEET)
300 150 0 150 300 600

Gerald Park
Urban Planner
February 2007

Source: Aerial Photo, USGS Website

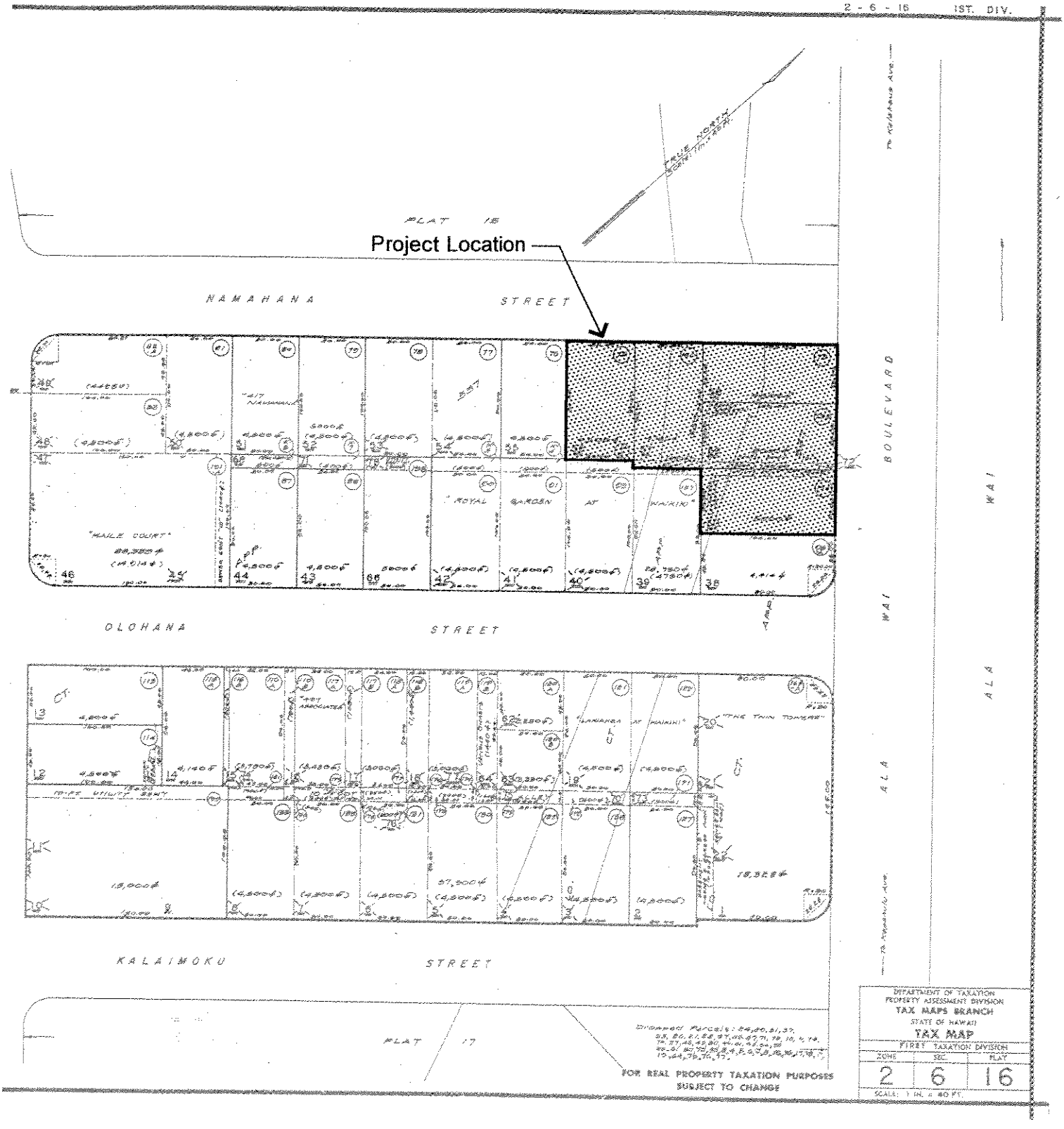


Figure 3
Tax Map

Ala Wai Garden Plaza

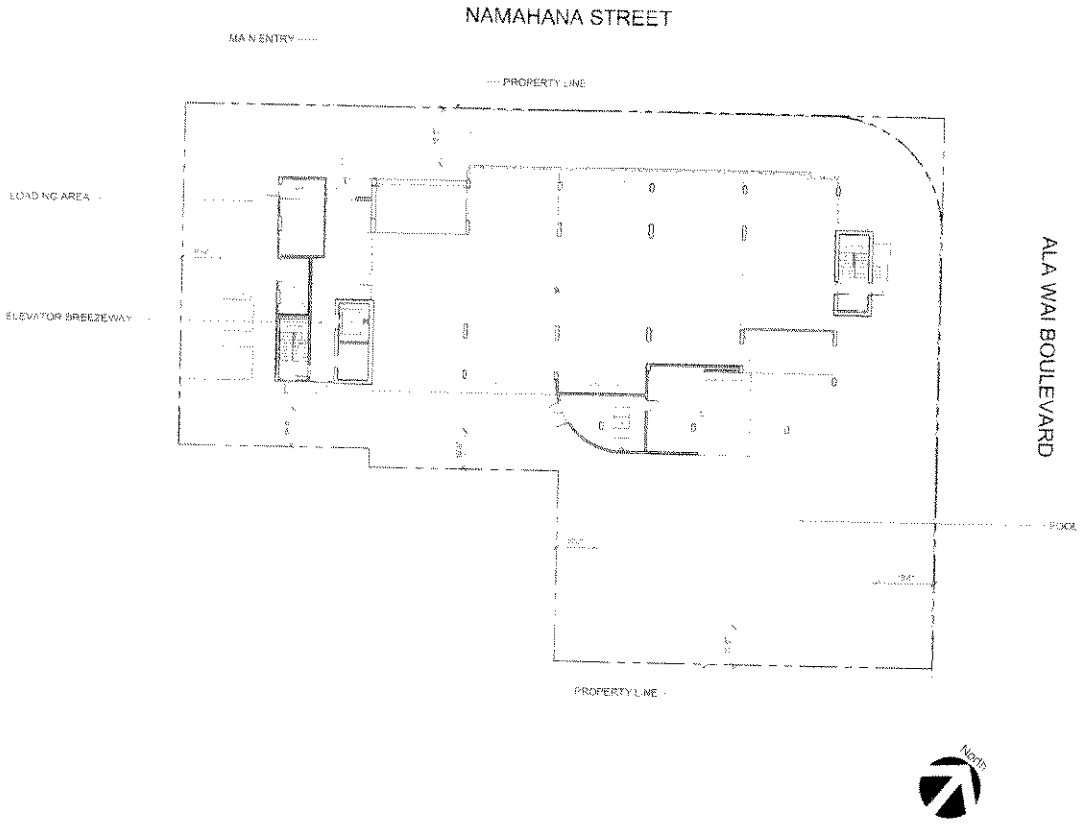
Waikiki, Island of Oahu

NORTH

LINEAL SCALE (FEET)
50 25 0 25 50 100

Gerald Park
Urban Planner
February 2007

Source:Department of Taxation, Taxation Maps Bureau



ALA WAI GARDEN PLAZA

Figure 4

Site Plan

Scale 1/32" = 1' 0"

June 15, 2007

Durrant
Media Five

No. 7154.00

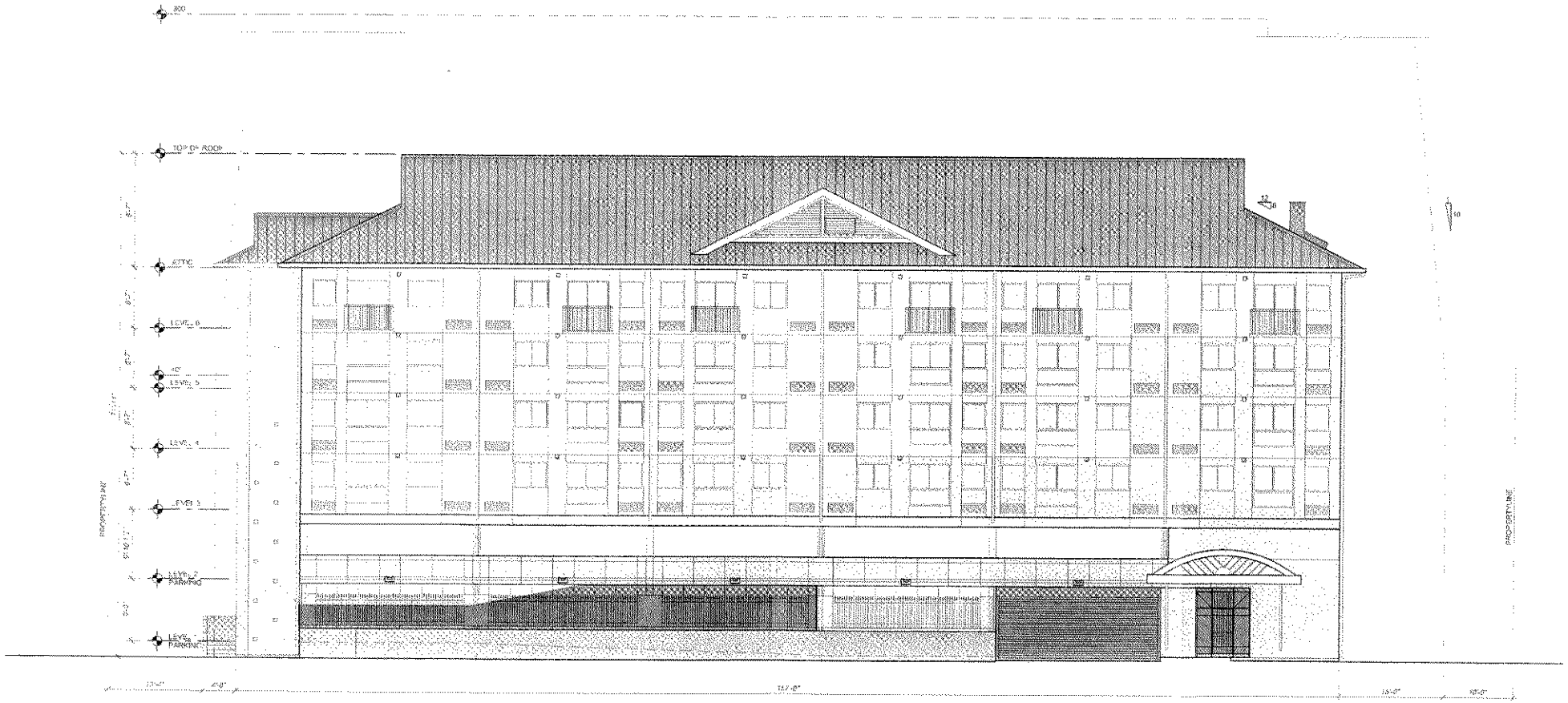


Figure 5a

ALA WAI GARDEN PLAZA

View From Namahana Street

June 13, 2007

Durrant
Media Five
No. 7154.00

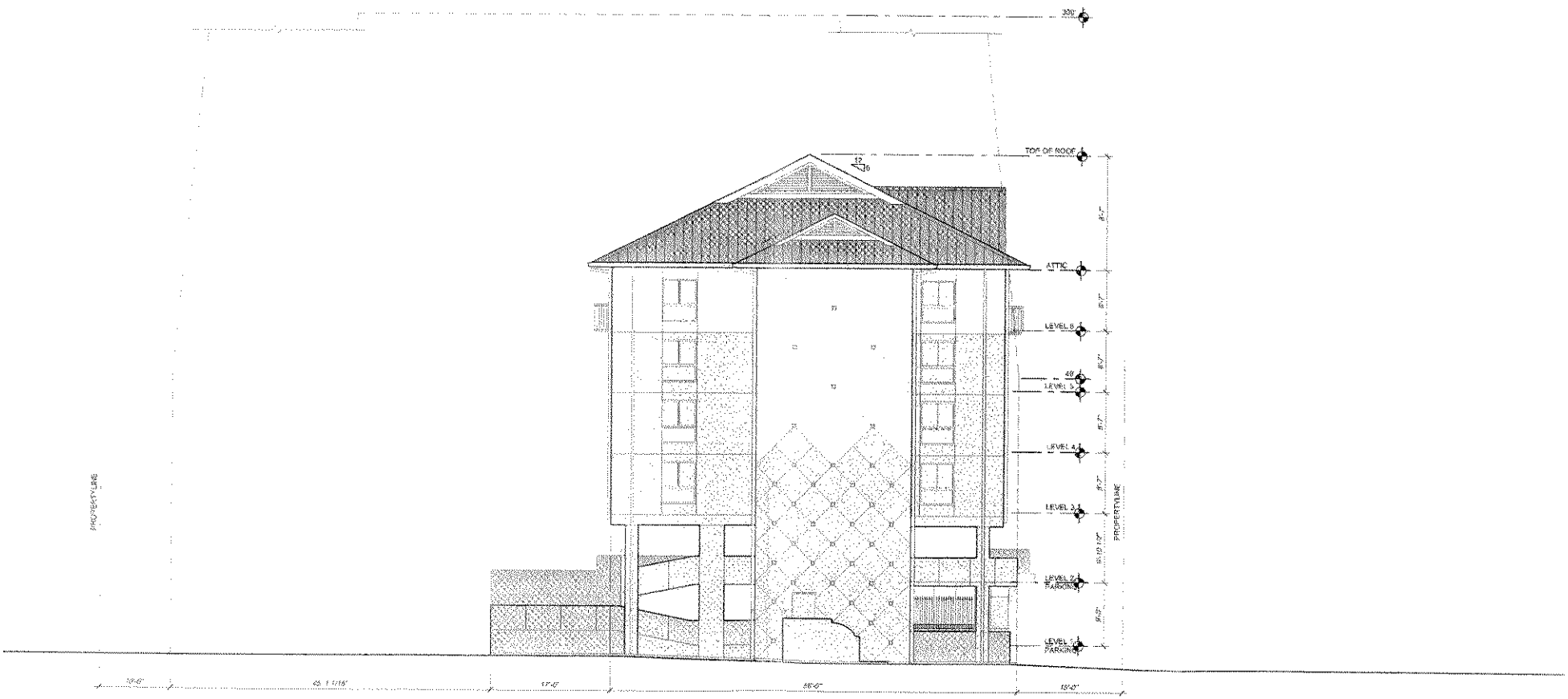


Figure 5b

ALA WAI GARDEN PLAZA

View From Ala Wai Blvd.

Durrant
Media Five

June 15, 2021

9

No. 7154.00

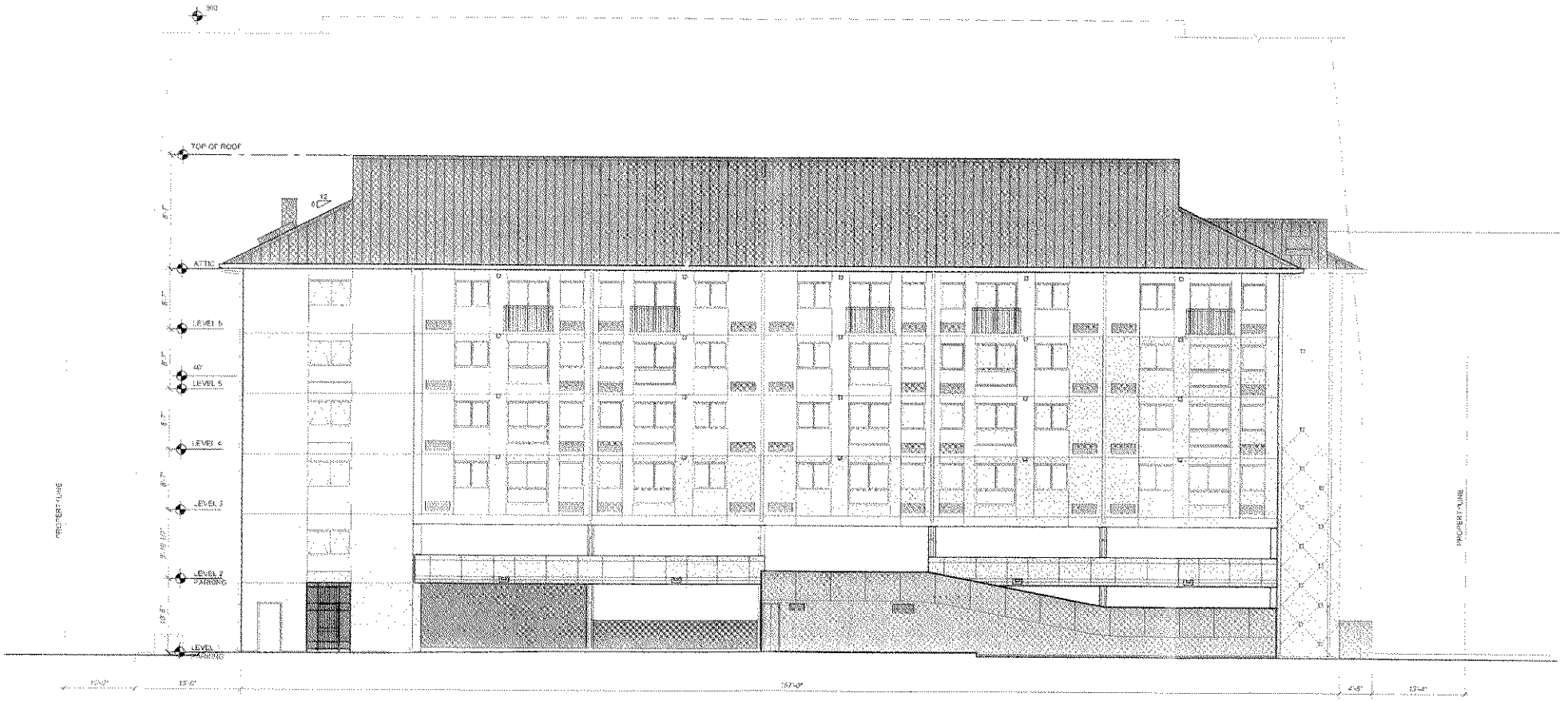


Figure 5c

ALA WAI GARDEN PLAZA

View From Diamond Head

Durrant
Media Five
No. 7154.00

June 15, 2007

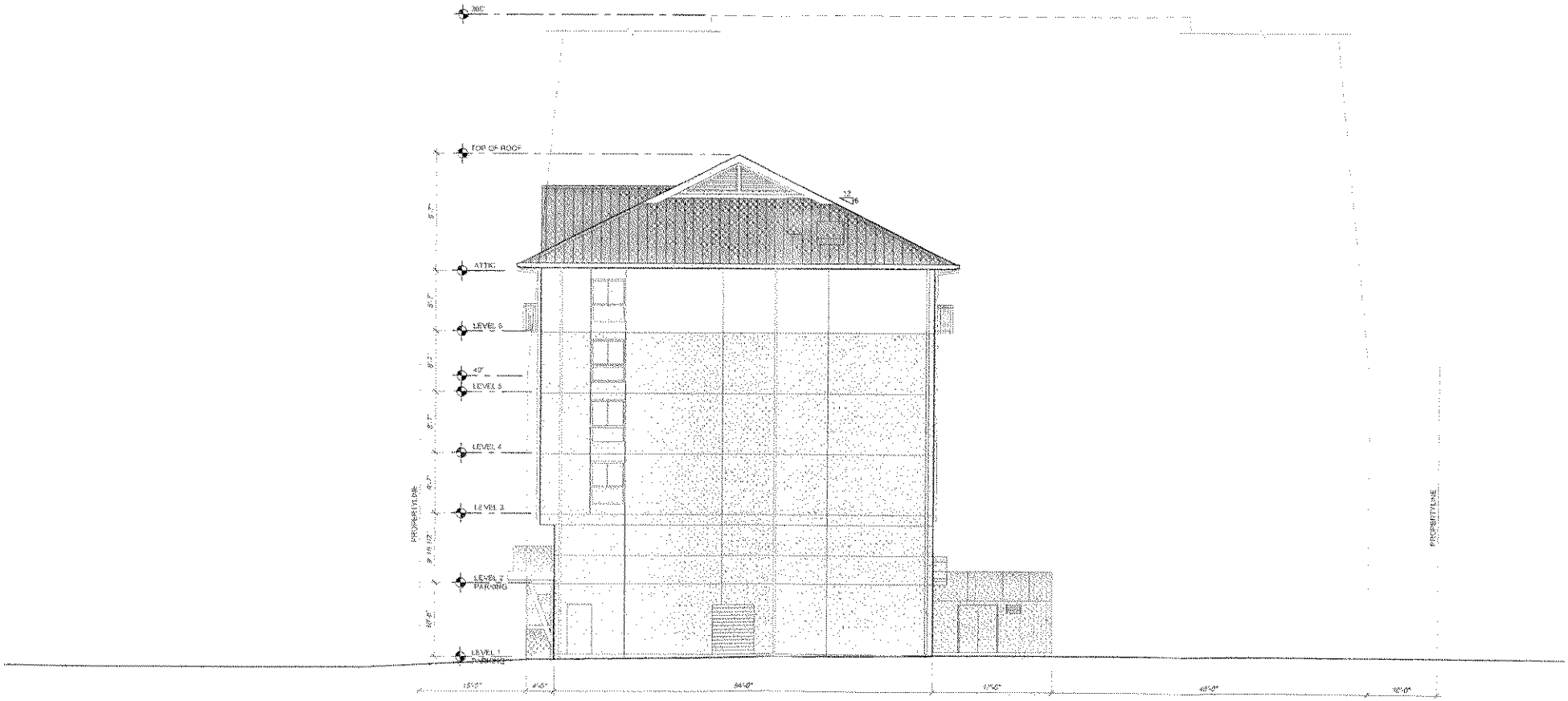


Figure 5d

ALA WAI GARDEN PLAZA

View From Makai

Durrant
Media Five

June 15, 2007

NAMAHANA STREET

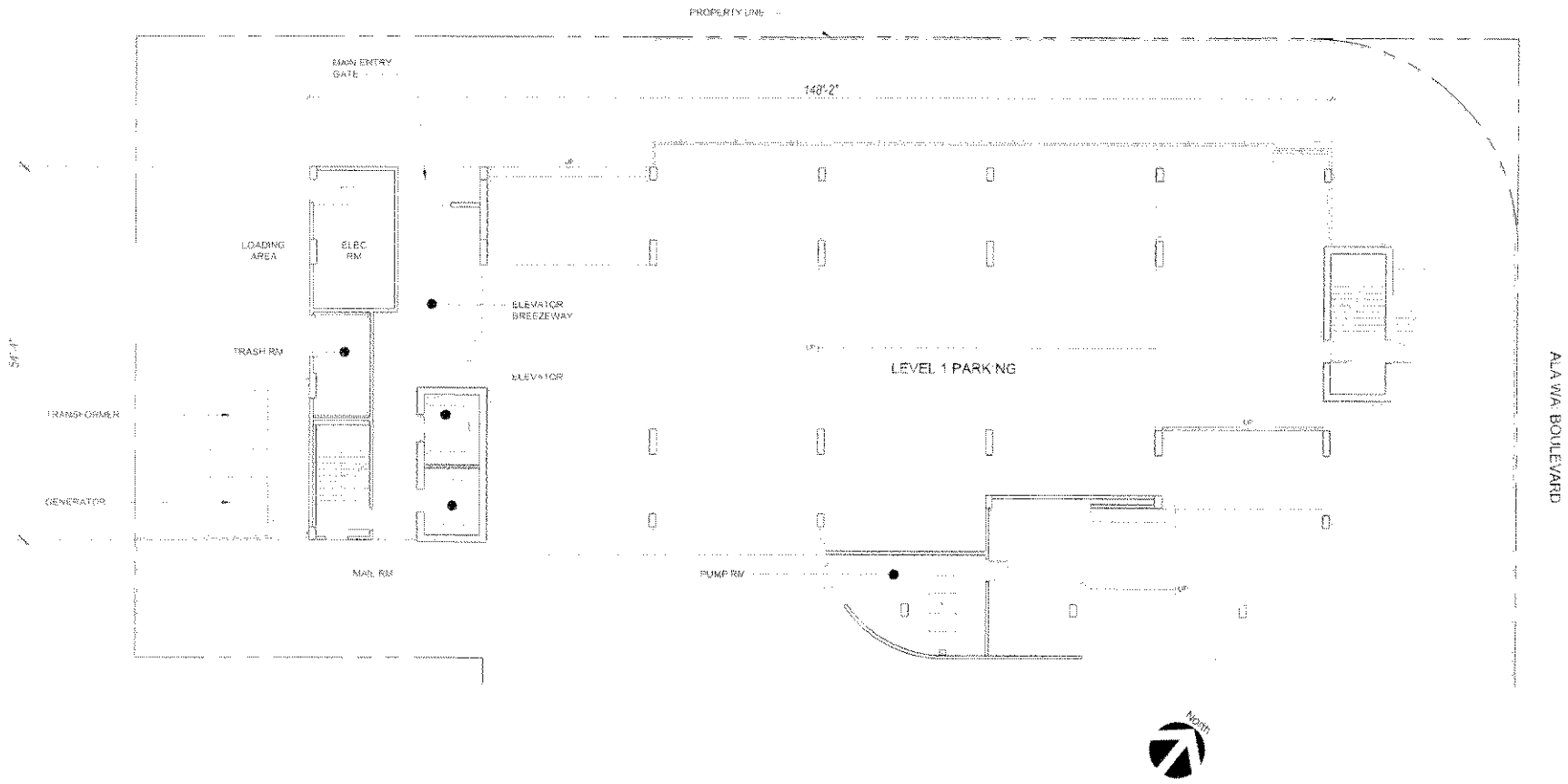


Figure 6a

ALA WAI GARDEN PLAZA

Plan Level 1

Scale 1/16" = 1'-0"

Durrant
Media Five

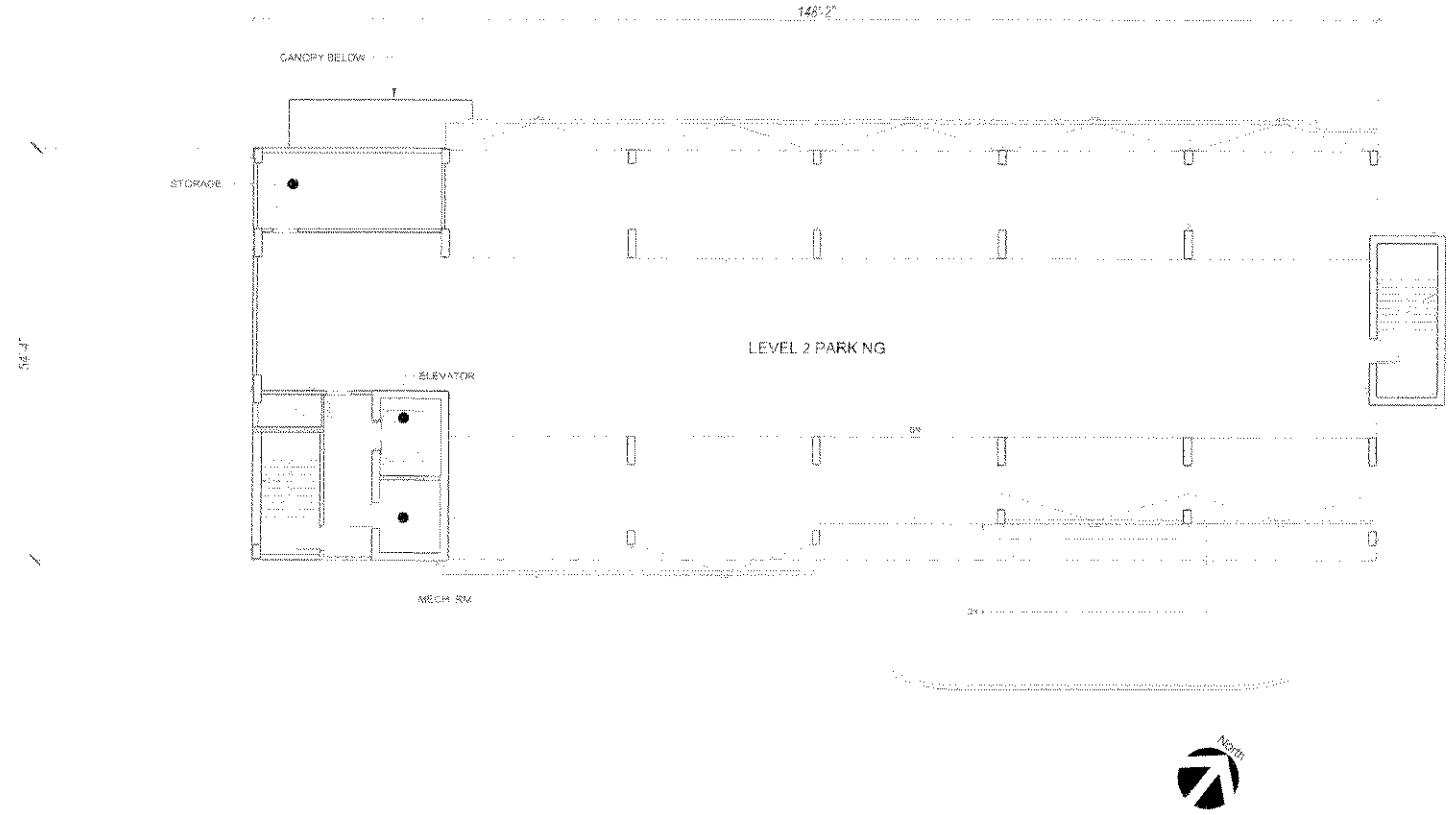


Figure 6b

ALA WAI GARDEN PLAZA

Plan Level 2

Scale 1/16" = 1'-0"

Durrant
Media Five

No. 2154.00

June 15, 2007

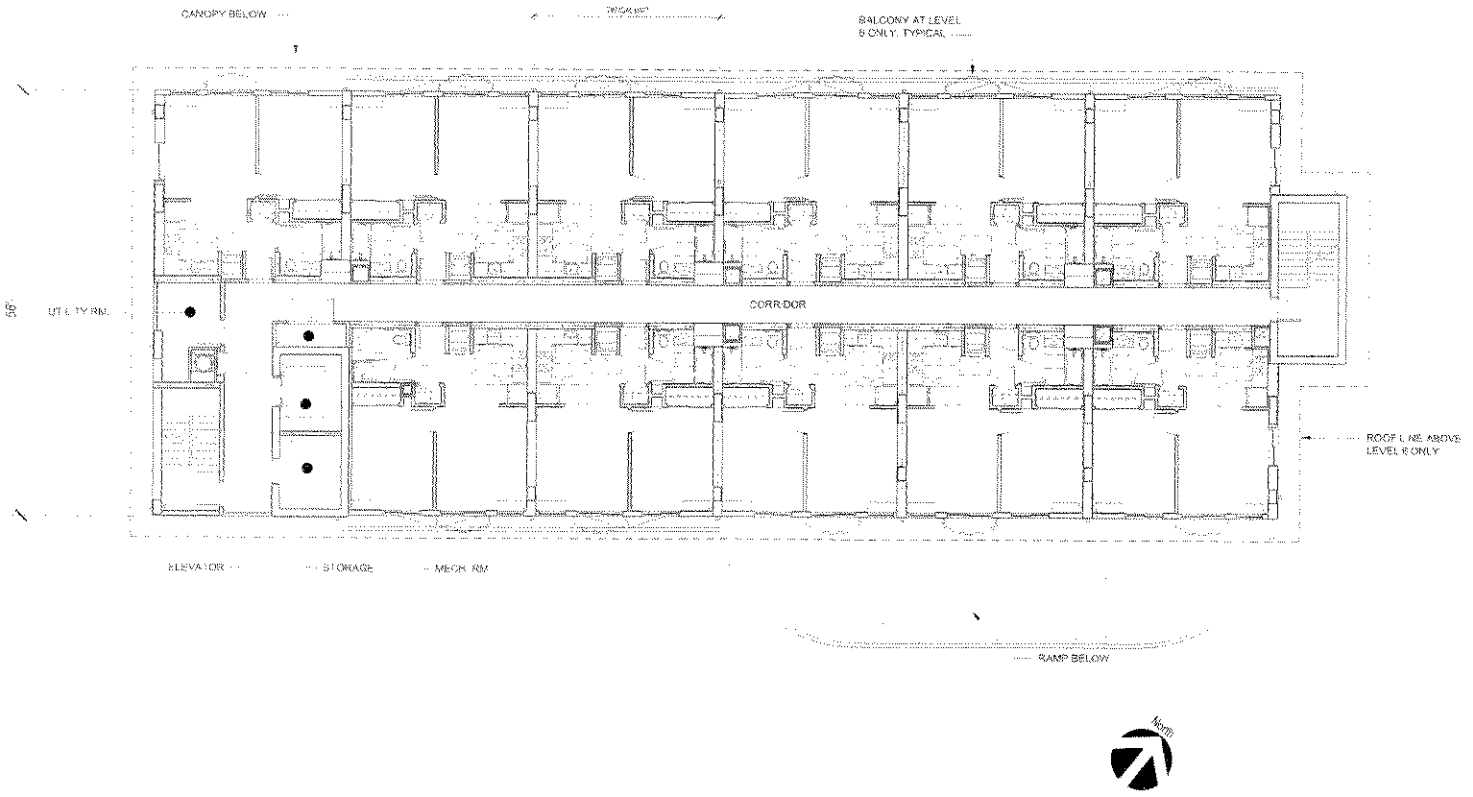


Figure 6c

ALA WAI GARDEN PLAZA

Plan Level 3 (Levels 4-6 Similar)

Scale: 1/16" = 1'-0"

Durrant
Media Five

No. 7154.09

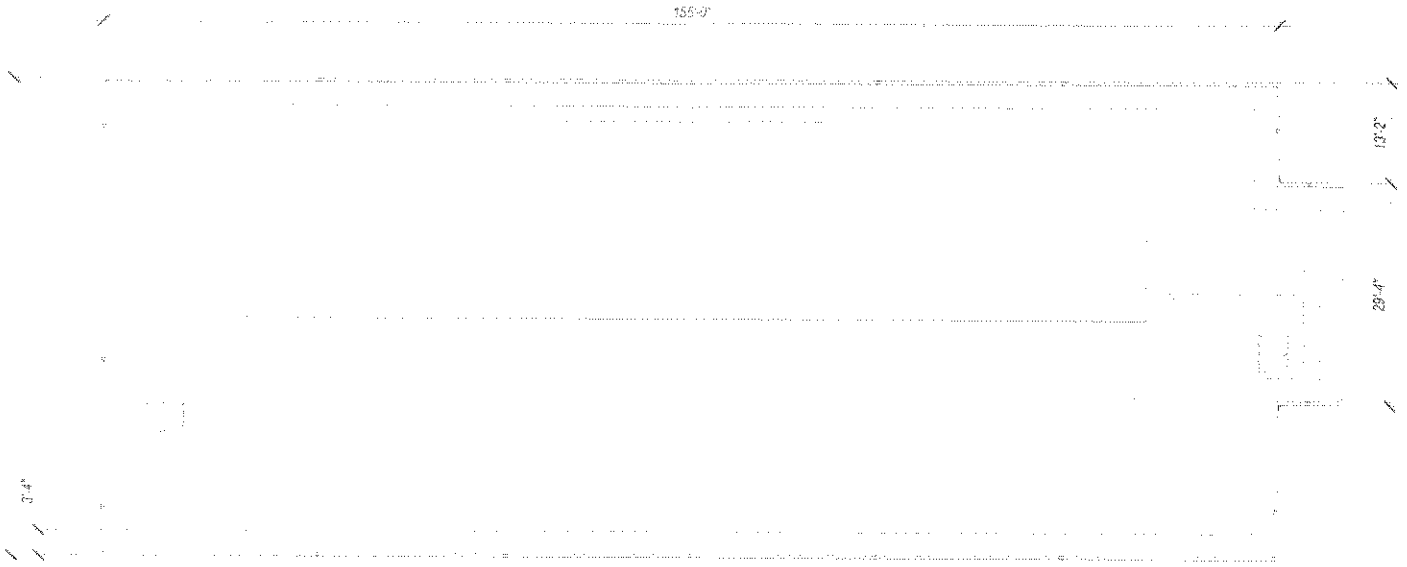


Figure 6d

ALA WAI GARDEN PLAZA

Roof Plan

Scale 1/16" = 1'-0"

Durrant
Media Five

June 15, 2007

ALA WAI GARDEN PLAZA
RENTAL APARTMENTS
SDD SUBMITTAL 10.23.07
ALA WAI BOULEVARD
NAMAHANA STREET
LANDSCAPE PLAN
16

Figure 7

DESCRIPTION OF THE AFFECTED ENVIRONMENT 2

A. Existing Use and Improvements

The vacant property is located on the *mauka* Diamond Head corner of Namahana Street and Ala Wai Boulevard. Wrought iron fencing bounds the Namahana Street and Ala Wai Canal sides of the property. A dense row of palms and shrubs planted behind the fence effectively limits views into the property from the street and sidewalk. A section of collapsed fencing at Ala Wai Boulevard and Namahana Street has created about a 15 foot wide opening. Yellow tape covers the opening in an attempt to keep trespassers out.

An abandoned swimming pool, covered jacuzzi, and associated flagstone decking (approximately 60' X 105') covers almost one-third of the lot. Approximately 18" of algae-laden standing water collects in the pool. A concrete slab supporting pool pumps and filters is located in the south corner. The pool was constructed in 1993 and ***was*** [is slated to be] demolished ***in July 2007***. The remainder of the property is vacant and overgrown by grasses, weeds, and several palm varieties. The lot does not appear to be maintained regularly as glass bottles, plastic bags, fallen palm fronds, and scattered rubbish piles are strewn about.

Existing conditions are shown on Figure 8 and views of the property and adjoining areas are shown on the Site Photographs.

B. Environmental Conditions

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 infrequent severe rainstorms.

Northeasterly tradewinds prevail throughout the year although their frequency varies from more than 50 percent during the summer months to 90 percent in January. The average annual wind velocity is approximately 10 miles per hour.

The mean temperature measured at Honolulu International Airport ranges from 70^0F in the winter to 84^0 F in the summer. The temperatures in the Waikiki area may be slightly higher due to localized urban heating effects. Average annual precipitation is approximately 24 inches with most of the rainfall occurring between November and April. Relative humidity ranges between 56 and 72 percent (Wilson Okamoto & Associates, Inc. 2003).

2. Topography

The property is flat and contains no unusual or unique topographical features. Ground elevation is approximately 10 feet above mean sea level (msl).

ALA WAI GARDEN PLAZA
RENTAL APARTMENTS

ALA WAI BOULEVARD

NAMAHANA STREET

Lot 72
4,560 Sq. Ft.

Lot 193
5,000 Sq. Ft.

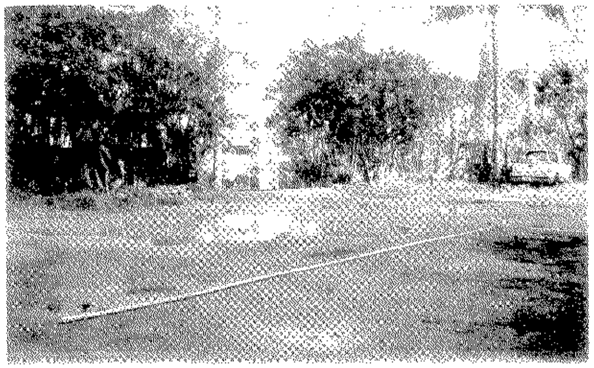
Lot 194
5,000 Sq. Ft.

Lot 186
4,750 Sq. Ft.

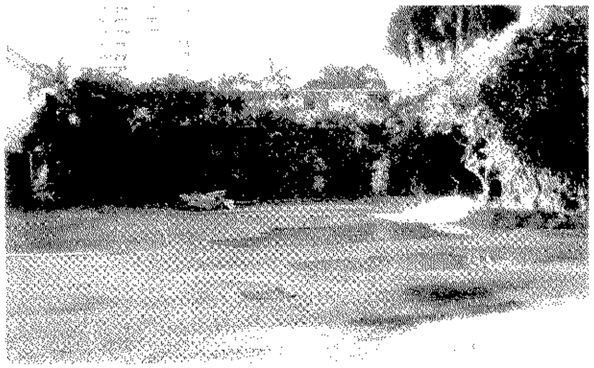
Lot 75
4,560 Sq. Ft.

Existing Conditions

Figure 8



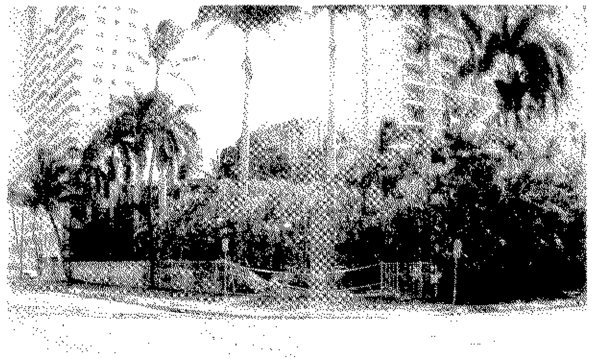
Photograph 1. Location of Former Swimming Pool



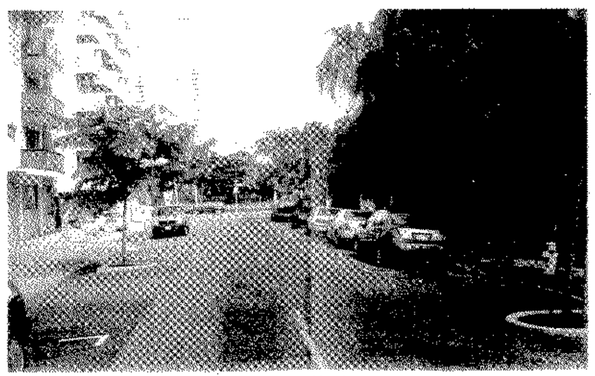
Photograph 2. View of Property Looking Makai

Photograph 3. Cleared Area on Ala Wai Boulevard Side of Property.

Photogrpah 4. Mechanical Equipment in South Corner of Property.



Photograph 5. View from Across Ala Wai Boulevard.



Photograph 6. Namahana Street Looking Mauka.

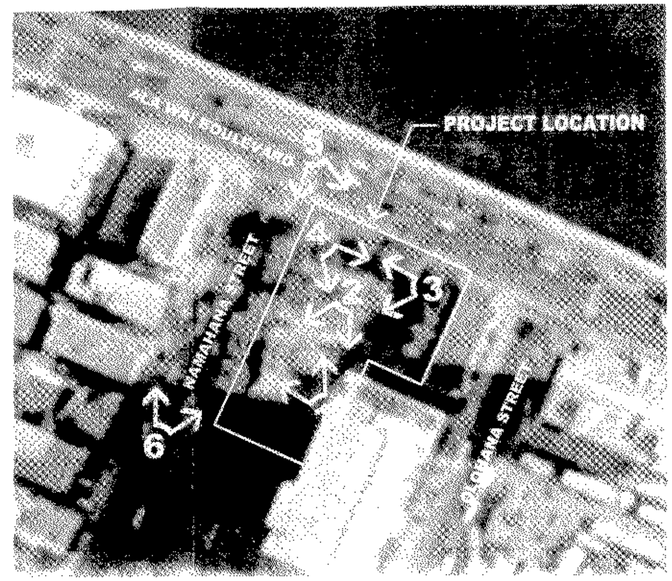


Photo Key Map

Site Photographs
Ala Wai Garden Plaza
Waikiki, Island of Oahu

Gerald Park
Urban Planner

Source: USGS Website, http://mrviewogc.cr.usgs.gov/viewer
Photographs by Gerald Park

3. Soils

According to the Soil Conservation Service (1972), soil underlying the property is Fill Land. This soil type consists of material dredged from the ocean bottom or hauled in from nearby areas. The archaeological inventory survey (Cultural Surveys Hawaii, 2005) indicated that the fill soils are materials dredged from the Ala Wai Canal and used to fill "banana patches and ponds between the canal and the *mauka* side of Kalākaua Avenue."

4. Flood Hazard

The project site lies within several flood hazard zones as depicted on the Flood Insurance Rate Map (FIRM) for this section of Waikiki (See Figure 9). ***The shaded area on the FIRM indicates the "special flood hazard zone inundated by 100-year flood." Within the 100-year flood area, the*** project site ***is*** in Flood Zone "AO" which is defined as "flood depths of 1 to 3 feet [, flood depths determined](Federal Emergency Management Agency, 2000)".

5. Tsunami Inundation

The property is not within an identified tsunami inundation or coastal high hazard area. The coastal area nearest the property is the beach at Fort DeRussy approximately 0.7 miles to the southwest.

6. Groundwater

1. Surface Water

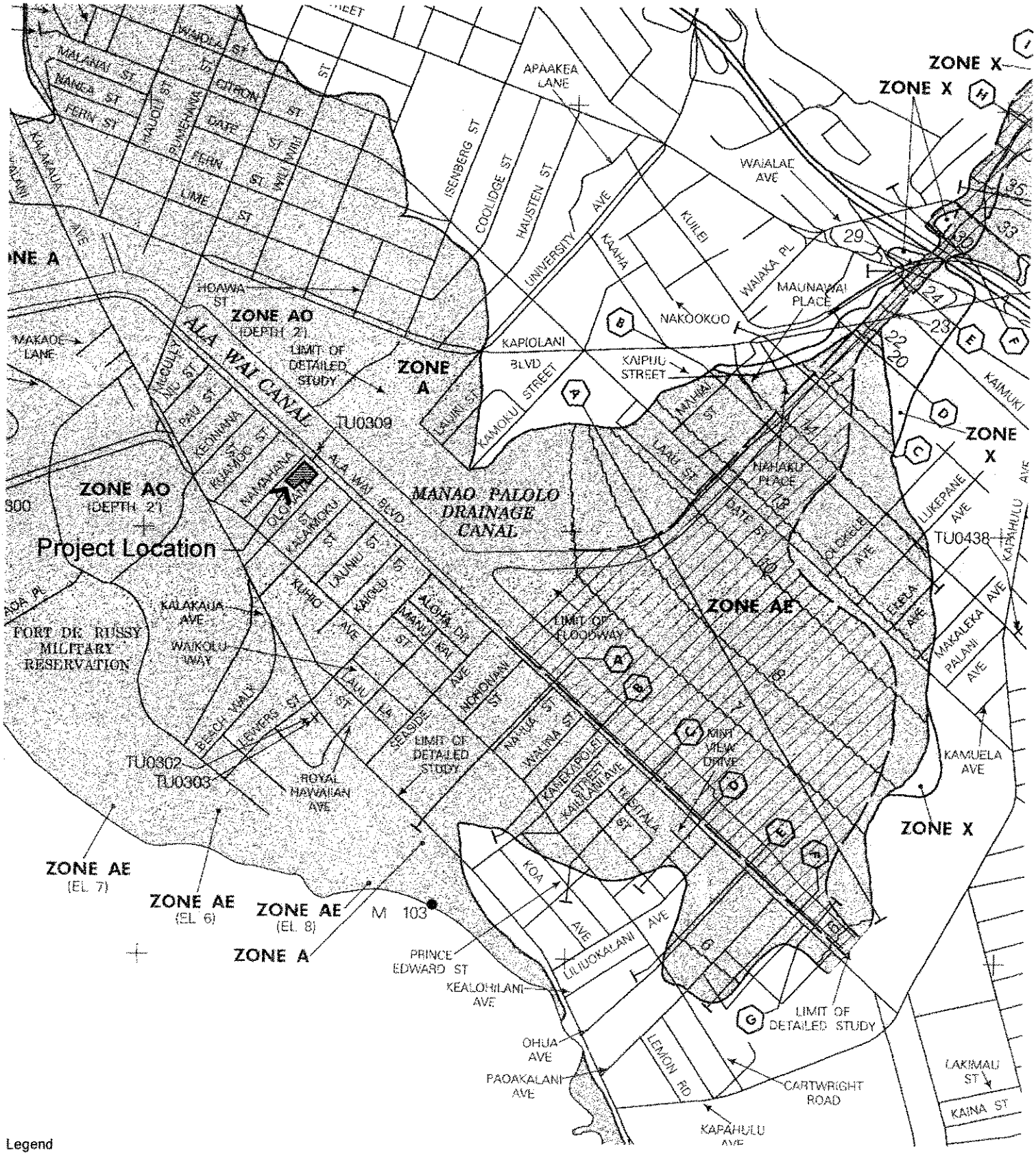
   There are no streams, wetlands, or ponds on the premises. The Ala Wai Canal, a man-made drainage canal, flows to the ocean on the north by northeast side of the property. Ala Wai Boulevard separates the property from the Ala Wai Canal.

2. Ground Water

   All of Waikiki overlies the Palolo aquifer of the Honolulu aquifer sector. The Palolo aquifer is characterized by an unconfined caprock aquifer above a confined basal aquifer in basalt. The caprock aquifer is classified as potentially useful, moderately brackish water (between 1000 and 5000 parts per million chloride) that is neither potable nor ecologically important. The basal aquifer is used for drinking water and has less than 250 parts per million chloride (Mink and Lau, 1990).

7. Flora

On-site flora consists of a few trees, palm varieties, shrubs, grasses, and weeds. Plumeria *(Plumeria sp.)* is the only tree specie observed. Areca palm and mock orange *(Murraya paniculata)* planted on the Namahana Street and Ala Wai Boulevard property lines create an effective "vegetation screen" blocking views from the inside and outside. Tall Royal palm *(Roystonea regia)* and coconut *(Cocos nucifera)* dot the landscape. Several Manila palm *(Veitchia merrillii)* are cultivated in above ground circular planters arranged on the pool deck. Common shrubs include hibiscus *(Hibiscus tiliaceus)*, ti *(Cordyline terminalis)*, and bougainvillea (*Bougainvillea sp.)*. Weeds include garden spurge, milkweed, and ipomea.



Legend

- Special Flood Hazard Zone Inundated by 100-Year Flood
  - Zone A — No Base Flood Elevation Determined.
  - Zone AE — Base Elevation Determined
  - Zone AO — Flood Depth of 1 to 3 Feet Usually Sheet Flow on Sloping Terrain
- Floodway Area in Zone AE
- Zone X — Areas of 2% Annual Chance Flood. Areas of 1% Annual Chance Flood w/ Average Depth of Less Than 1 Foot
- Zone X — Areas Determined to be Outside the 2% Annual Chance Floodplain.

Source: Federal Emergency Management Agency, Flood Insurance Rate Map, Map Number 15003C0105E, Date: November 2000.

Figure 9
Flood Insurance Rate Map

Ala Wai Garden Plaza

Waikiki, Island of Oahu

NORTH

LINEAL SCALE (FEET)
500 250 0 250 500 1000

Gerald Park
Urban Planner
February 2007

Nine vertical wiliwili (Erythrina sp.) along the south property line are dead. A shower tree (*Cassia sp.*) grows [on the property] outside the perimeter fence fronting Namahana Street ***and in the City and County of Honolulu right-of-way***.

None of the species are considered rare, threatened, or endangered.

A Tree Assessment denoting the condition of the on-site trees is found in Appendix A.

8. Fauna

No wildlife was observed on the property during a field visit. The presence of water suggests mice and rats are probably present. Dogs and cats may also browse the property.

Birds including barred dove *(Geopelia striata)*, spotted dove *(Geopelia chinensis)*, common mynah *(Acridotheres tristis)*, house sparrow (*Passer domesticus*), house finch *(Carpodacus mexicanus)*, and Brazilian cardinal *(Paroaria coronota)* are known to frequent urban areas and probably frequent the project site.

9. Archaeological Resources

An informative summary of the history of the project area in the context of Waikiki is presented below. The summary was excerpted from an archaeological inventory survey report for the project site (Cultural Surveys Hawaii, 2005). The discussion is based on a background summary and predictive model for what archaeological features might be encountered on the property.

The prehistoric Hawaiian settlement pattern was based on the system of *ahupua'a* land division. Prior to the Mahele of 1848 Oahu was divided into six *moku* or *kalama* (districts): Ko'olaupoko, Ko'olauloa, Waialua, Wai'anae, *'Ewa*, and Kona; these are said to be the same divisions established by the *ali'i Ma'ilikukahi* around 1500 A.D. Contained within these six districts were 86 (known) prehistoric *ahuapua'a* land divisions. The *ahupua'a*, as described by Kirch (1985:2, Chapter 11), ideally, is represented by a pie-shaped slice of an island or region, usually running from the mountains to the sea. Each *ahupua'a,* ideally, contained adequate amounts of all the natural resources a Hawaiian island could provide.

The current project area lies within the *ahupua'a* of Waikīkī in the moku (district) of Kona. Waikīkī Ahupua'a deviates somewhat from the usual pie-shaped land division in that its sides, the northwest to southeast breath, are wider. It does, however, fill all the other traditional criteria for an ideal *ahupua'a,* as described above both environmentally and in the archaeological record. Within Waikīkī ahupua'a, the *mauka* to *makai* region relative to the current project area extends from the Ko'olau Mountain range to the lower valleys of Manoa and Palolo, to the dry lowland of Moililili and extending on through the inner wetlands (before late historic modifications), and the coastal zone to the sea.

The project area is located in what was once the wetland plains of Waikīkī. This area provided ancient Hawaiians with the environment needed for the cultivation of fishponds and subsistence crops such as taro and banana. The features expected from thest cultural activities include berms, loi (pond fields), streambeds, pond banks, and *'auwai* levee remnants. Following the initial years of European contact, Westerners engaged in new large-scale agricultural ventures. Immigrant workers from Asia were bought to Hawaii to labor in these new agricultural ventures, and subsequently engaged in their own farming

enterprises, most notably rice and aquaculture. The wetlands of Waikīkī provided an ideal environment for the cultivation of rice, and the area yielded much of its traditional taro cultivation land to rice production. The same area, in the early 20th century, was altered more intensely by land-reclamation plans, the resulting dredge and fill projects obliterated what remained of traditional Hawaiian cultivation processes in the wetlands of Waikīkī.

Plans for reclamation of the wetlands of Waikīkī were generated in the early decades of the 20th century. The most extensive reclamation project took place iin the 1920's, with the off-shore and inland dredging for the creation of the Ala Wai Canal. The wetland plains of Waikīkī were filled-in with materials dredged from the sea-floor and the area of the present Ala Wai Canal. Drainage from the Ko'olau Mountains was diverted through the new Ala Wai Canal, leaving the rich agricultural land buried below layers of imported dredged sediments and coral fill.

Historic documentation indicates that the project area and its immediate environs included, up to the mid-nineteenth century, traditional Hawaiian irrigated taro fields, water course features, ponds, and associated house sites. Historic maps indicate that, by the late nineteenth and early twentieth centuries, this portion of Waikīkī included rice fields, banana fields, and other orchards.

Documents specific to the project area identify a "pauku of stream taro" extending across the *mauka* portion of the project area (in Mahele records for land Commission Award 775, Apana 2 to Paoa) with a kuanua---a soil embankment---defining the *makai* boundary of the *pauku* (on a 1922 survey map for land Court Application 537). An *'auwai* (irrigation ditch) is shown entering the *mauka* side of the project area.

Early 20th century maps and photographs---dated before the construction of the Ala Wai Canal---show a pond feature just *makai* of the project area.

Historic photographs show that the present surface of the urban blocks in this portion of Waikiki is landfill created during the construction of the Ala Wai Canal. By the early 1950's, as shown on a fire insurance map of the period, the project area comprised five parcels containing single-story dwellings and two- and three-story and apartment buildings. Episodes of demolition and new construction upon these parcels took place during the second half of the twentieth century.

It is anticipated that subsurface remnants of the original native Hawaiian agricultural wetland environments including an *'auwai*, a "pauku of stream taro", a *kuanua*, and possibly a pond--will be encountered during subsurface testing within the project area. It is further anticipated that evidence of fill episodes from land reclamation programs---including the Ala Wai Canal project and, perhaps, off-shore dredging projects---will also be encountered. Evidence of late historic construction, demolition, and landscaping activities are expected to overly the dredged area.

An archaeological inventory survey did not report the presence of historic properties on the premises (See Appendix B).

Subsurface testing was undertaken to 1) find evidence of prehistoric land-use and occupation, 2) to discover the historic agricultural features that were present at the time of the creation of the Ala Wai Canal, and 3) to reveal subsurface wetland deposits that could have provided valuable paleoenvironmental data.

10. Cultural Resources

No likely cultural practices are present due to the absence of the following on the property:

- Surface archaeological sites
- Known burials
- Fishing, hunting, and gathering resources
- Historical trails
- Sacred sites
- Storied places

11. Noise

An acoustic study prepared for the project (Y. Ebisu & Associates, Inc., 2007) is found in Appendix C. Excerpts from the study are reported below. Major contributors to the existing ambient noise levels in the project area are: traffic along Ala Wai Boulevard and Kuhio Avenue; refuse collection trucks, tour buses and delivery trucks which are idling or positioning as curbside; loud motorcycles; the sirens of emergency and police vehicles; and nearby construction activities. The louder motorcycle, siren, refuse truck, and tour bus noise events can range from 75 to 90 dBA, and are clearly audible above the other background ambient noise sources

The typical hourly variations in noise levels within the project area are conditioned by motor vehicle traffic along two high volume roadways: Ala Wai Boulevard and Kuhio Avenue. Traffic noise levels tend to be the lowest during the early morning ours between 3:00 and 5:00 AM and tend to be highest during the AM and PM peak commuting hours.

Existing background noise levels in the project environs currently exceed 65 Ldn (Ldn is a descriptor of day-night average sound level) at essentially all buildings which front Ala Wai Boulevard and Kuhio Avenue. In addition, at the upper floors of buildings which front lower volume streets such as Namahana Street, distant traffic noise plus the other non-traffic noise sources in the area can cause ambient noise levels to exceed 65Ldn.

Traffic noise levels at ground level and at 20 foot above ground level are currently above 65 Ldn along Ala Wai Boulevard so the north section of the proposed residential building site is in the "Significant Expose, Normally Unacceptable" noise exposure category ***(Above 65 Ldn but not above 75 Ldn from Table 1, Appendix C)***. Existing noise contributions from Namahana Street are well below 65 Ldn.

12. Air Quality

Air quality in the vicinity of the proposed Ala Wai Garden Plaza is primarily affected by vehicle emissions generated by traffic on adjacent streets. Among the various air pollutants for which State and National standards have been established, carbon monoxide is the primary concern in areas near heavy traffic flow (Wilson Okamoto, 2003). Until October 2004 when it was closed, the State of Hawaii Clean Air Branch maintained an air quality monitoring station in Waikiki. According to the Clean Air Branch, the Waikiki monitoring station on Kalakaua Avenue had not exceeded the State 1-hour carbon monoxide standard (10,000 $\mu g/m^3$) and 8-hour (5,000 $\mu g/m^3$) standard between 1999 and September 2004.

The State 1-hour and 8-hour standards are more stringent than the Federal standards for carbon monoxide.

13. Views

The Coastal View Study (Chu & Jones, 1987) neither identifies the project site as providing significant coastal views nor Namahana Street and Ala Wai Boulevard as coastal roads providing continuous or intermittent coastal views (South Shore Viewshed, Exhibit 13).

A discussion of views is also found in Section 3D. Waikiki Special District.

C. Socio-Economic Characteristics

General demographic and housing statistics for Oahu and Neighborhood Board No. 9 (Waikiki) are presented in Table 1. The total population reported for Waikiki is approximately 2.2% of Oahu's total population. In comparison with Oahu in general, the Waikiki area has a lower percentage of occupied housing units, a lower percentage of owner-occupied units, and about the same percentage of renter occupied units. Waikiki has a higher percentage of vacant units and a five-fold higher vacancy rate and about a four-fold higher rental vacancy rate.

Table 1. Demographic Characteristics

Variable	**NB No. 9**		**Oahu**	
	Number	Percent	Number	Percent
Total Population	19,720	100	876,156	100
Median Age (Years)	42.2	---	35.7	---
Total Housing Units	18,370	100	315,988	100
Occupied Housing Units	11,397	62.0	286,450	90.7
Owner Occupied	3,819	20.8	156,290	49.5
Renter Occupied	7,578	41.3	130,160	41.2
Vacant Units	6,993	38.0	29,538	9.3
Vacancy Rate	---	23.1	---	4.9
Homeowner	N/A	3.0	---	---
Renter	N/A	30.3	---	8.57
Homeownership Rate	N/A	33.5	---	54.6
Avg Household Size/Owner	N/A		3.10	
Avg household size/rental	N/A		2.70	
Avg Persons/Household	1.72	---	3.0	---

Source: 2000 Census; Neighborhood Board Website.

D. Public Facilities and Services

1. Circulation and Traffic

Namahana Street, a two-way, two-lane street connects Ala Wai Boulevard on the east and Kuhio Avenue on the west. The street lies within a 60-foot right-of-way improved with curbs, gutters, and sidewalks on both sides. Landscaped traffic medians jut into the travel lanes creating on-street parking areas on both sides of the right-or-way. Five on-street parking stalls front the project site. The posted speed limit is 25 miles per hour.

Namahana Street intersects Ala Wai Boulevard at the ***northeast*** end of the project site. Ala Wai Boulevard is the major westbound thoroughfare in Waikiki. The 75 foot right-of-way accommodates five traffic lanes and a 24-hour parking lane on the *mauka* side of the roadway. Traffic circulation is one-way from east to west. Curbs, gutters, and sidewalks are located on both sides of the road. The sidewalk along the Ala Wai Canal is identified as a pedestrian promenade. The posted speed limit is 35 miles per hour near Namahana Street.

South of the intersection with Ala Wai Boulevard, Namhana Street intersects Kuhio Avneue. At this unsignalized T-intersection, the Namahana Street approach has one lane that serves left-turn and right-turn traffic movements. The eastbound approach of Kuhio Avenue has two lanes at this intersection that serve left-turn and through traffic movements while the westbound approach has one lane that serves through and right-turn traffic movements.

Wilson Okamoto Corporation (2007) prepared a traffic impact report taking manual field turning counts and performing a capacity analysis of traffic operations (See Appendix D). The capacity analysis is based on the concept of Level of Service (LOS).

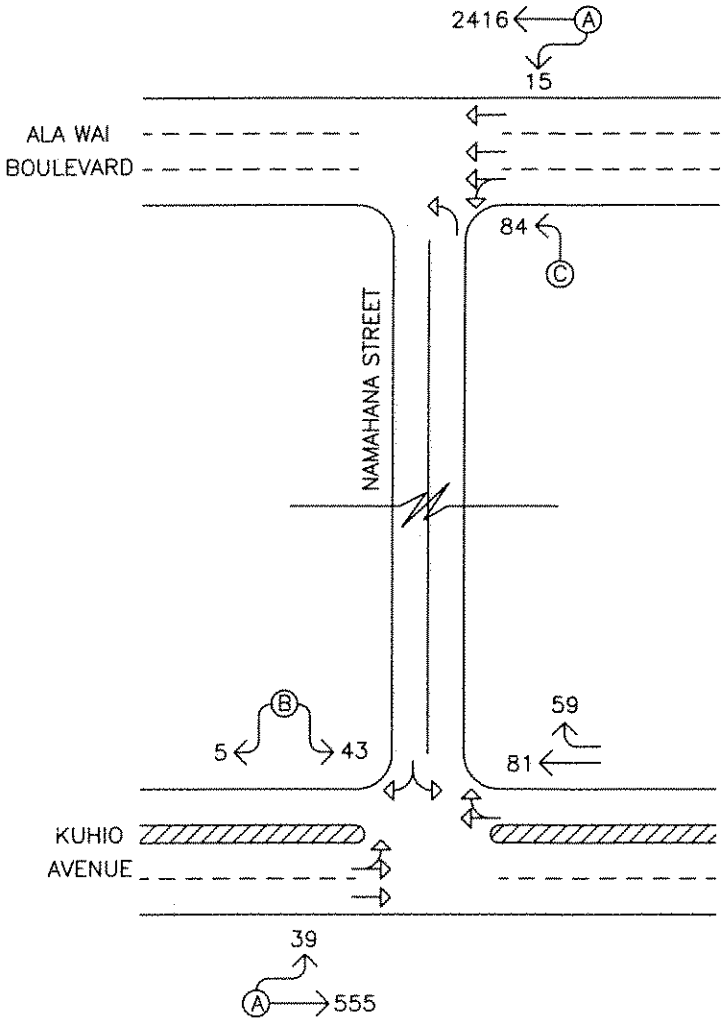
Existing AM and PM peak period traffic volumes and traffic operating conditions are shown in Figures 10 and 11. The AM peak hour of traffic generally occurs between the hours of 7:30 AM and 8:30 AM. The PM peak hour or traffic generally occurs between the hours of 3:30 PM and 4:30 PM.

At its intersection with Ala Wai Boulevard, Namahana Street carries 84 vehciles northbound during the AM peak period; during the PM peak period the traffic volume is slightly higher with 114 vehicles traveling northbound. The Namahana Street approach operates at LOS "C" during both peak periods.

The Ala Wai Boulevard approach of this intersection carries 2,431 vehicles westbound during the AM peak period and 2,529 vehicles during the PM peak period. The Ala Wai Boulevard approach operates at LOS "A" during both peak periods.

At its intersection with Kuhio Avenue, Namahana Street carries 48 vehicles southbound during the AM peak period and 33 vehicles during the PM peak period. The Namahana Street approach operates at LOS "B" and "C" during the AM and PM peak periods, respectively.

The Kuhio Avenue approach carries 594 vehicles eastbound and 140 vehicles westbound at its intersection with Namahana Street during the AM peak period. During the PM peak period, traffic volumes are higher with 773 vehicles traveling eastbound and 188 vehicles traveling westbound. The critical traffic movement on the Kuhio Avenue approaches is the



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

Ⓐ LANE GROUP LEVEL OF SERVICE

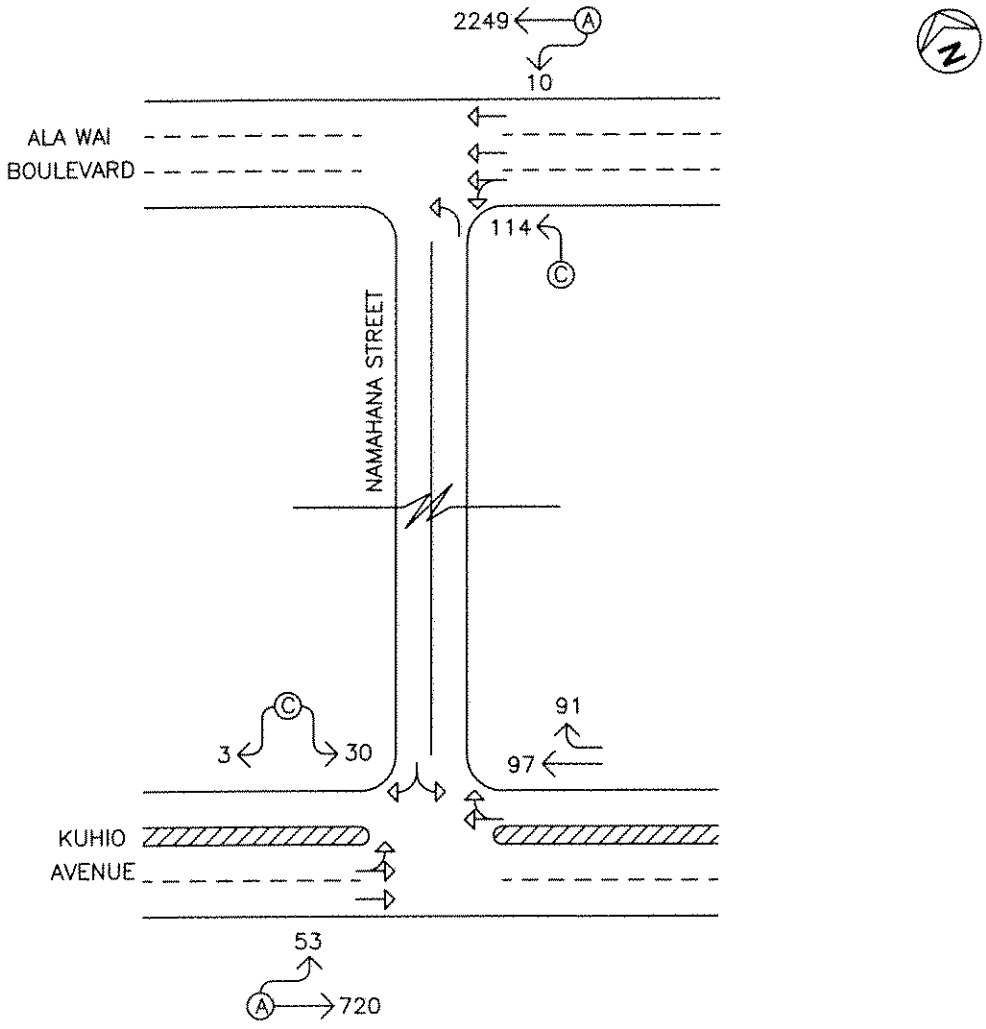
DATE OF COUNT: January 24, 2007

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

ALA WAI GARDEN PLAZA

EXISTING AM PEAK HOUR OF TRAFFIC

FIGURE 10



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: January 24, 2007

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

ALA WAI GARDEN PLAZA

EXISTING PM PEAK HOUR OF TRAFFIC

FIGURE 11

eastbound left turn and through traffic movement which operates at LOS "A" during both peak periods.

2. Water

The Board of Water Supply water system in the area includes a 12" service main in Ala Wai Boulevard and an 8" main in Namahana Street.

3. Wastewater

A 10" service line along Namahana Street discharges into the Kuhio Avenue Relief Sewer in Kuhio Avenue. An 8" service lateral from Lot 56 discharges into the 10" line. A sewer easement is located on the lot but it cannot be confirmed if there is an active sewer line or abandoned line within the easement.

4. Protective Services

Waikiki is located with the Honolulu Police Department's District 1. This resort-residential community is regularly patrolled by officers posted at the Waikiki Substation located at Kuhio Beach on Kalakaua Avenue.

Fire protection originates from the Waikiki Fire Station (Station 7) at the corner of Kapahulu Avenue and Ala Wai Boulevard. The station is equipped and staffed by an engine company and ladder company. Fire hydrants on Ala Wai Boulevard and Nahmahana Street are within distance of the project site.

Fire hydrants on Ala Wai Boulevard and Nahmahana Street are within 10 feet of the project site.

5. Utility Services

Electrical service is proved by Hawaiian Electric Company and telephone and CATV are available from Hawaiian Telcom and Oceanic Cable, respectively. All utility lines on Namahana Street are buried underground.

6. Public Schools

The project is located in the Department of Education's Honolulu District. School age children residing in the project would be serviced by Ala Wai Elementary School, Washington Intermediate School, and Kaimuki High School.

7. Recreation

Public recreation opportunities are provided throughout Waikiki. Public beach parks include De Russy, Waikiki, Kuhio, Queen's Surf, and Sans Souci beaches. Public parks and facilities include Kapiolani Park, Honolulu Zoo, Honolulu Aquarium, Ala Wai Golf Course, and Ala Wai Boat Harbor.

RELATIONSHIP TO PLANS, POLICIES, AND CONTROLS 3

A. State Land Use District

The State Land Use Commission classifies all land in the State of Hawaii into four land use designations: Agricultural, Conservation, Rural, and Urban. The project site is within the Urban district---a land use classification that applies to almost all developed lands in Waikiki.

B. General Plan for the City and County of Honolulu

The General Plan for the City and County of Honolulu (2002) is a statement of the long-range social, economic, environmental, and design objectives for the general welfare and prosperity of the people of Oahu. These objectives contain both statements of desirable conditions to be sought over the long run and statements of desirable conditions which can be achieved within an approximate 20 year time horizon. Second, the General Plan is a statement of broad policies which facilitate the attainment of the objectives of the Plan (DGP, 1992).

The General Plan is organized into eleven areas of concern with correlating objectives and polices that reflect the comprehensive planning process of the City and County of Honolulu. The areas of concern applicable to the Ala Wai Garden Plaza development are listed below.

II. Economic Activity

Objective B To maintain the viability of Oahu's visitor industry.

Policy 2: Provide for a high quality and safe environment for visitors and residents.

Policy 3 Encourage private participation in improvements to facilities in Waikiki.

Discussion: The proposed project is consistent with this objective and policy set.

III. Natural Environment

Objective A To protect and preserve the natural environment.

Policy 7: Protect the natural environment from damaging levels of air, water, and noise pollution.

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

Policy 2 Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas.

Discussion: Although located in a high-rise, high-density neighborhood of Honolulu, the site plan and building design are consistent with and supportive of the Waikiki Special District design guidelines. The building is adequately setback from the property line and the tower is lower than the allowable height limit. The

tower will not interfere with scenic views of the Koolau Mountains when viewed from areas makai of the project site and views of Diamond Head from the west.

IV. Housing

Objective C *To provide the people of Oahu with a choice of living environments which are reasonable close to employment, recreation, and commercial centers and which are adequately served by public utilities.*

Policy 1: Encourage residential developments that offer a variety of homes to people of different income levels and to families of various sizes

Policy 3: Encourage residential development near employment centers.

Policy 4: Encourage residential development in areas where exiting roads, utilities and other community facilities are not being used to capacity.

Discussion: The project provides 44 rental apartment units in Hawaii's major visitor destination and near to employment, recreation, and commercial centers.

The Board of Water Supply and the Department of Planning and Permitting have indicated that in-place water and sewer systems, respectively, can service the proposed development. A Traffic Impact Report for the project determined that the roads adjacent to the project site (Namahana Street, Ala Wai Boulevard, and Kuhio Avenue) can accommodate the peak hour traffic generated by the project.

VII. Physical Development and Urban Design

Objective A *To coordinate changes in the physical environment of Oahu to ensure that all new developments are timely, well-designed, and appropriate for the areas in which they will be located.*

Policy 2: Coordinate the location and timing of new development with the availability of adequate water supply, sewage treatment, drainage, transportation, and public safety facilities.

Policy 5: Provide for more compact development and intensive use of uran lands where compatible with the physical and social character of existing communities.

Policy 9: Exclude from residential areas, uses which are major sources of noise and air pollution.

Objective E *To create and maintain attractive, meaningful, and stimulating environments throughout Oahu.*

Policy 4: Require the consideration of urban design principles in all development projects

Policy 6: Provide special design standards and controls that will allow more compact development and intensive use of lands in the primary urban center.

Discussion: Ala Wai Garden Plaza will be developed in Waikiki on land that has been vacant since 2005. Its development can be considered as "in-fill" to foster compact and efficient use of vacant or underdeveloped land in the primary urban center.

The project will be designed for consistency with the Waikiki Special District design standards for the Apartment precinct. It is anticipated that the sum total of architectural features, landscaping and setbacks, a low building height, and low-density will help to foster a Hawaiian sense of place envisioned for Waikiki.

X. Culture and Recreation

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

Policy 2: Identify, and to the extent possible, preserve and restore buildings, sites, and areas of social, cultural, historic, architectural, and archaeological significance.

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

Policy 9: Require all new developments to provide their residents with adequate recreation space.

Policy 10: Encourage the private provision of recreation nand leisure-time facilities and services.

Discussion: An archaeological inventory survey did not unearth archaeological features on the premises. Archaeological monitoring will be performed during site work activities as recommended by the State Historic Preservation Division.

C. Primary Urban Center Development Plan

The Primary Urban Center ("PUC") is that geographic area bounded by the Koolau Mountain Range to the north, Mamala Bay on the south, Waialae-Kahala on the east, and Pearl City on the west. The Department of Planning and Permitting, City and County of Honolulu briefly characterized this urban area in numerical terms thusly:

"In the year 2000, this 15.5 mile long urban corridor had a population of 425,000 residents (about one-half of Oahu's population), accommodated 172,000 housing units (about 55% of Oahu's housing stock), and sustained about 370,000 non-construction jobs (about 78% of total Oahu jobs)."

The Open Space (Map A.2) and Land Use Maps (Map A.6) for the PUC Development Plan (June, 2004) designate the Waikiki area as Urban and the section of Waikiki where the Ala

Wai Garden Plaza project is proposed Medium and Higher-Density Residential/Mixed Use, respectively.

The PUC Development Plan is not a land use plan *per se* but a plan that prescribes a vision for the Honolulu of 2025 based on five key elements. "The vision emphasizes retaining the qualities that attract both residents and visitors, while encouraging growth and redevelopment to accommodate the projected increases in jobs and residential population (PUC Development Plan, 2004)". There are five key elements to this vision:

- Honolulu's natural, cultural and scenic resources are protected and enhanced.
- Livable neighborhoods have business districts, parks and plazas, and walkable streets.
- The PUC offers in-town housing choices for people of all ages and incomes.
- Honolulu is the Pacific's leading city and travel destination.
- A balanced transportation system provides excellent mobility.

Two DP Elements and policies applicable to the proposed project are cited below.

Element: Honolulu's natural, cultural and scenic resources are protected and enhanced.

Policy: Preserve panoramic views of natural landmarks and the urban skyline.

Element: The PUC offers in-town housing choices for people of all ages and income.

Policy: Promote people-scaled apartment and townhouse dwellings in low-or mid-rise buildings oriented to the street.

Policy: Preserve and expand the current inventory of affordable rental housing units.

Discussion

The proposed project will increase the inventory of rental apartments in Waikiki. Rents have not been established but they should be comparable to similar priced units in the community. Redeveloping the now vacant property should improve the street environment along Namahana Street and contribute to the residential character of the neighborhood.

The mid-rise tower will not impinge into the urban skyline when viewed either from areas *mauka* of the Ala Wai Canal or views of the Koolau Mountains from Namahana Street and Kuhio Avenue.

D. Waikiki Special District

The property is located within the boundaries of the Waikiki Special District (See Figure 12). There are no zoning districts and controls *per se* for Waikiki as there is for the rest of Oahu. The Waikiki Special District separates Waikiki into five zoning precincts and prescribes land uses and design standards for the respective precincts that are generally more stringent than those applicable to the rest of Oahu.

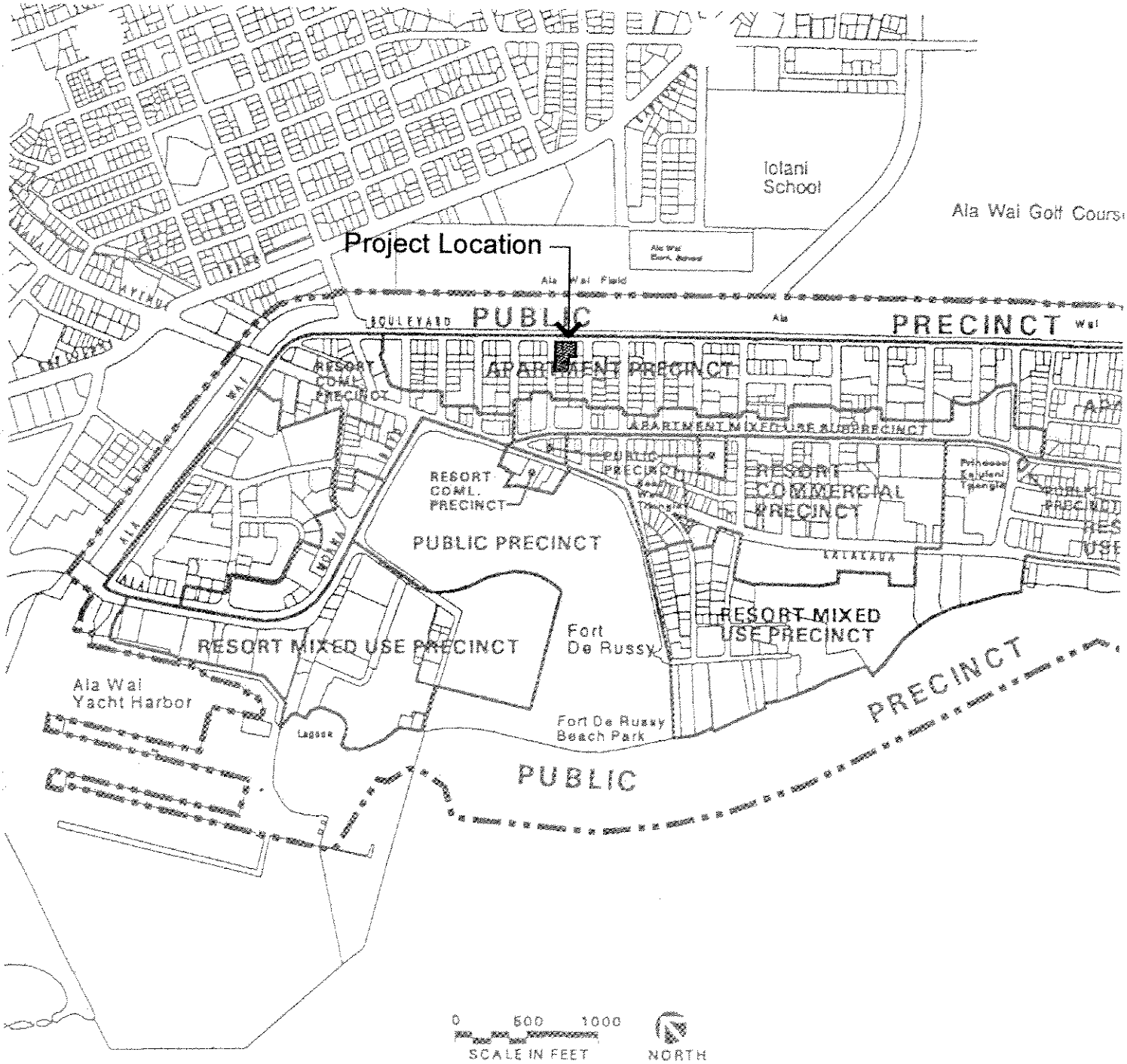


EXHIBIT 21-9.13

JANUARY 30, 1986

LEGEND

WAIKIKI SPECIAL DISTRICT BOUNDARY

USE PRECINCT BOUNDARY

Source: City & County of Honolulu

Figure 12
Waikiki Special District

Ala Wai Garden Plaza

Waikiki, Island of Oahu

NORTH

LINEAL SCALE (FEET)
300 150 0 150 300 600

Gerald Park
Urban Planner
February 2007

The property is located within the Apartment Precinct and will conform to the uses and design standards for the precinct. The project site has a 300-foot height limit. At approximately 71 feet in height the tower complies with the height limit for the area.

The Waikiki Special District also includes provisions for the protection of prominent view corridors or streets oriented *mauka to makai.* Namahana Street is not identified as a major view corridor for streets *mauka* of Kuhio Avenue. Streets providing major view corridors are Nohonani, Nahua, Kanekapolei, Kaiolu, Lewers, Walina, and Seaside Avenue.

The Waikiki Special District, however, recognizes two features in the vicinity of the proposed project that would promote the objectives of the District. One feature which would promote a pedestrian-oriented Waikiki is the proposed pedestrian promenade along the Ala Wai Canal from Kapahulu Avenue on the east to the Ala Wai Boat Harbor. The second feature which would improve mauka views from public viewing areas is the Fort DeRussy Mauka-Makai View Corridor for lands mauka of Fort DeRussy and Kalakaua Avenue and between McCully Street on the west and Kuamoo Street on the east. Namahana Street is just outside of this area being one block east of Kuamoo Street.

E. Special Management Area

The Ala Wai Garden Plaza is not located within the boundaries of the City and County of Honolulu's Special Management Area ("SMA"). A SMA Permit is not required to build the project.

F. Park Dedication Ordinance

Ordinance No. 4621, Park Dedication, creates a program with associated rules for assuring the provision of park space when subdividing land for residential use and constructing multi-family dwellings. The ordinance requirements may be satisfied through the provision of land for a park, payment of fees equal to the land area required multiplied by the fair market value per square foot of land in the immediate area, provision of privately maintained parks, or a combination equal to the dedication requirements. The requirement for the multiple family dwellings in Special District Use precincts is 10% of the maximum permitted floor area or 110 square feet per dwelling or lodging unit, whichever is less.

Applicant will dedicate ***approximately 3,745 square feet of*** land for a private, on-site park to comply with the Park Dedication Ordinance. ***The area to be dedicated is 10% of the maximum permitted floor area (37,430 square feet) which is less than the land to unit ratio of 4,840 square feet (44 units X 110 sf/unit).*** [The provision of an approximately 8,000 square feet park substantially exceeds the ordinance requirement of 4,840 square feet.] ***An area of 2,370 square feet contiguous to the private park and within the space delineated by the pool safety fence will be set aside for recreational uses. A total of 6,115 square feet of outdoor recreation space will be provided for residents and their guests (Department of Parks and Recreation Comment).***

SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS AND MEASURES TO MITIGATE ADVERSE EFFECTS

4

A. Assessment Process

The scope of the project was discussed with the design team. State and County agencies were contacted for information relative to their areas of expertise. Time was spent in the field noting site conditions and conditions in the vicinity of the project site. The sum total of the consultations and field investigations helped to identify existing conditions and features that could affect or be affected by the project. These conditions include:

- The site is vacant and devoid of major above ground structures;
- An abandoned swimming pool and deck occupies about half the project site;
- There are no rare, threatened, or endangered flora or fauna on the property;
- There are no recorded archaeological or cultural resources on the property;
- The property is located in flood zone AO;
- The property is not located in a coastal high hazard area or tsunami inundation area;
- There are no environmental hazards associated with the property; and
- Existing water, wastewater, and utility services are available.

B. Anticipated Short-term Impacts

1. Air Quality

Site work is a necessary function to prepare the land for building the improvements to follow and is probably the most disruptive construction activity on the environment. Site work is a persistent source of fugitive dust. Site contractors are aware that dust is a nuisance to both workers and people living near work sites and it is imperative for them to maintain stringent dust controls. Water sprinkling is probably the most effective dust control measure given the size of the lot and the scale of the proposed improvements. The Contractor, however, may choose to implement other measures based on their experience with similar projects, physical conditions, and job sites. Air pollution control measures will comply with Chapter 60.1, Air Pollution Control regulations of the State Department of Health.

The Contractor will be responsible for general housekeeping of the site and for keeping adjacent streets and properties free of dirt, mud, and construction litter and debris.

2. Construction Noise

Audible construction noise will be unavoidable for most of the 14 month construction period. Exposure to noise, however, is expected to vary in volume, frequency, and duration. Noise will vary also by construction phase, the duration of each phase, and the type of equipment used during the different phases. A chart depicting the range of noise levels from construction equipment is shown in Figure 7 of Appendix C. Actual length of exposure to construction noise at any location will probably be less than the total construction period for the entire project. Noise will be most pronounced during the early stages when the site is grubbed of vegetation and the building foundation constructed. Noise will diminish as the

building is erected and the completed exterior walls will help to attenuate noise from interior construction work.

The multi-family residential and resort buildings closest to the project site are predicted to experience the highest noise levels during construction due to their close proximity to the project site. Adverse impacts from construction noise, however, are not expected to be in the "public health and welfare" category due to the temporary nature of the work and 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 site.

Due to the underlying soil conditions, the structural design anticipates the use of reinforced concrete piles to bear gravity loads and resist seismic uplift loads. A pneumatic pile driver will drive the piles and it is perhaps the noisiest and most irritating piece of construction equipment (at least to those who are exposed to its hiss-boom staccato) that can be used on a construction site. The use of this equipment and its associated noise impact cannot be avoided. Pile driving typically emits noise in the range of 100 to 108 dbA at 50 feet from the source. Regardless of measurable sound levels, pile driving noise is irritating to those exposed to it. Pile driving noise is difficult to attenuate because this activity occurs after construction sites are cleared of vegetation, structures, and other features that help to attenuate noise. Pile driving is projected to take about 1 to 1½ months to complete.

Community Noise Control regulations establish a maximum permissible sound level for construction activities occurring within various zoning districts. Multi-family residential use is placed in the Class B zoning district and the maximum permissible sound level is 60 dBA between the hours of 7:00 AM and 10:00 PM (Chapter 46, Community Noise Control, 1996). Construction activities often produce noise in excess of the permissible daytime noise level and a noise permit (or variance) will be needed. The Contractor will be responsible for obtaining the permit and complying with conditions attached to the permit. Work will be scheduled between the hours of 8:00 AM to 3:30 PM, Mondays through Fridays. The contractor also will ensure that only properly muffled construction equipment are on the job site.

3. Erosion

Excavating, grading, and trenching activities will expose soil to the elements thus creating opportunities for runoff and erosion. Earthwork will be performed in accordance with the Revised Ordinances of Honolulu, 1990, as amended and the Rules Relating to Soil Erosion Standards and Guidelines. At this time grading quantities are conservatively estimated at approximately 950 cubic yards for excavation and 450 cubic yards of fill. Best Management Practices (BMPS) for erosion and drainage control during construction are currently being prepared and will be submitted for review and approval by the Department of Planning and Permitting. At a minimum, perimeter soil barrier fences will be erected; gravel beds placed at vehicle entries to and from the public right-of-way; and filters placed around drain inlets to reduce sediment entering the storm drainage system.

An NPDES permit for storm water runoff associated with construction activities will not be required because less than one acre of the total land area will be disturbed during construction.

The presence of a high water table may require dewatering to construct the building foundations and pile supports extending below the water table. If dewatering is needed, water and solids will be pumped into an on-site detention basin (for example the building's elevator shaft) and allowed to evaporate or percolate into the ground. Dried material will be spread over the ground, allowed to dry, and disposed of off-site. An NPDES Permit for dewatering activities will be required from the State Department of Health for any dewatering activity pursuant to Chapter 54, Hawaii Administrative Rules.

4. Archaeological and Cultural Features

Subsurface archaeological and cultural features are not expected to be encountered because the project is proposed on fill land. The State Historic Preservation Division ***reviewed the archaeological inventory survey report and recommended archaeological monitoring be conducted during construction.*** Applicant will conduct archaeological monitoring during construction as recommended. [by the State Historic Preservation Division.]

Based on the literature search conducted for the project site as part of the archaeological inventory survey, a cultural assessment prepared for a project nearby, and the absence of surface and subsurface archaeological resources it was determined that the property is low in archaeological and cultural resource value. There are no known cultural resources presently associated with the property for the reasons cited in the environmental assessment (Response to OHA Comment).

The project nearby referenced above is located on the block bounded by Kuhio Avenue, Olohana Street, Ala Wai Boulevard, and Kalaimoku Street. A high-rise residential condominium, named Lanikea, was built on the site.

State Historic Preservation Division (SHPD) comments were sought during the Draft Environmental Assessment public review period but no comments were offered. SHPD will be consulted during the Waikiki Special District Permit review process.

5. Flora and Fauna

Adverse effects on flora are not anticipated. None of the trees, palms, shrubs, grasses, and weeds observed is indigenous to the area and listed or proposed for rare, threatened, or endangered status.

6. Solid Waste

Demolition and construction debris will be hauled to an approved disposal site. Green waste will be hauled to H-Power for burning.

7. Circulation and Traffic

Work in Namahana Street to connect infrastructure and utilities and to construct the project driveways will be required. A traffic management plan will be prepared and submitted to the Department of Planning and Permitting for review and approval prior to construction. Measures for mitigating construction-related traffic impacts may include but are not limited to:

- Posting notices alerting residents and motorists of scheduled road work.

- Posting warning signs on both sides of the work area to alert motorists of construction and to slow traffic speed.
- Posting flagmen for traffic control.
- Positioning traffic cones or other directional devices in the roadway to guide vehicles around work areas.
- Keeping at least one traffic lane open at all times to minimize inconveniences to motorists.
- Limiting road construction to between 8:00 AM and 3:00 PM, Monday through Friday.
- Covering open trenches with steel plates during non-working hours and posting safety devices with warning lights to alert motorists of the construction area.

Construction vehicles hauling men and material will contribute to traffic on streets leading to and surrounding the project site. These streets include Kalakaua Avenue, Kuhio Avenue, Namahana Street, and Ala Wai Boulevard. Material deliveries will be scheduled during non-peak traffic hours to minimize impacts on local traffic. Construction material will be off-loaded and stockpiled on-site; however, flagmen will be posted for traffic control should materials need to be unloaded within the road right-of-way. When this occurs, traffic delays can be expected but should not last for more than a few minutes.

8. Economic

The development budget of approximately $22 to 24 million is a significant infusion of capital into the local economy although most of the benefits will accrue to the construction industry. The amount includes the cost of purchasing direct and indirect labor, materials, shipping, and all professional services associated with the project. An estimated 40 to 60 persons (the vast majority being tradesmen) will be on-site at various times over the 24 month construction period. Indirectly, the budget also will pay for off-site administrators and construction managers of companies providing the labor. Labor purchases will also contribute tax dollars to federal and state governments in the form of payroll deductions.

C. Anticipated Long-term Impacts

1. Housing and Rental Inventory

The project will contribute 44 apartment units to the overall housing and rental apartment inventory in Waikiki. It is recognized that the vacancy rate for Waikiki is high for apartments. Applicant, however, believes that a new, clean, and safe living environment will attract tenants and vacancy is not an issue.

2. Population

The completed project would house a population estimated at between 70 to 85 people. Some of the tenants may be new to the islands, moving from another part of the island, or moving from elsewhere in Waikiki.

3. Noise

Because of the relatively small increases in traffic noise attributable to project related traffic, the proposed project is not expected to generate adverse noise impacts (Ebisu, 2007).

Special traffic noise mitigation measures should not be required. Because the mauka living units of the project will experience traffic noise levels greater than 65 Ldn, provisions for air conditioning at these units will be incorporated into the project. The use of air conditioning allows for closure of exterior windows and doors, which can typically provide acceptable attenuation of outside traffic noise. Each unit will be equipped with two through the wall air conditioning units. This type of unit typically emit low volume fan and compressor sounds. It is anticipated that noise from the air conditioning units will be within the allowable night time noise limit (50 dBA) for residential areas.

Landscape plantings also will aid in attenuating project related noise and noise from street traffic.

4. Ambient Air Quality

Ambient air quality should not be adversely affected in the long-term. The principal source of air pollution is expected to be exhaust emissions from vehicles entering and exiting the site and passing traffic. The Traffic Impact Report indicated that traffic contributed by the project is expected to be minimal.

5. Circulation and Traffic

Trip generation rates for the 44 unit Ala Wai Garden Plaza is projected as follows:

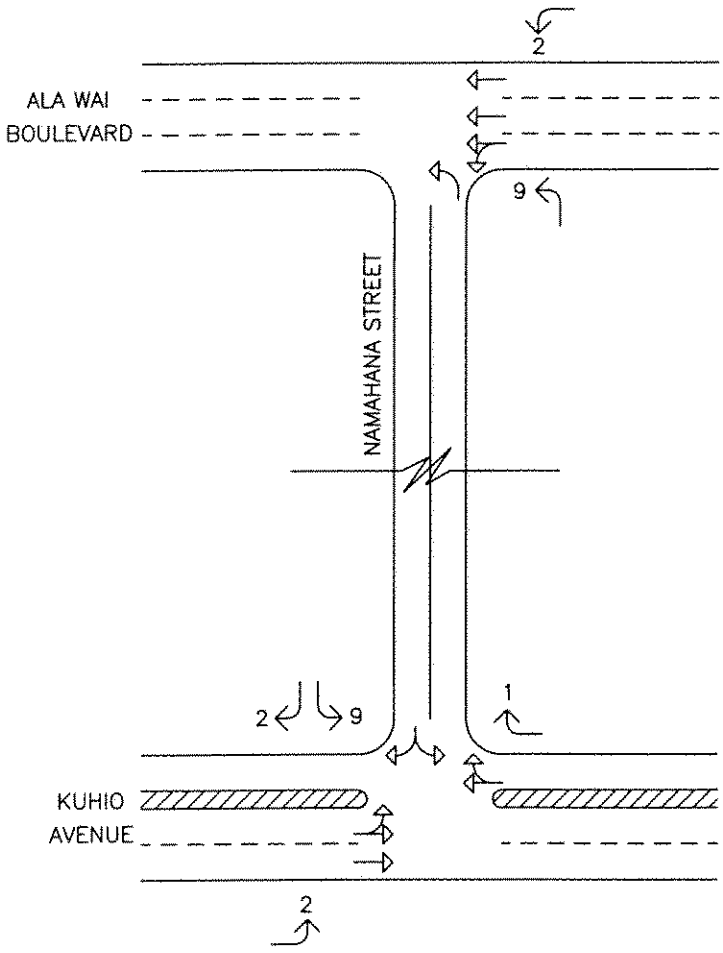
Table 2. Peak Hour Trip Generation

APARTMENT **INDEPENDENT VARIABLE:**		**Dwelling Units = 44**
		PROJECTED TRIP ENDS
AM PEAK	**ENTER**	**5**
	EXIT	**20**
	TOTAL	**25**
PM PEAK	**ENTER**	**27**
	EXIT	**15**
	TOTAL	**42**

Source: Wilson Okamoto Corporation, 2007.

Access to the project site will be from Nahamaha Street thus all project generated traffic will use Namahana Street. Based upon the prevalent directional distribution of traffic through Waikiki and utilizing traffic count data in the vicinity of the project, directional distribution of traffic during AM and PM peak hours is shown on Figures 13 and 14.

The projected Year 2009 AM and PM peak period traffic operating conditions (Level of Service or LOS) without the project are summarized in Table 3. Existing Levels of Service are included for comparison purposes. Traffic operations under Year 2009 without project conditions are expected to remain similar to existing conditions.



LEGEND

90 TRAFFIC MOVEMENT VOLUME (VPH)

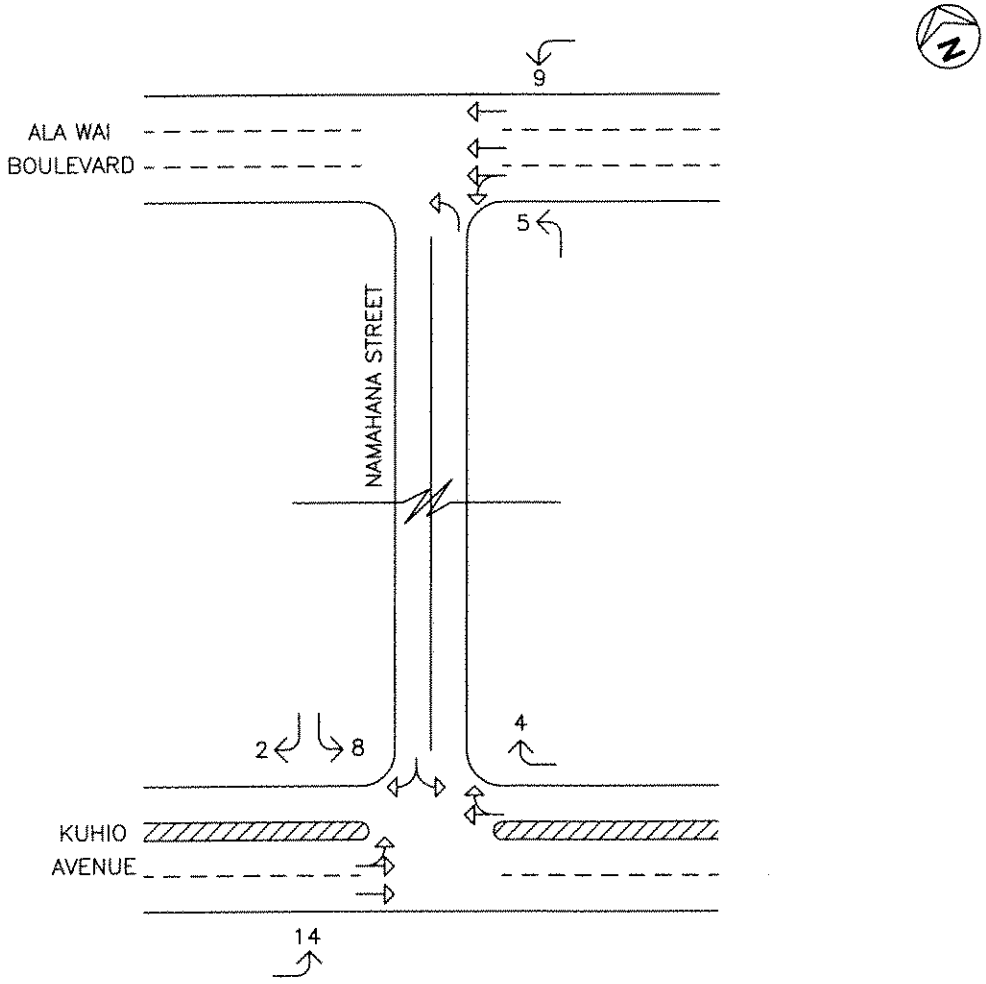
LANE USAGE

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

ALA WAI GARDEN PLAZA

DISTRIBUTION OF SITE-GENERATED VEHICLES - AM PEAK HOUR OF TRAFFIC

FIGURE 13



WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

ALA WAI GARDEN PLAZA

DISTRIBUTION OF SITE-GENERATED VEHICLES - PM PEAK HOUR OF TRAFFIC

FIGURE 14

The projected Year 2009 AM and PM peak period traffic operating conditions (LOS) with the project are shown in Table 3.

Table 3: Existing and Projected (With and Without Project) Traffic Operating Conditions

Intersection	Critical Movement		AM			PM		
			Exist	Year 2009		Exist	Year 2009	
				w/out Proj	w/ Proj		w/out Proj	w/ Proj
Namahana St/ Ala Wai Blvd	Northbound	LT	C	C	C	C	C	C
	Westbound	TH-LT	A	A	A	A	A	A
Namahana St/ Kuhio Ave	Southbound	LT-RT	B	B	B	C	C	C
	Eastbound	TH-LT	A	A	A	A	A	A

Source: Wilson Okamoto Corporation, 2007

Traffic operations under Year 2009 with project conditions are expected to remain similar to existing and Year 2009 without project conditions during both peak periods. The critical movement at the study intersections along Namahana Street is expected to continue operating at levels of service similar to existing and Year 2009 without project conditions.

The total traffic volumes entering the intersection of Namahana Street with Ala Wai Boulevard are expected to increase by less than 1% during both peak periods with the proposed project while those entering the intersection with Kuhio Avenue are expected to increase by approximately 2-3% during both peak periods. These increases in total traffic volumes are in the range of daily volume fluctuations along those roadways and represent a minimal increase in the overall traffic volumes.

Construction of the project will result in the net loss of one (1) of the five on-street parking stalls fronting the project site.

6. Water

Water use is estimated at 1,760 gallons per day for domestic consumption. The Board of Water Supply has indicated that water is available for the development and a final decision on availability will be confirmed when the building permit is submitted for approval.

7. Wastewater

Wastewater will be discharged into the municipal sewer system and conveyed to the Sand Island Wastewater Treatment Plant for ocean disposal. The Department of Planning and Permitting approved a Wastewater Connection ***(2006/SCA-0713)*** for a 40-unit residential development on this site ***in April 2007 (Department of Planning and Permitting Comment).***

8. Solid Waste

Domestic solid waste is estimated at 154 pounds per day (3.5 pounds per dwelling unit). A private hauler will be contracted to collect and transport solid waste to an approved disposal facility. The building owner may set aside an area for voluntary waste separation as a conservation measure.

9. Storm Runoff

Storm runoff is anticipated to be higher in volume in comparison to the runoff generated under existing conditions because pervious areas will be replaced by impervious surfaces. ***A preliminary estimate of the increase in storm runoff is 0.223 cubic feet per second (Department of Design and Construction Comment).*** The current City and County of Honolulu policy on storm water runoff is to reduce the pollution associated with storm water runoff from new development. Because the site is currently vacant, on-site generated storm runoff is minimal. Development will increase storm water by the addition of roofs and paved surfaces.

To comply with City policy, ***an on-site storm water retention system will be designed to keep runoff from leaving the site. The system may include directing*** [it is proposed to direct] new project generated storm water to open space and landscaped areas where the water can evaporate or percolate into the ground. Stormwater equal to existing conditions will be allowed to daylight toward the street and enter the municipal drainage system at Ala Wai Boulevard and Namahana Street. Other methods may be implemented pursuant to approved, site-specific Best Management Practices and criteria in Part II Water Quality Criteria, City Rules Relating to Storm Drainage Standards (Department of Planning and Permitting, 2000).

10. Protective Services

The Honolulu Police Department regularly patrols the neighborhood. The project will neither generate a need to expand the service district (Police District 1) nor the need for additional police officers.

Fire protection originates from the Waikiki Fire Station with back-up from the Kaheka Street Station. It is anticipated that the completed project will not adversely affect fire service in Waikiki.

11. Land Use

The proposed project is consistent with the Apartment ***Precinct*** [designation] for the property and its construction will help to implement the desired land use pattern for the area. The height of the tower is approximately 71-feet which is considerably less than the 300-foot ***allowable*** height level for the Apartment Precinct.

12. Landscaping and Views

A computer generated rendering of the project taken from across the Ala Wai Canal is shown on Figure 15. The Ala Wai Garden Plaza will be slightly higher than adjoining walkup apartments on Namahana Street. As shown on the graphic, the Ambassador Hotel

Figure 15

and Maile Sky Court at Namahana Street and Kuhio Avenue and the Royal Garden on Olohana Street are the visually prominent structures on the block.

Existing plant material around the perimeter will be selectively removed to allow for driveway openings onto Namahana Street. Selective removal and trimming also will allow for the introduction of plant materials other than palms. [Removal of trees with a 6" caliper or greater will require a Waikiki Special District Minor Permit.] ***Project landscaping, including tree removal, will be reviewed and approved under the Waikiki Special District Major Permit (Department of Planning and Permitting Comment).*** New plantings will add form, color, and texture to interior locations around the building and the recreation area. It is anticipated that the landscaping will help to soften the building form and mass and contribute visually to a Hawaiian "sense of place". ***Integrated design features that would help to accomplish this objective include:***

- ***The 71-foot tall building is less than the allowable building height;***
- ***Parking is setback from the street and yards;***
- ***Parking levels are screened from public view;***
- ***A free standing metal fence fronting public streets is setback from the street to provide street side landscaping and to enhance the pedestrian walkway;***
- ***Exterior colors of the building and roof convey a tropical setting;***
- ***The East elevation features a stepped façade to break up the building bulk and the exterior wall is embellished with a pattern finish;***
- ***The building is topped by a pitched roof; and***
- ***Tropical palms, trees, and shrubs create a comfortable tropical environment and help to screen views from the outside.***

The tower is not expected to cast shadows onto the lower floors of adjoining multi-family buildings. The existing perimeter landscaping already screens several adjoining buildings from the sun and no significant change in this condition is anticipated even with the 6-floor tower and additional landscaping.

ALTERNATIVES TO THE PROPOSED ACTION 5

A. No Action

The no action alternative would maintain the status quo of the building site and preclude the occurrence of all environmental impacts, short and long-term, beneficial and adverse described in this Assessment. The site would remain vacant until another more economically feasible use is proposed.

PERMITS AND APPROVALS 6

Land use and construction permits required for the project and respective approving authorities are identified below. Additional permits and approvals may be required depending on final construction plans.

City and County of Honolulu

Department of Planning and Permitting

Special District Major Permit
Grubbing, Grading, and Stockpiling Permit
Building Permit for Building, Electrical, Plumbing Sidewalk/Driveway and Demolition Work
Permit to Excavate Public Right-of-Way
Certificate of Occupancy

Board of Water Supply

Water and Water System Requirements for Developments

Department of Transportation Services

Street Usage Permit

State of Hawaii

Department of Health

Variance from Pollution Controls (Noise Permit)
NPDES Permits (Various)

AGENCIES AND ORGANIZATIONS TO CONSULTED IN THE ENVIRONMENTAL ASSESSMENT PROCESS

7

The Draft Environmental Assessment for Ala Wai Garden Plaza was published in the Office of Environmental Quality Control Environmental Notice of August 23, 2007. Publication initiated a 30-day public review period that ended on September 24, 2007. An asterisk * identifies agencies and organizations that submitted written comments during the review period. All comment letters and responses are in Appendix F.

State of Hawaii
- ***Department of Education***
- *Department of Health
  - *Environmental Planning Office
  - ***Clean Air Branch***
  - *Office of Environmental Quality Control
- Department of Land and Natural Resources
  - Historic Sites Division
  - ***Land Division***
- ***Department of Transportation***
- ***Office of Hawaiian Affairs***

City and County of Honolulu
- *Board of Water Supply
- ***Department of Design and Construction***
- *Department of Facility Maintenance
- ***Department of Parks and Recreation***
- *Department of Planning and Permitting
- Department of Transportation Services
- *Fire Department
- *Police Department

Others
- *Hawaiian Electric Company
- *Hawaiian Telcom, Inc.
- Oceanic Cable
- *Waikiki Neighborhood Board No. 23
- Waikiki Public Library (Placement)

Agencies Consulted in Preparing the Environmental Assessment

Board of Water Supply
Department of Planning and Permitting
- Land Use Branch
- Site Development Division, Wastewater Branch
- Traffic Management Branch

Department of Land and Natural Resources, State Historic Preservation Division

DETERMINATION OF SIGNIFICANCE 8

Chapter 200 (Environmental Impact Statement Rules) of Title 11, Administrative Rules of the State Department of Health, establishes criteria for determining whether an action may have significant effects on the environment (§11-200-12). The relationship of the proposed project to these criteria is discussed below.

1) **Involves an irrevocable commitment to loss or destruction of any natural or cultural resource;**

   Natural or cultural resources are not found on the property thus there should be no effect on these resources. The State Historic Preservation Division recommended and Applicant has agreed to archaeological monitoring during construction.

2) **Curtails the range of beneficial uses of the environment;**

   The property is located in a section of Waikiki and has been vacant and generally unused since 2005.

3) **Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in chapter 344, Hawaii Revised Statutes, and any revisions thereof and amendments thereto, court decisions or executive orders;**

   The project does not conflict with long-term environmental policies, goals, and guidelines of the State of Hawaii.

4) **Substantially affects the economic or social welfare of the community or State;**

   The completed project will make available 44 rental units. Considering that there is no other project of this scale proposed at this time in Waikiki, the project is anticipated to have a beneficial impact in late 2008 when the project is projected to be completed and units made available for rent.

5) **Substantially affects public health;**

   Public health will not be adversely affected.

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

   In-place water, sewer, drainage, and utility systems should be able to accommodate the user demand on the respective systems.

   A resident population of between 70 and 85 persons is projected.

7) **Involves a substantial degradation of environmental quality;**

   Environmental quality will not be degraded. The Ala Wai Garden Plaza is proposed on a vacant and generally undeveloped lot. When completed, a well-designed, safe, and

secure residential environment will be provided for its tenants. The project is anticipated to improve the overall environmental quality of the property on which it is to be built and the neighborhood in which it is located.

8) **Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions;**

The project does not involve a commitment for larger actions.

9) **Substantially affects a rare, threatened or endangered species, or its habitat;**

Rare, threatened or endangered flora or fauna were not observed on the premises. The lot was previously grubbed, graded, and surcharged and most vegetation consists of common trees, shrubs, grasses, and ruderal weeds.

10) **Detrimentally affects air or water quality or ambient noise levels;**

Air and water quality and ambient noise levels should not be detrimentally affected by the proposed project. Fugitive dust will be raised during site work but can be controlled by appropriate dust mitigation measures stipulated in this Assessment and measures proposed by the site work contractor.

Construction noise will be audible throughout the 14-month construction period. Noise will be most pronounced during the early construction stages and diminish with the advent of interior building activities. A pile driver will be used and noise from this equipment will be audible for approximately 1 to 1½ months.

Surface runoff will be detained on-site to allow sediment and other pollutants to fall out of the runoff stream. Runoff water will be allowed to evaporate or percolate into the ground or controlled release into the municipal storm drainage system.

The completed project is not anticipated to adversely affect air and water quality in the long-term.

11) **Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters.**

The project is not proposed in an environmentally sensitive area.

12) **Substantially affects scenic vistas and view planes identified in county or state plans or studies, or,**

No significant scenic vistas and view planes have been identified on the property or occurring across the property.

13) **Requires substantial energy consumption.**

Electrical power requirements will be determined during the design stage of the project.

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June 14, 2007

Mr. Randal Monaghan
Landscape Architect
45-222 Kailiwai Place
Kaneohe, HI 96744

Re: Tree Assessment at Ala Wai Garden Plaza

Dear Mr. Monaghan:

The following tree assessment includes the major trees and palms located at the Ala Wai Garden Plaza project on the corner of Ala Wai Blvd. and Namahana St. in Honolulu.

The area includes seventy Areca Palm clusters, nineteen Royal Palm trees, ten Coconut Palms, sixteen Plumeria trees and three Shower trees, as shown on existing plant survey plan provided. One Manila Palm tree was not listed on site map.

After conducting a site inspection, the enclosed spreadsheet provides the following information for your review:

1. Tree numbers (Corresponding to site map)
2. Plant species (Common name)
3. Height (Reference to palms)
4. Trunk diameter (Reference to leafy trees)
5. Condition (Good, fair or poor)
6. Transplantable (Good prospects for long term survival)
7. Comments (Regarding above categories)

The Royal Palms located along the perimeter are in good condition, they are larger mature palms and candidates for transplant if necessary on site (Photo # 1, # 2). The Royal Palm # 19 has a defect in the upper 1/3 of the trunk (Photo # 3) Royal Palm # 17has a penciling upper crown shaft (Photo # 4). Royal Palm # 18 is over 60 feet tall (Photo # 5) these three palms are not good candidates for transplant.

The Plumeria trees range in condition from poor to good, many have severe wound cavities and branch die back (Photos # 6, # 7). Eight of the sixteen are transplantable (Photo # 8).

Coconut Palms along the Diamond Head side of the project are in good condition, Coconut # 39 and # 40 have penciling upper crowns (Photo # 9). The two Coconut palms # 45 and # 46 along Ala Wai Blvd. (Photo # 10) are stressed and in fair condition, these palms are marginal transplant candidates.

The majority of the Areca palms located on the Makai, Ewa and Diamond Head side of the project are in good-fair condition (Photo # 11). There has been minimal irrigation, maintenance and removal of dead stalks/fronds. With care the majority of the Areca palm clusters could be relocated with a reasonable success rate. The Areca palms on the Mauka side are stressed and weak, they are not a good candidate for relocation at this time. An irrigation program and root stimulant fertilizer is recommended to help revitalize these palms.

One yellow Shower tree growing on the outside corner of Ala Wai Blvd. and Namahana Street has a large decayed wound and poor branch structure, this tree is a poor candidate for transplant (Photo # 12).

Please contact my office at 734-5963 if you have any further questions or requests for additional services.

Respectfully yours,

Steve Nimz,
Consulting Arborist ISA Certified Arborist # WC- 0314

Enclosure: Site map
Spreadsheet
Photos # 1 thru # 12

Ala Wai
Garden Plaza
Tree Survey

Tree #	Common name	Height	Trunk Diameter	Condition	Transplantable	Comments
1	Royal Palm	45		Good	X	
2	Royal Palm	40		Good	X	
3	Royal Palm	40		Good	X	
4	Royal Palm	40		Good	X	
5	Royal Palm	40		Good	X	
6	Royal Palm	50		Good	X	
7	Royal Palm	40		Good	X	
8	Royal Palm	45		Good	X	
9	Royal Palm	45		Good	X	
10	Royal Palm	40		Good	X	
11	Royal Palm	40		Good	X	
12	Royal Palm	35		Fair	X	
13	Royal Palm	40		Good	X	
14	Royal Palm	40		Good	X	
15	Royal Palm	35		Good	X	
16	Royal Palm	30		Good	X	
17	Royal Palm	40		Fair-poor		Penciling in crown shaft
18	Royal Palm	60				Large, over mature
19	Royal Palm	60		Fair		Decay in upper trunk, over mature
20	Manila Palm	10		Good	X	
21	Pink Plumeria		12.5	Poor		Decay, wounds
22	Yellow Plumeria		6.5	Poor		Decay
23	Yellow Plumeria		8	Fair		Decay
24	Singapore Plumeria		9	Fair	X	Low branching
25	Singapore Plumeria		8.5	Good	X	Wounds
26	Singapore Plumeria		16	Fair		Low branching
27	Singapore Plumeria		9	Fair		Leaning, wound
28	Singapore Plumeria		6	Fair	X	Broken branches
29	Singapore Plumeria		12	Good	X	Wounds
30	Singapore Plumeria		9	Fair-poor		Decay, wounds

Ala Wai
Garden Plaza
Tree Survey

Tree #	Common name	Height	Trunk Diameter	Condition	Transplantable	Comments
31	Singapore Plumeria (2)		10 & 9	Fair		Decay, wounds
32	Singapore Plumeria		7.5	Good	X	
33	Singapore Plumeria		15	Good	X	Low branching
34	Singapore Plumeria		14	Poor		Decay, wounds
35	Singapore Plumeria		10.5	Fair	X	Wounds
36	Singapore Plumeria		6.5	Fair	X	Wounds
37	Coconut Palm	30		Good	X	
38	Coconut Palm	30		Good	X	
39	Coconut Palm	30		Fair	X	Penciling upper trunk
40	Coconut Palm	30		Fair	X	Penciling upper trunk
41	Coconut Palm	25		Good	X	
42	Coconut Palm	35		Good	X	
43	Coconut Palm	40		Good	X	
44	Coconut Palm	40		Good	X	
45	Coconut Palm	50		Fair-poor		Stressed, large mature palm
46	Coconut Palm	25		Fair	X	Wounds at base
47	Areca Palm	25		Good	X	
48	Areca Palm	25		Good	X	
49	Areca Palm	20		Good	X	
50	Areca Palm	15		Fair		
51	Areca Palm	25		Fair	X	
52	Areca Palm	20		Good	X	
53	Areca Palm	20		Fair		
54	Areca Palm	20		Poor		
55	Areca Palm	20		Fair	X	
56	Areca Palm	15		Fair	X	
57	Areca Palm	15		Poor		
58	Areca Palm	15		Poor		
59	Areca Palm	20		Poor		
60	Areca Palm	20		Poor		

Ala Wai
Garden Plaza
Tree Survey

Tree #	Common name	Height	Trunk Diameter	Condition	Transplantable	Comments
61	Areca Palm	15		Poor		
62	Areca Palm	20		Good	X	
63	Areca Palm	20		Fair	X	
64	Areca Palm	20		Fair	X	
65	Areca Palm	15		Good	X	
66	Areca Palm	20		Good	X	
67	Areca Palm	20		Good	X	
68	Areca Palm	25		Good	X	
69	Areca Palm	20		Good	X	
70	Areca Palm	20		Good	X	
71	Areca Palm	15		Good	X	
72	Areca Palm	10		Fair	X	
73	Areca Palm	15		Good	X	
74	Areca Palm	15		Good	X	
75	Areca Palm	15		Good	X	
76	Areca Palm	20		Good	X	
77	Areca Palm	15		Fair	X	
78	Areca Palm	15		Fair		
79	Areca Palm	15		Fair	X	
80	Areca Palm	15		Fair		
81	Areca Palm	15		Fair	X	
82	Areca Palm	15		Fair		
83	Areca Palm	10		Poor		
84	Areca Palm	10		Poor		
85	Areca Palm	10		Poor		
86	Areca Palm	10		Poor		
87	Areca Palm	10		Poor		
88	Areca Palm	10		Poor		
89	Areca Palm	10		Poor		
90	Areca Palm	10		Poor		

Ala Wai
Garden Plaza
Tree Survey

Tree #	Common name	Height	Trunk Diameter	Condition	Transplantable	Comments
91	Areca Palm	10		Poor		
92	Areca Palm	10		Poor		
93	Areca Palm	10		Poor		
94	Areca Palm	10		Poor		
95	Areca Palm	10		Poor		
96	Areca Palm	11		Poor		
97	Areca Palm	11		Poor		
98	Areca Palm	11		Poor		
99	Areca Palm	11		Poor		
100	Areca Palm	11		Poor		
101	Areca Palm	11		Poor		
102	Areca Palm	11		Poor		
103	Areca Palm	11		Poor		
104	Areca Palm	11		Poor		
105	Areca Palm	11		Poor		
106	Areca Palm	25		Good	X	
107	Areca Palm	25		Good	X	
108	Areca Palm	25		Good	X	
109	Areca Palm	25		Good	X	
110	Areca Palm	25		Good		
111	Areca Palm	20		Good	X	
112	Areca Palm	20		Good	X	
113	Areca Palm	20		Good	X	
114	Areca Palm	20		Good	X	
115	Areca Palm	20		Good	X	
116	Areca Palm	25		Good	X	
117	Yellow Shower Tree		12	Poor		Large trunk wound, poor branching
118	Shower Tree		3	Fair	X	New planting
119	Shower Tree		3.5	Fair	X	New planting

Ala Wai Garden Plaza

Photo # 1

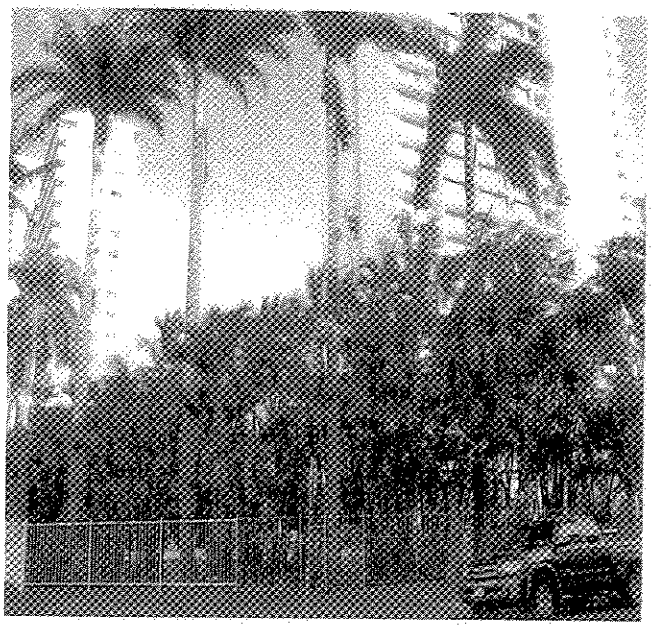
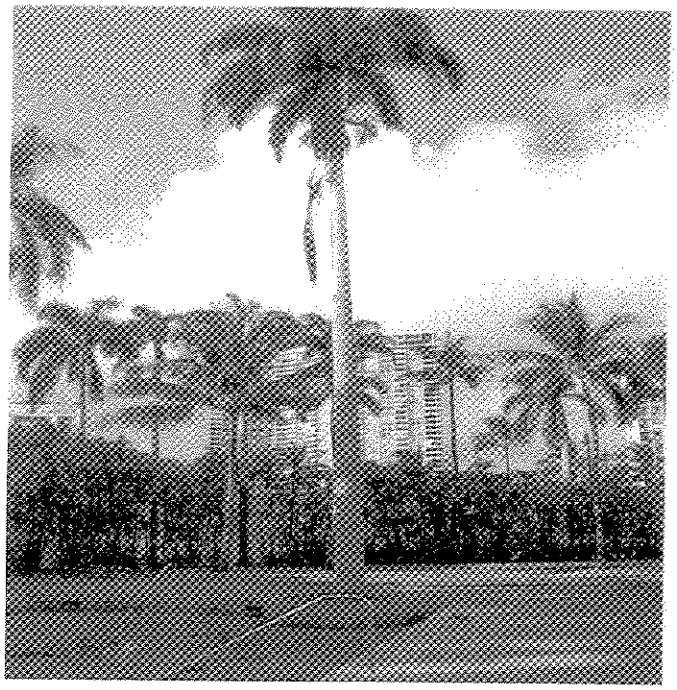


Photo # 2

Photo # 3

Photo # 4



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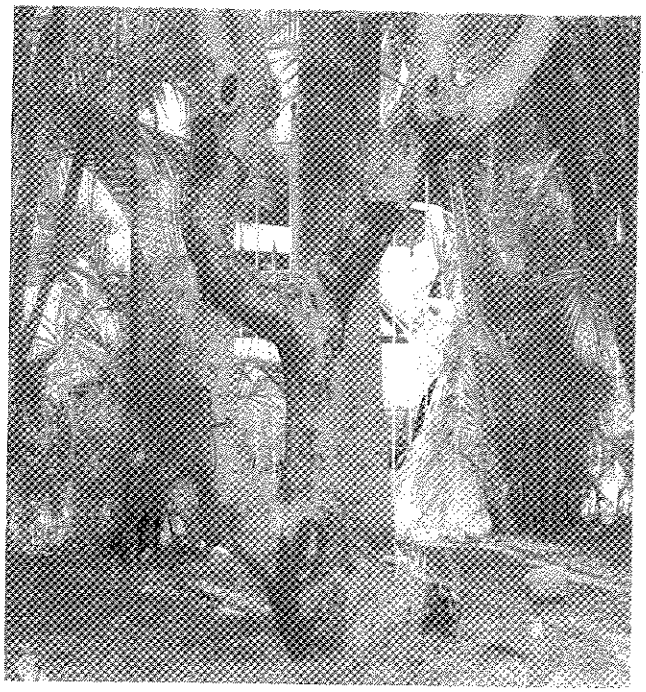

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Photo # 7

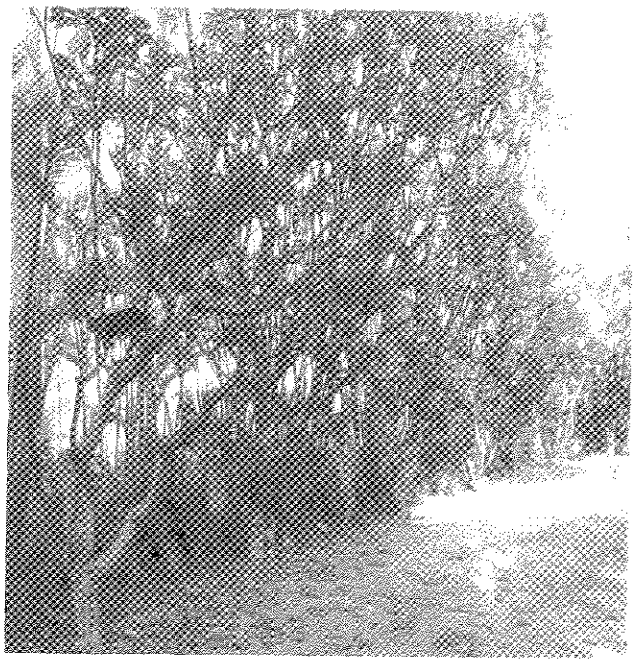

Photo # 8

Photo # 9

Photo # 10

Photo # 11

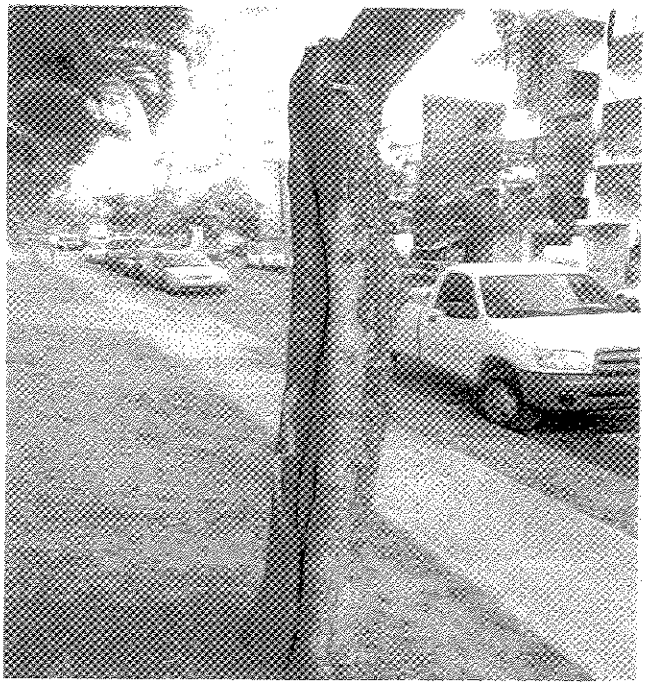

Photo # 12

Archaeological Inventory Survey of 0.5-Acres of the Royal Kāhili Condo Property,

Waikīkī, Kona District, Island of O'ahu

TMK: (1)-2-6-016:056, 057, 058, 059, 060

Draft

by
Owen O'Leary, M.A.
Rodney Chiogioji, B.A
Anthony Bush, B.Ed.
Douglas F. Borthwick, B.A.
and
Hallett H. Hammatt, Ph.D.

Prepared for
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18010 Dry Mill Rd.
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Prepared by
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Kailua, Hawai'i
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August 2005

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Management Summary

Report Reference	Archaeological Assessment of 0.5-Acres of the Royal Kāhili Condo Property, Waikīkī, Kona District, Island of O'ahu
Project Number	Cultural Surveys Hawai'i Inc. (CSH) Project No. WAIK 75
Location	The project area comprises TMK: 2-6-16: 056, 057, 058, 059, 060, which are on the corner of Ala Wai Boulevard and Nāmāhana Street, *ahupua'a* of Waikīkī, District of Kona, Island of O'ahu. This area is depicted on the 1998 Honolulu 7.5-minute USGS topographic quadrangle
Date Submitted	August 2005 (Draft)
Permit Number	Fieldwork was performed under CSH's annual archaeological research permit, No. 0508, issued by DLNR / SHPD
Agencies	State of Hawai'i Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD)
Land Jurisdiction	Private, owned by Pacific Century Development and Realty.
Survey Acreage	Approximately 0.5-acre
Historic Preservation Regulatory Context	This study was conducted to fulfill HAR 13-276 and 13-284.
Field Effort	Owen L. O'Leary, M.A., Anthony Bush, B.Ed., and Todd Tulchin, B.S. assisted project director Douglas F. Borthwick, B.A., with the field effort, which required 5 person-days to complete. Fieldwork took place on June 2&3, 2005 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).
Sites Identified	None.
Site Significance Evaluations	No Sites.
Recommendations	No sites were identified during the course of this archaeological inventory survey. Based on testing results, no further archaeological appears warranted. However, as with all portions of Waikiki, the chance of encountering burials is very possible and as such, if further excavations occur and cultural material is noted, an archaeological monitor should be brought in and on-hand during any further excavations.

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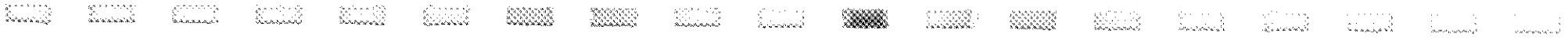


Section 1 Introduction

1.1 Investigation Background

At the request of Pacific Century Development and Realty, Cultural Surveys Hawai`i, Inc., (CSH) completed an Archaeological Inventory Survey of 0.5-Acres of the Royal Kāhili Condo Property, Waikīkī, Kona District, Island of O'ahu (TMK: 2-6-16: 056, 057, 058, 059, 060) (Figures 1-2).

In consultation with SHPD, the archaeological inventory survey was designed to fulfill the state requirements for archaeological inventory survey [Hawai'i Administrative Rules (HAR) Chapter 13-276]. This document was prepared to support the proposed project's historic preservation review under Hawai'i Revised Statutes (HRS) Chapter 6E-42 and HAR Chapter 13-284.

1.2 Project Description

The subject parcel is approximately 0.5-acres in size, comprising TMK: 2-6-16: 056, 057, 058, 059, 060, at the corner of Ala Wai Boulevard and Nāmāhana Street, *ahupua'a* of Waikīkī, District of Kona, Island of O'ahu. The project area is depicted on the 1998 Honolulu 7.5-minute USGS topographic quadrangle (Figure 1). The parcel is completely developed and landscaped. Existing vegetation on site consists of a mowed lawn and introduced plants, typically used for landscaping. Approximately half of the project area is an existing resort swimming pool with associated infrastructure, such as pumps, filter ad underground service lines.

1.3 Scope of Work

The following are included in this archaeological inventory scope of work and will satisfy the State and County requirements:

A complete pedestrian ground survey of the entire project area was conducted for the purpose of site inventory. No historic properties were discovered during this phase.

Limited subsurface testing with a backhoe was undertaken to determine if subsurface deposits were located in the project area, and, if so, evaluate their significance. One sample of organic material (gourd fragment) was submitted to Beta Analytic to be analyzed for chronological information.

Research on historic and archaeological background, including search of historic maps, written records, and Land Commission Award documents. This research focuses on the specific area, with general background on the *ahupua`a* and district, and emphasizes settlement patterns.

Conduct community consultations with persons knowledgeable about the historic and traditional practices in the project area and region. We anticipate both formal and informal interviews.

Preparation of a survey report that includes the following:

a. A topographic map of the survey area showing all archaeological sites and site areas;

b. Description of all archaeological sites with selected photographs, scale drawings, and discussions of function;

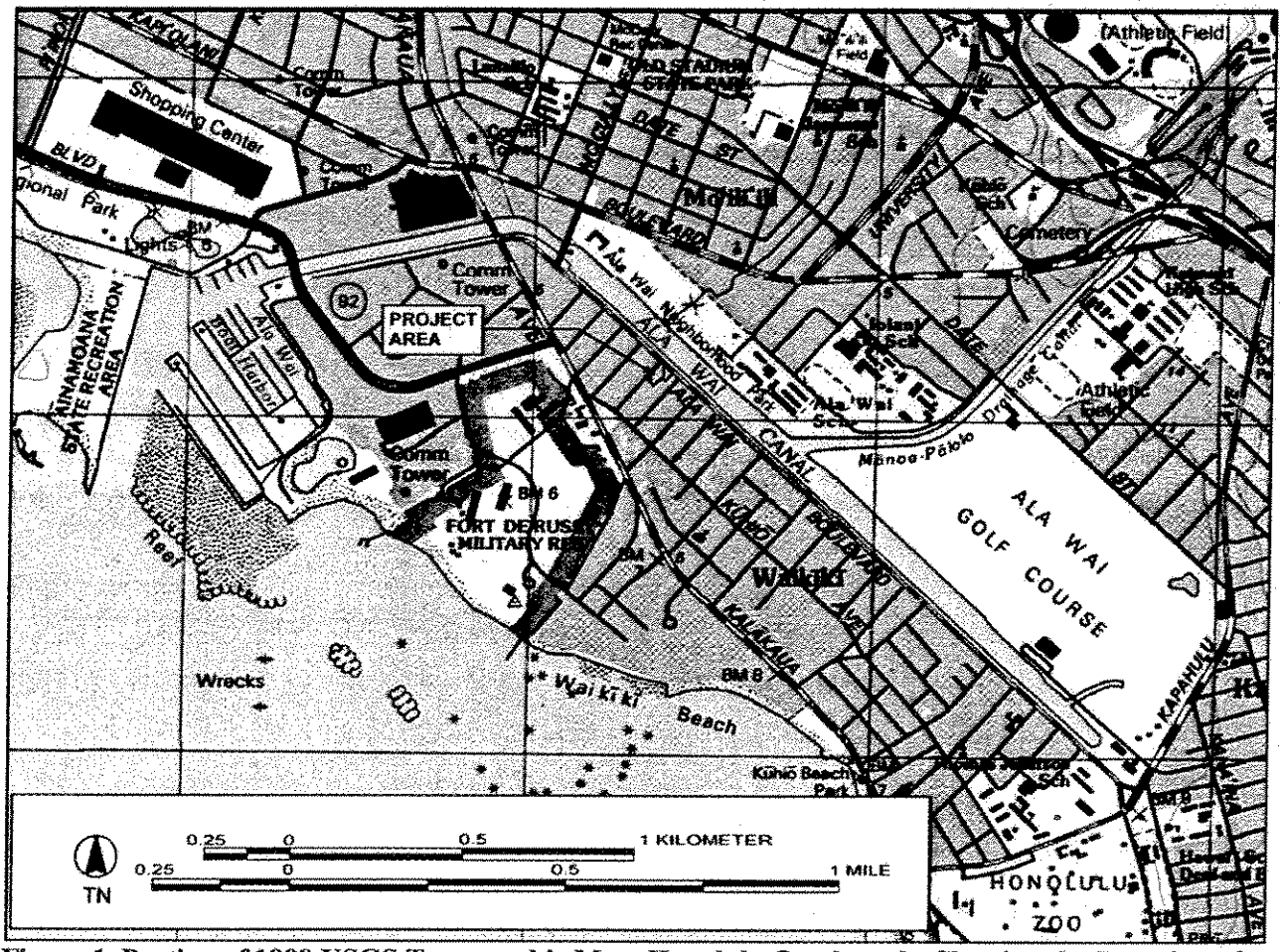
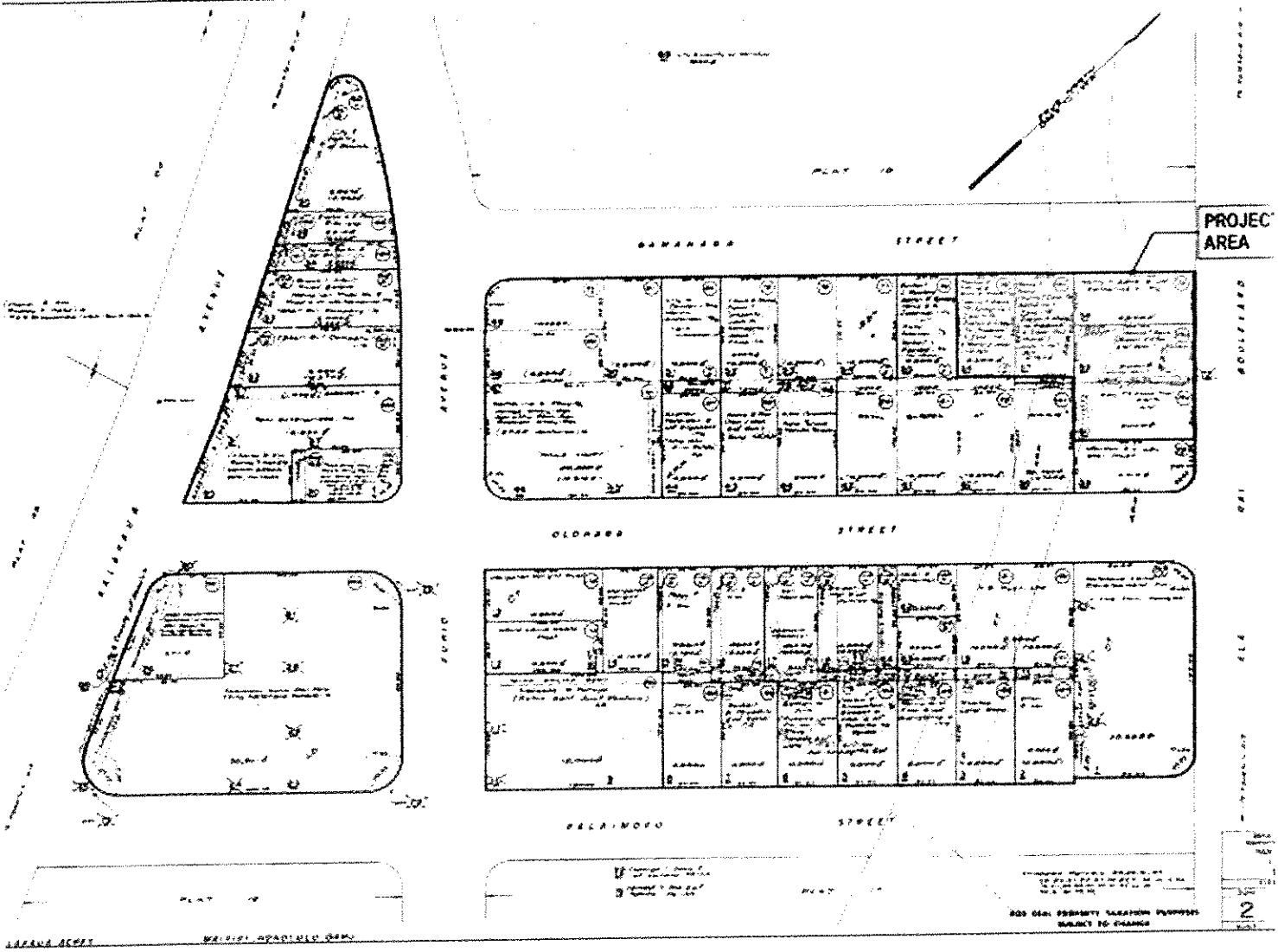


Figure 1. Portion of 1998 USGS Topographic Map, Honolulu Quadrangle, Showing the Location of the Project Area.



e 2. TMK: 2-6-22 Showing the Location of the Project Area.

c. Historical and archaeological background sections summarizing prehistoric and historic land use as they relate to the archaeological features;

d. A summary of site categories and their significance in an archaeological and historic context;

e. Incorporation of the results of the community consultation;

f. Recommendations based on all information generated that will specify what steps should be taken to mitigate impact of development on archaeological resources - such as data recovery (excavation) and preservation of specific areas. These recommendations will be developed in consultation with the client and the State agencies.

This scope of work also includes full coordination with the State Historic Preservation Division (SHPD), and County relating to archaeological matters. This coordination takes place after consent of the owner or representatives.

1.4 Environmental Summary

1.4.1 Natural Environment

The elevation of the project area is approximately 10 feet above mean sea level (AMSL). Annual rainfall ranges from 24 to 31 inches (Giambelluca *et al.* 1986). According to Foote et al., soils within the project area consist of Jaucas sand (JaC) (Foote *et al.* 1972). Northeasterly trade winds prevail throughout the year, although their frequency varies from more than 90% during the summer months to 50% in the winter; the average annual wind velocity is approximately 10 miles per hour (Okamoto 1998:2-1).

1.4.2 Built Environment

This approximately 0.5-acre parcel., privately owned by the Pacific Century Development and Realty, comprises TMK: 2-6-16: 056, 057, 058, 059, 060, which are on the corner of Ala Wai Boulevard and Nāmāhana Street, *ahupua'a* of Waikīkī, District of Kona, Island of O'ahu. This area is depicted on the 1998 Honolulu 7.5-minute USGS topographic quadrangle (Figure 1). The parcel is completely developed and landscaped, with one third of the parcel covered by a swimming pool. Sparse existing vegetation on site consists of all introduced plants typically used for landscaping. The project parcel is surrounded by apartments and hotels to the south, east, and west, and the Ala Wai Canal to the North.

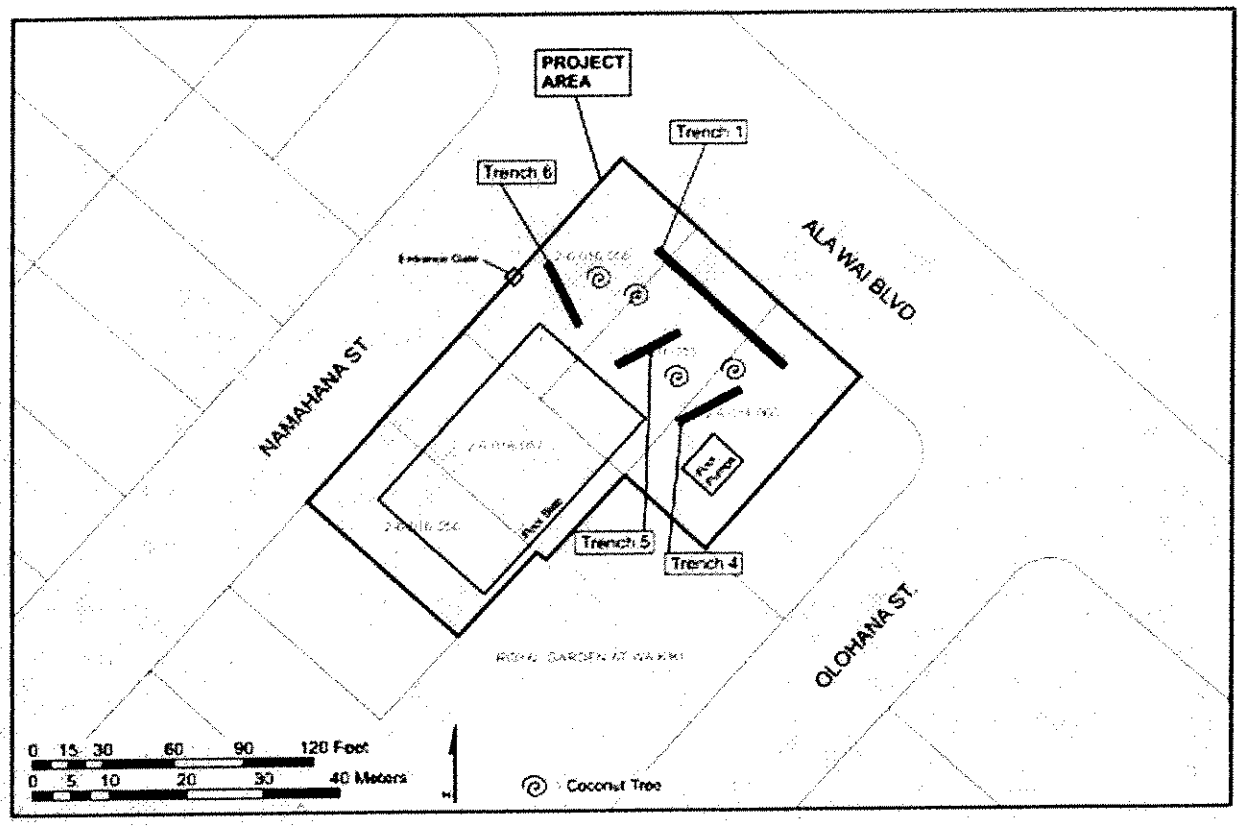


Figure 3. Map showing the location of the 6 test trenches in relation to the foundation plan for the proposed development. The foundation plan and trench locations have been georeferenced and placed within the appropriate current TMK parcel boundaries (red lines).

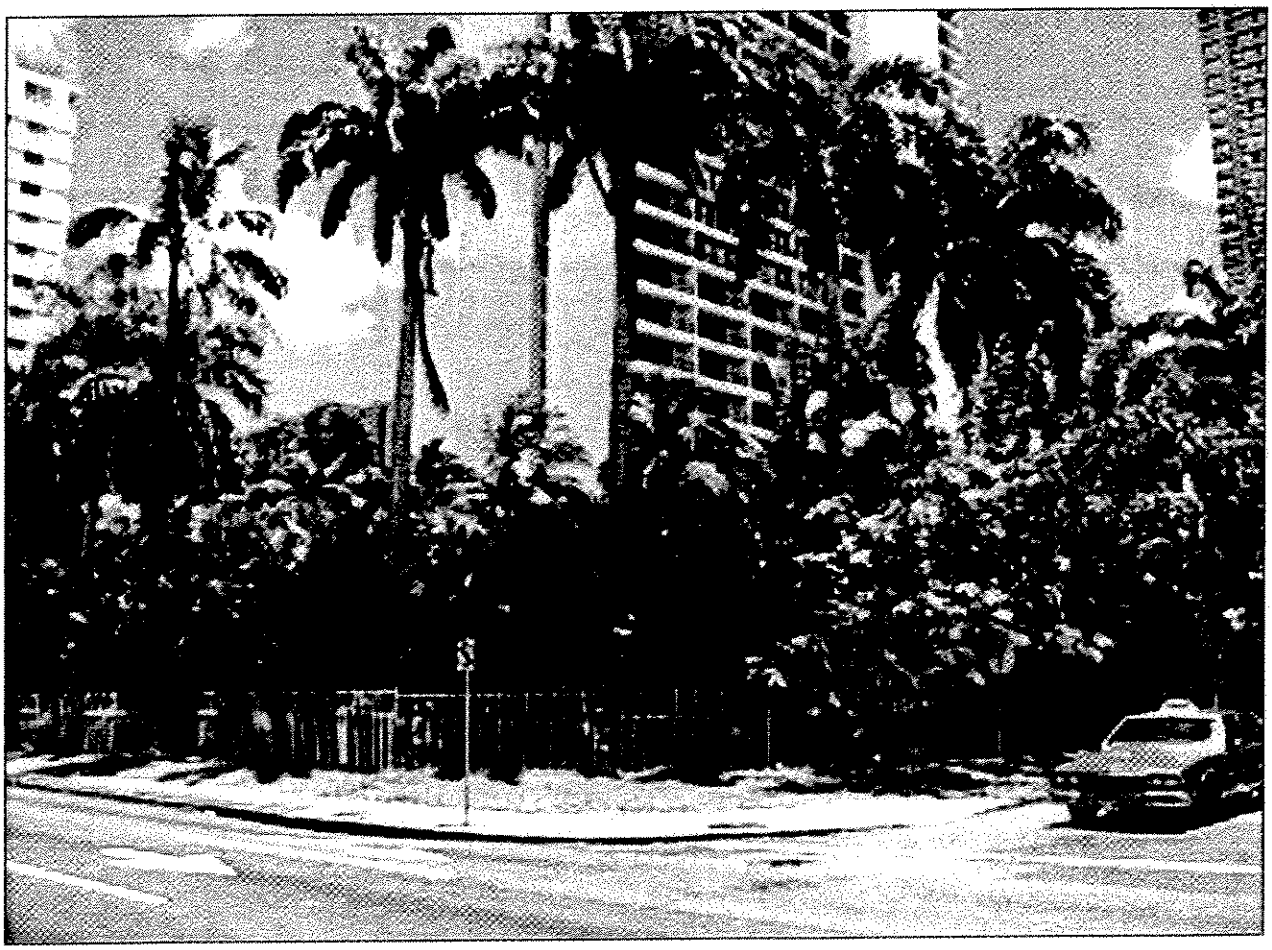


Figure 4. Photograph looking southeast at Project Area, on the corner of Ala Wai Boulevard and Nāmāhana Street.

Section 2 Methods

2.1 Field Methods

Owen L. O'Leary, M.A., Anthony Bush, B.A., and Todd Tulchin, B.S. assisted project director Douglas F. Borthwick, B.A., with the field effort, which required 5 person-days to complete. Fieldwork took place on June 2 and 3, 2005 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator). Fieldwork was conducted under state archaeological fieldwork permit No. 0508 issued by SHPD, per Hawai'i Administrative Rules (HAR) Chapter 13-13-282.

Anthony Bush and Douglas F. Borthwick conducted a pedestrian survey of the project area on June 2. No historic properties were discovered.

Owen L. O'Leary, Anthony Bush, and Douglas F. Borthwick monitored the excavation of 6 backhoe test trenches within the project area

The locations of the 6 test trenches were recorded using a Trimble Pro XR backpack GPS unit with a TSCI Datalogger with active differential correction providing horizontal accuracy to within 0.5 meters. Data collected using the GPS unit was processed using ESRI's Arc Surveyor 5.0 and ArcGIS 8.3.

Stratigraphy was drawn and photographed and sediments were described for each of the 6 trenches excavated. Sediment descriptions include, Munsell color, texture, consistence, structure, plasticity, cementation, origin of sediments, descriptions of any inclusions such as cultural material and/or roots and rootlets, lower boundary distinctiveness and topography, and other general observations.

2.2 Laboratory Methods

Bulk sediment samples were collected and wet sieved through 1/8-inch mesh screens at the CSH laboratory. This involved placing a large screen across two sawhorses and using a garden hose to breakup and push through the clay particles so that only objects larger than 1/8-inch remained. The materials in the screens were allowed to dry. Subsequently, all cultural remains were collected, identified, examined, and catalogued.

An organic sample (gourd fragment) was submitted to Beta Analytic, Inc. for AMS radiocarbon dating.

2.3 Document Review

Background research included: a review of previous archaeological studies on file at the State Historic Preservation Division of the Department of Land and Natural Resources; review of documents at the Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and study of historic maps at the Survey Office of the Department of Land and Natural Resources. Waihona 'Āina was also consulted as well as the library of maps and texts at CSH.

Section 3 Background Research

3.1 Traditional and Historical Background

3.1.1 Pre-Contact to Early 1800s

Waikīkī, by the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, had long been a center of population and political power on O'ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become "the ruling seat of the chiefs of Oahu." The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O'ahu by defeating the island's chief, Kalanikūpule. The 19th-century Hawaiian historian John Papa 'Ī'ī, himself a member of the *ali'i* (chiefly class), described the king's Waikīkī residence:

> Kamehameha's houses were at Puaaliilii, *makai* of the old road, and extended as far as the west side of the sands of Apuakehau. Within it was Helumoa where Ka'ahumanu *mā* went to while away the time. The king built a stone house there, enclosed by a fence . . . ('Ī'ī 1959:17).

'Ī'ī further noted that the "place had long been a residence of chiefs. It is said that it had been Kekuapoi's home, through her husband Kahahana, since the time of Kahekili" ('Ī'ī 1959:17).

Chiefly residences, however, were only one element of a complex of features – sustaining a large population – that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*. Water was also available from springs in nearby Mō'ili'ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver, arriving at "Whyteete" in 1792, captured something of this profusion in his journals:

> On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.
>
> [Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.
>
> This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.

> [We] found the plain in a high state of cultivation, mostly under immediate crops of taro; and abounding with a variety of wild fowl, chiefly of the duck kind . . . The sides of the hills, which were at some distance, seemed rocky and barren; the intermediate vallies, which were all inhabited, produced some large trees, and made a pleasing appearance. The plain, however, if we may judge from the labour bestowed on their cultivation, seemed to afford the principal proportion of the different vegetable productions on which the inhabitants depend for their subsistence. (Vancouver 1798: I, 161-164)

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua'a* of Waikīkī are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of cocoanut palms, affording a delightful shade to the scattered habitations of the natives. Some of those near the beach were raised a few feet from the ground upon a kind of stage, so as to admit the surf to wash underneath them. We pursued a pleasing path back to the plantation, which was nearly level and very extensive, and laid out with great neatness into little fields planted with taro, yams, sweet potatoes and the cloth plant. These, in many cases, were divided by little banks on which grew the sugar cane and a species of Draecena without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. (Menzies 1920:23-24)

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change – disrupted by the same Euro-American contact, which produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu - with the only sheltered harbor on O'ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood that had developed. By 1828, the missionary Levi Chamberlain, describing a journey into Waikīkī, would note:

> Our path led us along the borders of extensive plats of marshy ground, having raised banks on one or more sides, and which were once filled with water, and replenished abundantly with esculent fish; but now overgrown with tall rushes waving in the wind. The land all around for several miles has the appearance of having once been under cultivation. I entered into conversation with the natives respecting this present neglected state. They ascribed it to the decrease of population. (Chamberlain 1957:26)

Tragically, the depopulation of Waikīkī was not simply a result of the attractions of Honolulu (where, by the 1820's, the population was estimated at 6,000 to 7,000) but also of the European diseases that had devastating effects upon the Hawaiian populace.

3.1.2 Mid- to late-1800s

As the 19th century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O'ahu. An 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *ali'i* – the Hawaiian royalty – and several notables had residences there. A visitor to O'ahu in 1873 described

Waikīkī as "a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year" (Bliss 1873).

Other developments during the second half of the 19th century a prelude of changes that would dramatically alter the landscape of Waikīkī during the 20th century – include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalākaua Ave.), the building of a tram line between the two areas, and the opening of Kapi'olani Park on June 11, 1877. Traditional land-uses in Waikīkī were abandoned or modified. By the end of the 19th century most of the fishponds that had previously proliferated had been neglected and allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States.

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the 19th century, the need for increased numbers of field laborers prompted passage of contract labor laws. In 1852, the first Chinese contract laborers arrived in the islands. Contracts were for five years, and pay was $3 a month plus room and board. Upon completion of their contracts, a number of the immigrants remained in the islands, many becoming merchants or rice farmers. As was happening in other locales, in the 1880's, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming. The taro lands' availability throughout the islands in the late 1800's reflected the declining demand for taro as the native Hawaiian population diminished.

The Hawaiian Islands were well positioned for rice cultivation. A market for rice in California had developed as increasing numbers of Chinese laborers immigrated there since the mid-19th century. Similarly, as Chinese immigration to the islands also accelerated, a domestic market opened.

> The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.
>
> In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai'i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun, 1937: 13]

By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O'ahu. Most of the former taro *lo'i* converted to rice fields were located *mauka* of the present Ala Wai Boulevard.

3.1.3 1900s

During the first decade of the 20th century, the U.S. War Department acquired more than 70 acres in the Kālia portion of Waikīkī for the establishment of a military reservation called Fort DeRussy, named in honor of Brig. Gen. R.E. DeRussy of the Army Corps of Engineers.

> On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post...
> Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O'ahu. At DeRussy other activities also had to be attended to - especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground, [Hibbard and Franzen 1986:79].

All the fishponds were filled by 1928.

During the 1920's, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa...
>
> The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311]

During the course of the Ala Wai Canal's construction, the banana patches and ponds between the canal and the *mauka* side of Kalākaua Avenue were filled and the present grid of streets was laid out. These newly created land tracts spurred a rush to development in the 1930's. An article in the Honolulu Star-Bulletin in 1938 extolled the area's progress:

> The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.
>
> These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938: 10)

The writer speculated that the "future of Waikīkī is assured."

The entrance of the United States into World War II following the Japanese bombing of Pearl Harbor on December 7, 1941 put on hold plans for the development of Waikīkī as a tourist destination. Until the war's end in 1945, the tourist trade was non-existent "...since the Navy controlled travel to and from Hawai'i and did not allow pleasure trips" (Brown 1989: 141). For the duration of the war, Waikīkī was transformed into a recreation area for military personnel.

> It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the Honolulu Advertiser of July 16, 1945 decried "honky-tonks" that had sprung up in Waikīkī during the course of the war, and asked: "Can anyone look at present-day Kalākaua Ave. – lined with makeshift curio shops, noisy 'recreation' centers, eyesores that pass under the name of lunchrooms and miscellany of 'joints' – and hope that Waikīkī can stage a comeback [as a tourist destination]?"

By the mid-1950's there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi'olani Park. The Waikīkī population, by the mid-1950's, was not limited to transient

tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

3.1.4 Historic Use of the Projecct Area

Beginning at the mid-nineteenth century, the historical record of Waikīkī including the present project area and adjacent lands was established in increasingly detailed documentation including photographs, maps, newspaper articles, and government records. These documents also give insight into pre-contact Waikīkī. During subsequent decades of the twentieth century, abundant documentation of Waikīkī allows a more precise focus on the changes within the project area itself up to the 1950s.

3.1.5 1881 survey map by S.E. Bishop

An 1881 Hawaiian Government survey map by Serrano E. Bishop with locations of LCA parcels provides a detailed record of the physical landscape of Waikīkī before the transformations of the twentieth century. Figure 5 presents a portion of the 1881 map with the location of the current project area and the present block bounded by Olohana Street, Kūhio Avenue, Namahana Street, and Ala Wai Boulevard are situated within lands awarded to William C. Lunaliho (later King Lunalilo [reign 1873-1874]) in Land Commission Award (LCA) 8559B Apana 29. LCA documents associated with this award do not reveal what spcific activities or land usages were occurring on Apana (parcel) 29 at the mid-19th century. However, documentation for *kuleana* parcels (awarded to commoners and others who could prove residency on and use of the parcels) within the present project area itself indicate specific ongoing traditional Hawaiian habitation and activity.

The 1881 map shows LCA 1775 to Paoa running through the central portion of the project area. Describing this parcel, On December 16, 1847 Paoa testified:

> ...I hereby state my claim for a section of irrigation ditch. I do not know its length – perhaps it is two fathoms more or less. The length of my interest at this place is from the time of Kaahumanu I, which was when my people acquired this place..(Native Register vol. 3, pg. 250)

Paoa also claimed – and was awarded – a separate house lot at the shore. The "irrigation ditch" parcel is further described by a witness, Kalaeone, testifying on Paoa's behalf, as "a pauku ditch of stream taro" bounded "Mauka [by] Government land; Waialae [by Nihopuu's land; Makai [by] Kuluwailehua's land, Keino's land; Ewa [by] Nakoko's land" (Native Testimony vol. 3 pg. 509). Kalaeone also describes the history of Paoa's tenure on his house lot and "pauku ditch of stream taro":

> Land to [Paoa] from his mother, Makuahine. Makuahine had received it from Naliikipi after the death of Kinau in 1839, because Makuahine is Naliikipi's sister. Makuahine had bequested it permanently to [Paoa], their son. Makuahine, [Paoa's] parent has died and [Paoa] has been living there to the present time peacefully. (Ibid.)

A *paukū* is a narrow strip of land smaller than a *mo'o* (Pukui and Elbert 1896: 320). The LCA documents indicate that Paoa's parcel within the present project comprised an actively worked taro cultivation feature that had been in his family for two generations. It is highly likely that the *paukū* had been fully developed and operational at the time of the Paoa family's acquisition earlier in the 19th century.

Located *makai* of Paoa's parcel is Apana 2 of LCA 1281 awarded to Kuluwailehua which runs through the *makai* portion of the present project area. Mahele records describe Kuluwailehua's parcel as containing "5 kalo patches and house lot" (Foreign Testimony vol. 2, pg. 458).

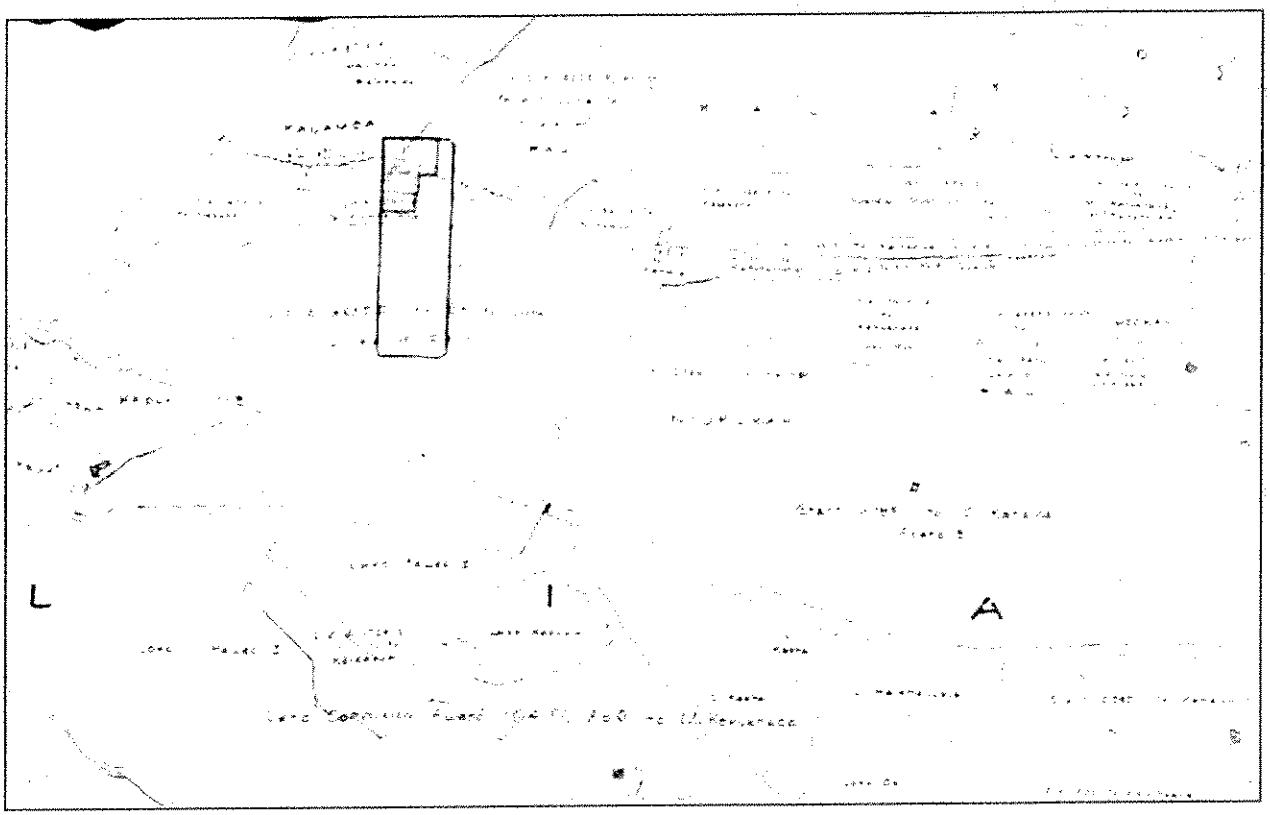


Figure 5. Portion of 1881 map by S. E. Bishop with the approximate location of the project area parcels indicated in red outline and project area block indicated in blue outline.

Also shown on the 1881 map is an *'auwai* (irrigation ditch) entering the *mauka* side of the present project area and feeding the *paukū* of Paoa.

The map and Mahele documents suggest that the pesent project area, in traditional Hawaiian times and continuing into the 19th century, comprised a portion of the extensive system of wetland taro cultivation that spread across the floor of Waikīkī.

3.1.6 The Project Area in the Twentieth Century

Historic maps and photographs document land use within the project area streets from the first decades of the twentieth century to the 1950s when the present layout of Waikīkī streets was completed.

As noted in the historical documentation presented above, by the beginning of the 20th century, remnants of the former traditional Hawaiian landscape in Waikīkī had been transformed to accommodate agricultural pursuits of he growing immigrant population. An early 20th century U.S. Army Engineers map, upon which the approximate location of the present project area is indicated, offers a graphic depiction of the developing Waikīkī lands (Figure 6). Rice fields stretch mauka into Mo'ili'ili. Closer makai, a pattern of ponds, banana plantations, and other orchards are seen to share the landscape with clusters of dwelling structures. The map suggests that a pond feature was located just makai of the present project area.

A fire insurance map of 1914 shows that there were five areas in Waikīkī where residential and commercial structures were concentrated in the early 20th century (Figure 7). These areas were located: 1) clustered at Saratoga Road and Lewers Road; 2) near the intersection of Ena Road and Kalākaua Avenue; 3) makai of Kālia Road on the east side of Ft. DeRussy; 4) clustered around the Moana Hotel (which had opened in 1901) on Kalākaua Avenue; and 5) in Kapahulu on the 'Ewa side of Makee Road (the present Kapahulu Avenue). The fire insurance map also reveals the relative isolation of Waikīkī, in the early 20th century, from the encroaching grid of modern Honolulu streets. It appears that no structures had been constructed within the present project area during the first years of the twentieth century.

Documents generated in the early 1920s in association with the impending construction of the Ala Wai Canal further clarify earlier land usage within the present project area. A survey map for Land Court Application No. 537 (Figure 8) shows the same portion of Waikīkī and the LCA parcels within the project area – as that on the 1881 map (see Figure 5 above).

The Land Court Application map identifies a "kuauna" feature running along, and defining the *makai* boundary of LCA 1775 to Paoa and separating LCA 1775 from LCA 1281 to Kaluwailehua. The entire *kuāuna* feature connects Alanaio Stream to the north, and an *'auwai* to the south. (The *'auwai* has been recorded as State Site 50-80-14-4970 in previous archaeological reseach [see Section III* below].) A *kuāuna* is defined as a "bank or border of a taro patch; stream bank" (Pukui and Elbert 1986: 171). It is further described:

> The term is derived from the fact that the banks were made solid when built by beating with the butt ends of coconut leaf stems (*ku'au*)...(Lucas 1995: 59)

The map thus indicates that a soil embankment formerly ran across the present project area in the midst of surrounding irritated taro fields.

With the construction of the Ala Wai Canal in the 1920s and the draining and filling of Waikīkī, the present-day grid of streets and blocks was impressed on the landscape. An aerial photograph, taken shortly after the construction of the canal, shows the block – in which the present project area is located – to be a completely filled, man-made construction (Figure 9). However, a line of mature trees running across the *mauka* side of the block is a likely remnant of the vegetation on the soil embankment, *kuāuna*, associated with LCS 1775 (see Figure 8).

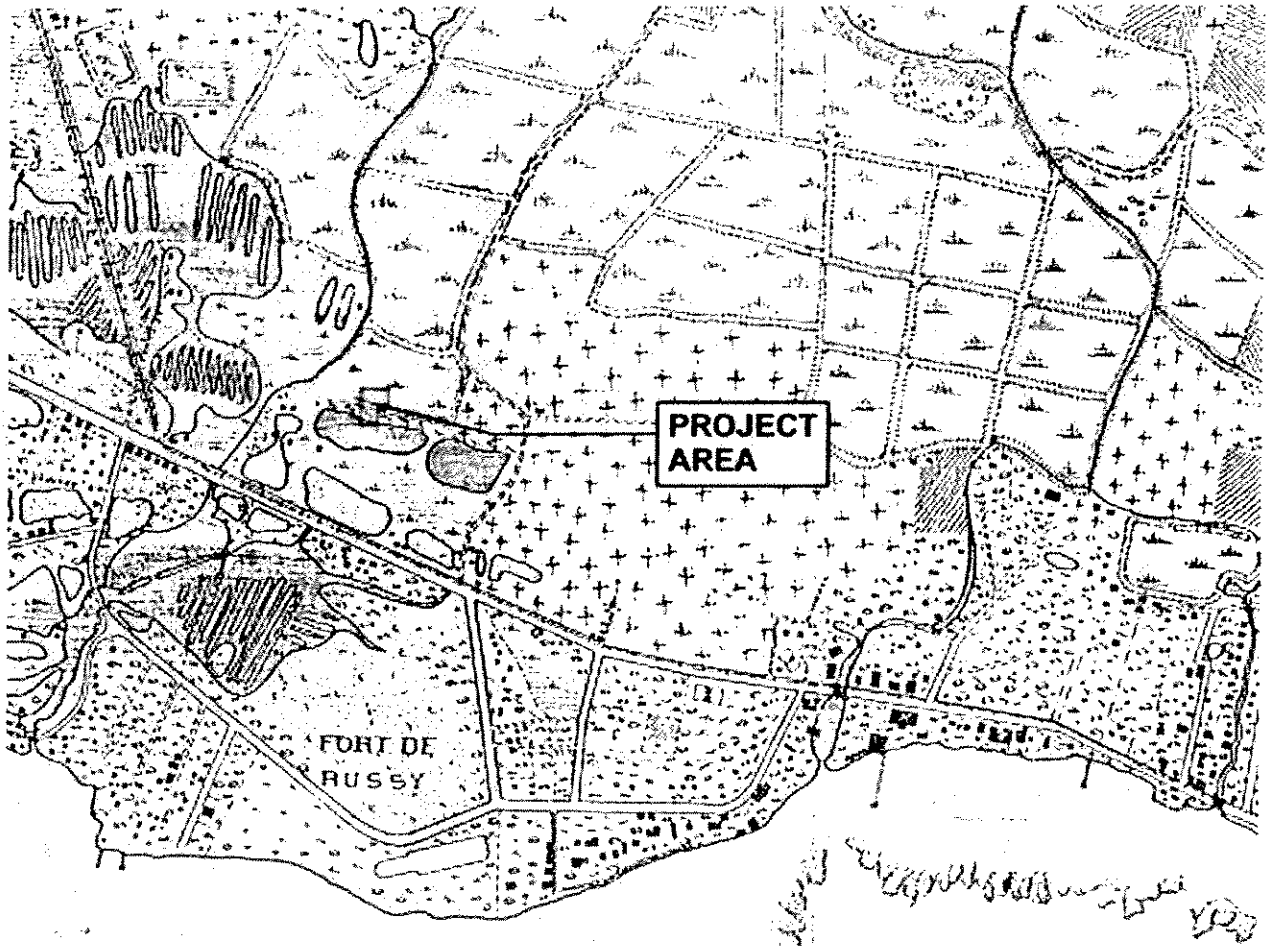


Figure 6. Portion of 1910 U.S. Engineers map with the approximate location of the project area parcels indicated in red outline.

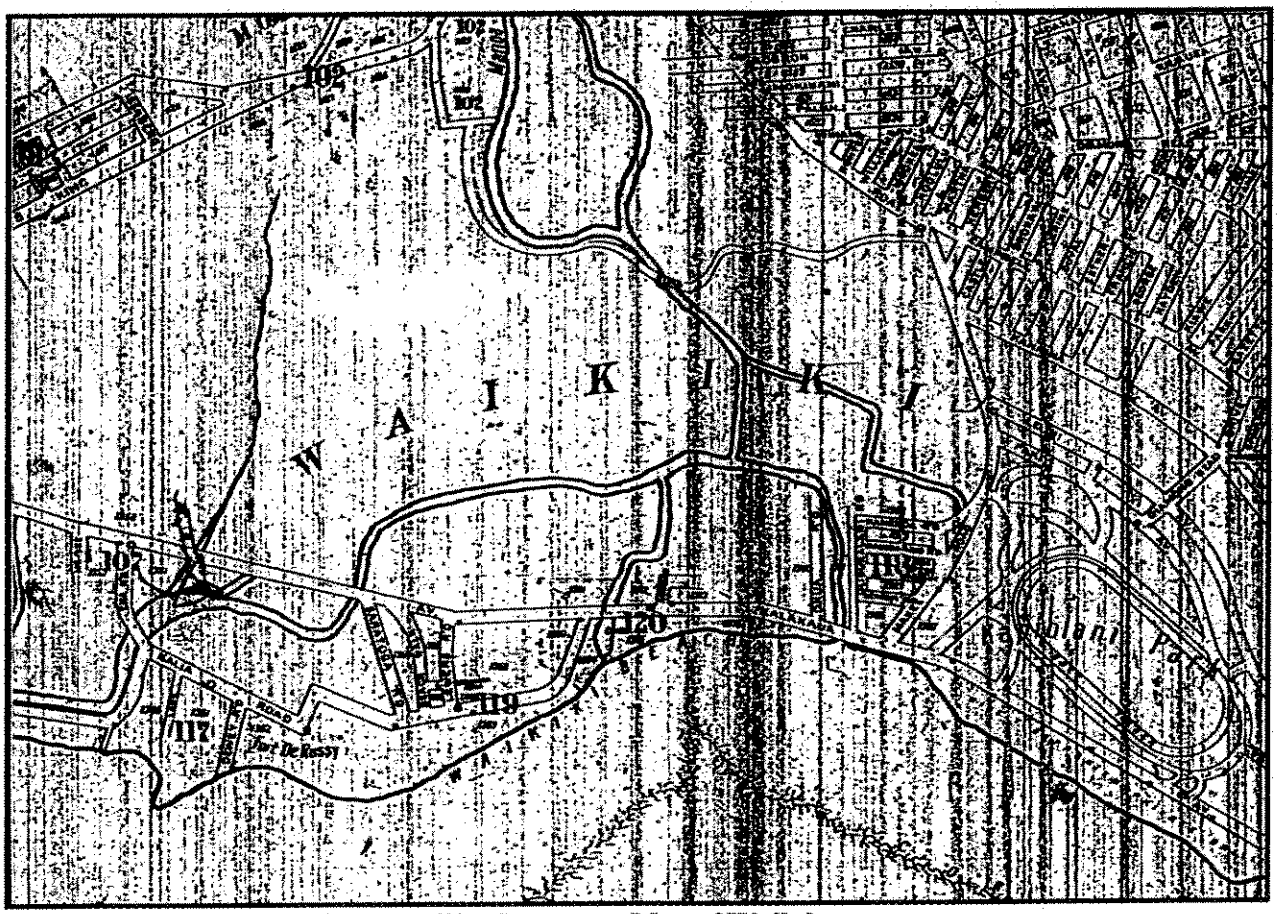


Figure 7. Portion of 1914 Sanborn Fire Insurance Map of Waikīkī

There is also a building shown within the block, at the corner of the present Ala Wai Blvd. and Olohana Street. As there are no other buildings evident on the block in the aerial photograph, this may be among the first houses to be built on the newly filled lands of Waikīkī.

A fire insurance map of 1951 indicate that, by the mid-twentieth century, the five parcels comprising the present project area were filled with the typical single-story cottages and two- and three-story apartment buildings that characterized much of Waikīkī before subsequent resort development during the remainder of the century (Figure 10).

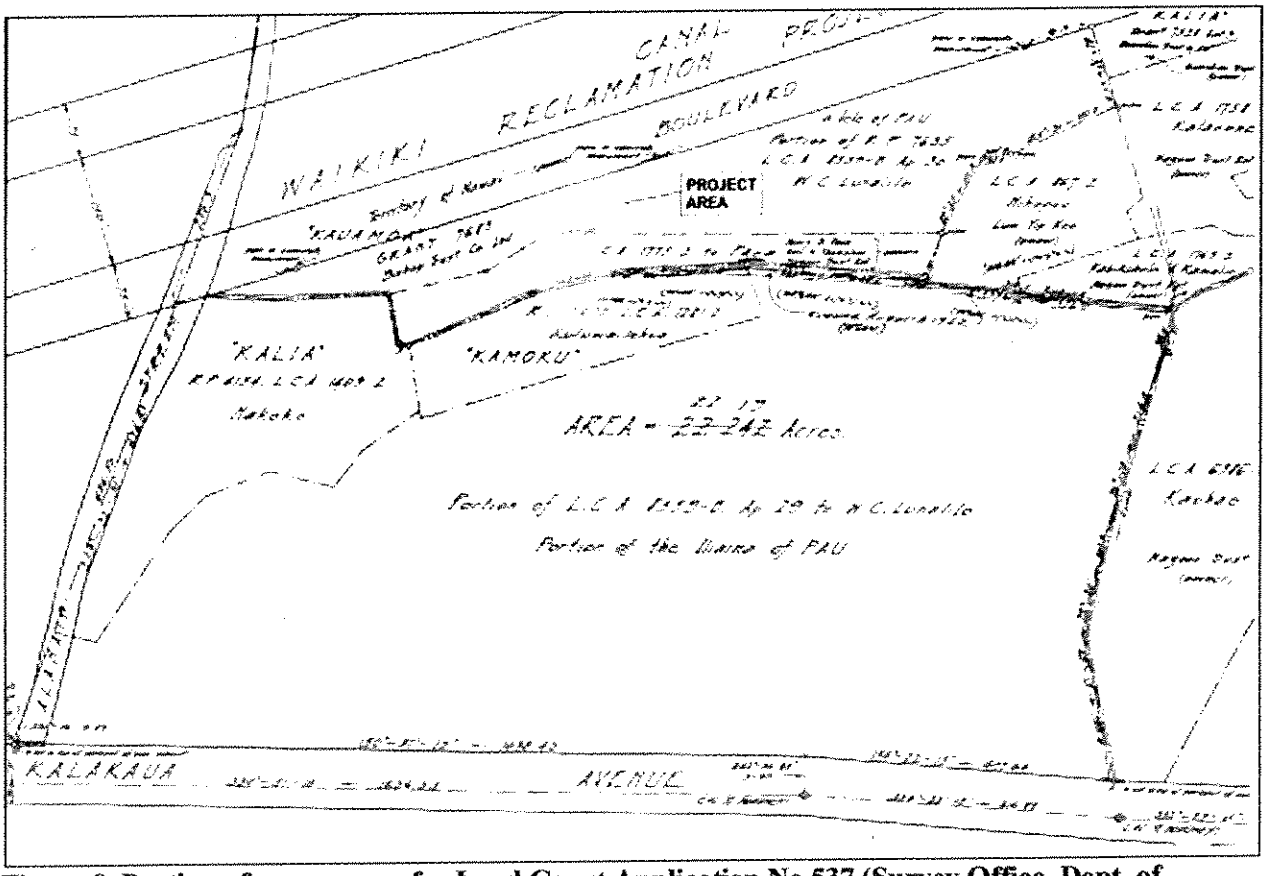


Figure 8. Portion of survey map for Land Court Application No 537 (Survey Office, Dept. of Accounting and General Services) with location of project area indicated

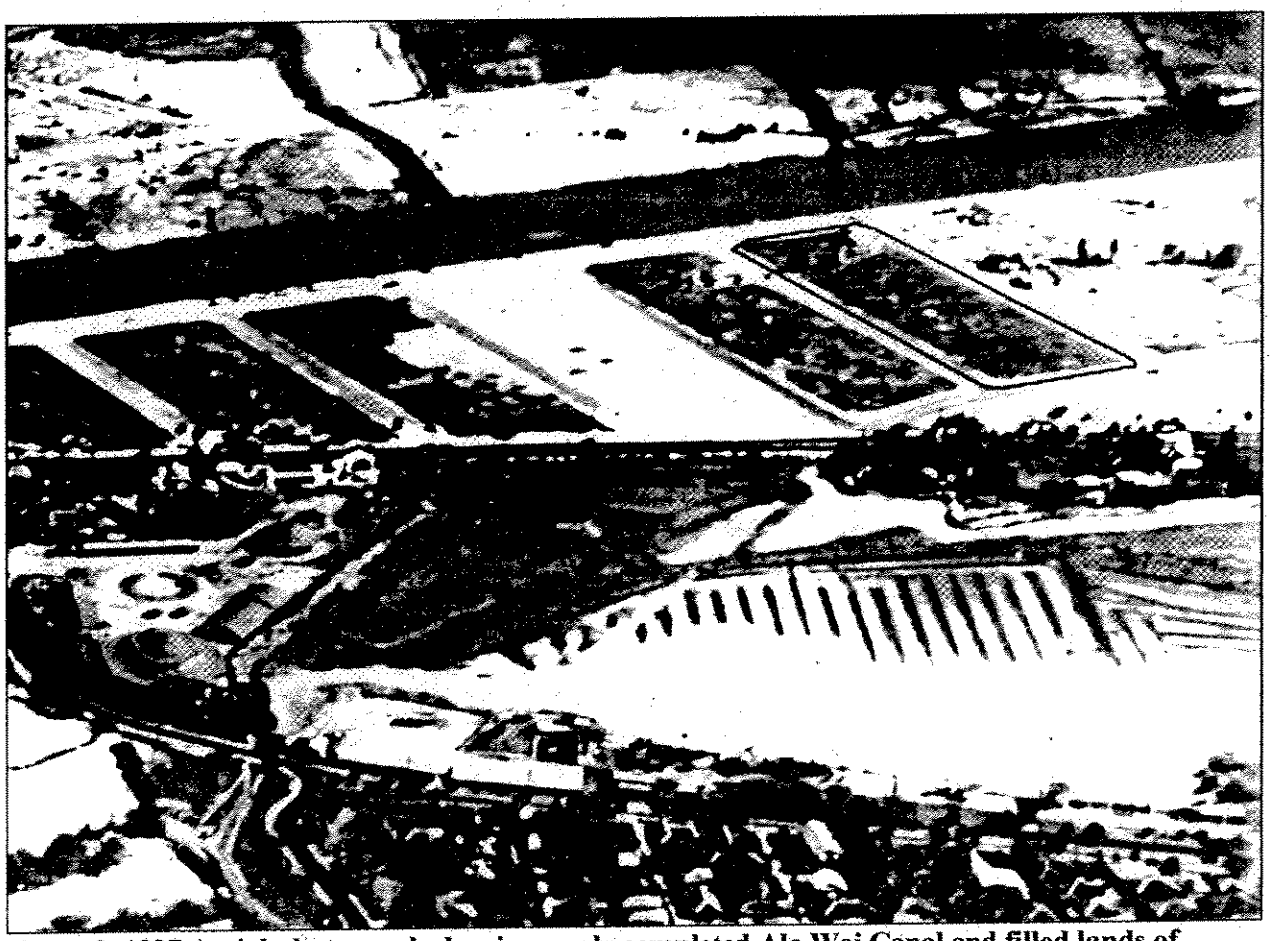


Figure 9. 1927 Aerial photograph showing newly completed Ala Wai Canal and filled lands of Waikīkī with project area block indicated in red outline

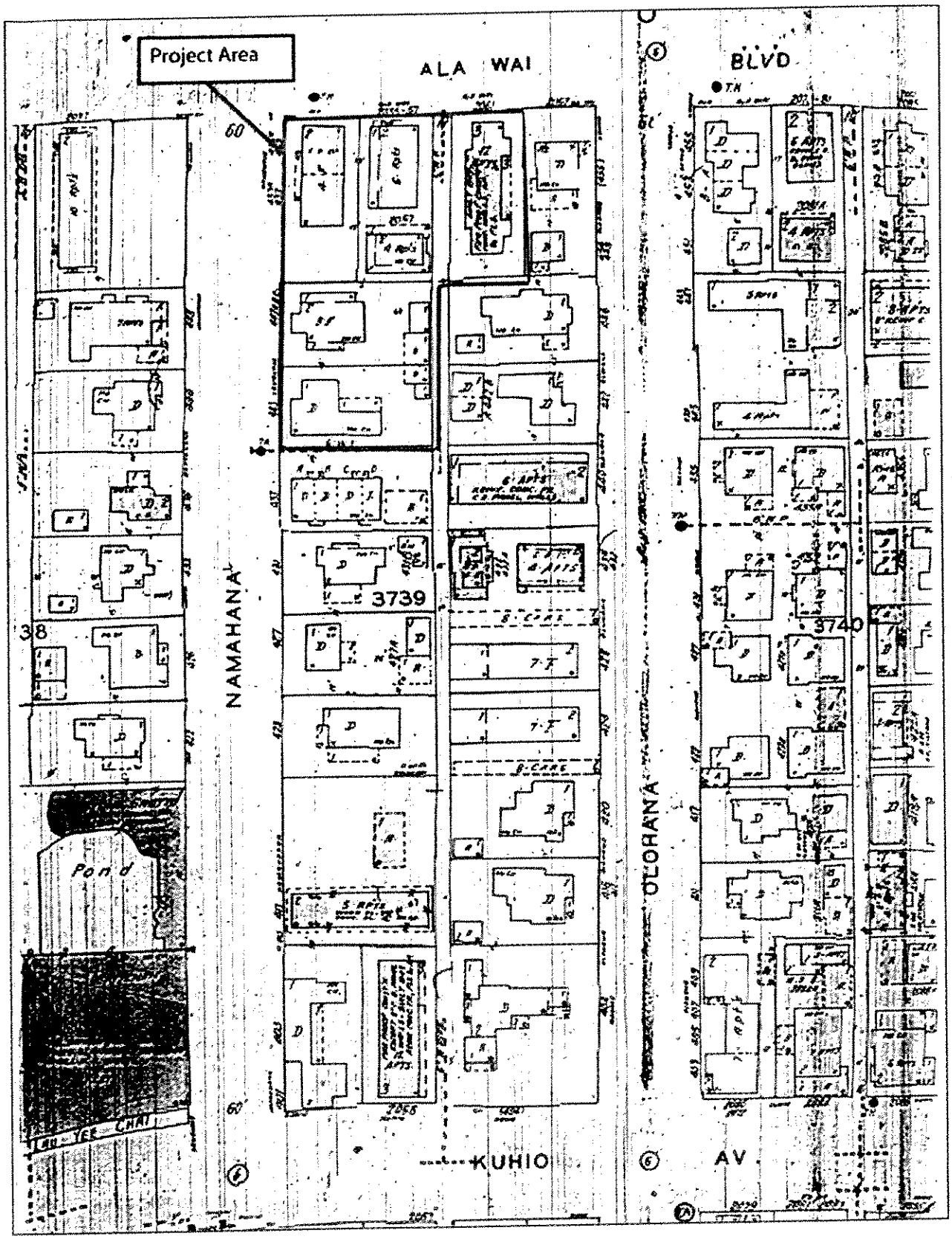


Figure 10.1927-1951 Sanborn Insurance Map with project area indicated in red outline.

3.2 Previous Archaeological Research

The *ahupua'a* of Waikīkī, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources, that supported a large population. In the nineteenth and early twentieth centuries, after a period of depopulation, Waikīkī was reanimated by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system, which had been converted from taro to rice. Farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields. Remnants of the pre-contact and historical occupation of Waikīkī have been discovered and recorded in archaeological reports, usually in connection with construction activities related to urban development, or infrastructural improvements. These discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits. A full list of projects conducted in the Waikīkī area is listed in Table 1. The locations of previous archaeological studies and burials in the vicinity of the present project area are shown in Figure 11. A discussion of projects focusing on burials follows.

N.B. Emerson reported on the uncovering of human burials during the summer of 1901 on the property of James B. Castle - site of the present Elks Club - in Waikīkī during excavations for the laying of sewer pipes (Emerson 1902:18-20). Emerson noted:

> The soil was white coral sand mixed with coarse coral debris and sea-shells together with a slight admixture of red earth and perhaps an occasional trace of charcoal. The ground had been trenched to a depth of five or six feet, at about which level a large number of human bones were met with, mostly placed in separate groups apart from each other, as if each group formed the bones of a single skeleton. Many of the skulls and larger bones had been removed by the workmen before my arrival, especially the more perfect ones [Emerson 1902:18].

Emerson's report on the find describes the remains of at least four individuals, all presumed to be Hawaiian. Associated burial goods were also exposed during excavation; these included "a number of conical beads of whale-teeth such as the Hawaiians formerly made" and "a number of round glass beads of large size." The glass beads "can be assigned with certainty to some date subsequent to the arrival of the white man" (Emerson 1902:19). Also located with the beads was "a small sized *niho-palaoa*, such as was generally appropriated to the use of the chiefs" which had been "carved from the tooth of the sperm-whale" and which was "evidently of great age" (Emerson 1902:19).

In the 1920s and 30s the first systematic archaeological survey of O'ahu was conducted by J. C. McAllister (1933). He recorded four *heiau* (temples), three of which were located at the *mauka* reaches of Waikīkī Ahupua'a in lower Mānoa Valley. The fourth *heiau* – Papa'ena'ena - was located at the foot of Diamond Head crater in the environs of the present Hawai'i School for Girls. Papa'ena'ena Heiau is traditionally associated with Kamehameha I, who was said to have visited the *heiau* before setting off to battle for Ni'ihau and Kaua'i in 1804. Five years later, according to John Papa 'Ī'ī, Kamehameha placed at Papa'ena'ena the remains of an adulterer – "all prepared in the customary manner of that time" ('Ī'ī 1959:50-51).

In 1963, two human skulls and other human remains were discovered in a construction trench at 2431 Prince Edward St. (Bishop Museum site Oa-A4-23, cited in Neller, 1984).

In 1964, sand dune burials, a traditional Hawaiian mortuary practice, were revealed as beach sand eroded fronting the Surfrider Hotel (Bishop Museum Site Files).

Table 1. Previous Archaeological Investigations in Waikīkī Ahupua'a.

Reference	Type of Investigation	General Location	Findings
McAllister 1933	Island-wide survey	All of O'ahu	Waikīkī listed as Site 60.
Nakamura 1979	History Graduate Thesis	Waikīkī	History of Waikīkī with focus on the radical changes in land use that occurred in the early 20th century.
Neller 1980	Monitoring Report	Kālia Burial Site: Hilton Hawaiian Village	Brief field inspection: partial recovery of 3 historic Hawaiian burials, trash pit from 1890's, no pre-contact Hawaiian sites.
Bishop Museum 1981	Interim Progress Report on Testing, Excavations, and Monitoring	Halekulani Hotel	Intact cultural deposits found.
Neller 1981	Reconnaissance Survey	Halekulani Hotel	Limited background research on area
Acson 1983	Historical Research, Past and Present Landmarks	'Ewa to Diamond Head end of Waikīkī	Nine walks through Waikīkī, photos, maps and historical info.
Bishop Museum 1984	Burial Remains List	Waikīkī Ahupua'a	Listing of burial remains found in Waikīkī Ahupua'a at the Bishop Museum
Davis 1984	Archaeological and Historical Investigation	Halekulani Hotel	48 historic and pre-contact features excavated.
Neller 1984	Informal Narrative Report	Paoakalani Street	Recovery of human skeletons at construction site
Center for Oral History 1985	Oral Histories, Volumes I-IV	Waikīkī	Oral Histories of Waikīkī, 1900-1985, Volumes I-IV
Griffin 1987	Burial Recovery Report	Along Kalākaua Ave. near the corner of Kai'ulani St.	Bones removed and bagged by construction crew, burial found in *makai* wall of gas pipe excavation.
SHPD 1987	Burial, PA Report	Kalākaua Ave.	From excavation adjacent to Moana Hotel (SIHP # 50-80-14-9901).
Davis 1989	Reconnaissance Survey and Historical Research	Fort DeRussy	Fishponds and other features are buried in this area. SIHP #s 50-80-14-4573 thru -4577 are fishponds, -4570 is a remnant cultural deposit.
Riford 1989	Pre-Field Background Literature Search	TMK: 2-6-014:039	List of literature pertaining to Waikīkī area.
Rosendahl 1989	Inventory Survey, Preliminary Report	Fort DeRussy	Historic artifacts, no human remains

Reference	Type of Investigation	General Location	Findings
Athens 1990	Letter	TMK: 2-6-023:025	Letter to SHPD listing human remains at IARII lab from Pacific Beach Hotel, and Barbers Point Generating Station.
Hurst 1990	Historical Literature and Documents Search	Waikikian Hotel	Background and planning document. No fieldwork was done.
Chiogioji 1991	Assessment	2 parcels, TMK 2-6-24:65-68 and 80-83, TMK 2-6-24:34-40 & 42-45	TMK 2-6-24:36-40, formerly a corner of the 'Āinahau estate; remainder of parcels, former *'auwai*, *kalo* and rice fields; subsurface test excavations and specific sampling strategy recommended.
Davis 1991	Monitoring Report	Fort DeRussy	See also Davis 1989. No groundwater contamination found; subsurface features and material remains date to early post-contact times (c. 1780s to 1790s) through the mid-19th century.
Kennedy 1991	Monitoring Report	TMK: 2-6-022:014 IMAX theatre location	Pollen and bulk-sediment ^{14}C samples from ponded sediments were recovered. The three ^{14}C dates and the pollen sequence were interpreted as inverted.
SHPD 1991	Public Inquiry	TMK: 2-6-024:036	Bones were determined to be non-human and part of the extensive fill material present in the area.
Simons et al. 1991	Interim Field Study, Monitoring and Data Recovery	Moana Hotel Area	Human skeletal remains, 8 burials, preliminary osteological analysis indicates pre-contact type; artifactual material recovered, both pre- and post-contact types.
Hurlbett 1992	Monitoring Report	TMK: 2-6-008:001	SIHP site -2870 (3 burials) found by Neller in 1980. This report is on testing and monitoring in same area.
Pietrusewsky 1992a	PA Report	Moana Hotel	Right half of human mandible found by hotel guest.
Pietrusewsky 1992b	PA Report	Lili'uokalani Gardens Site, Hamohamo	Human Remains from the Lili'uokalani Gardens Site, Hamohamo, Waikīkī, O'ahu
Rosendahl 1992	Monitoring Report	Hilton Hawaiian Village	Identified12 historic refuse pits, 3 historic to modern trenches; not recommended for further work, significant solely for information content.
Streck 1992	Memorandum for Record	Fort DeRussy	Human burial discovery (believed to be late pre-contact Hawaiian) during data recovery excavations, May, 20, 1992.

Reference	Type of Investigation	General Location	Findings
Cleghorn 1993	Report on Inadvertent Discovery of Remains	Waikīkī Aquarium	Remains of one human individual, mandible identified.
Dagher 1993	Report on Inadvertent Discovery of Remains	Waikīkī Aquarium	Human remains of at least one person identified, excavation recommended.
Dega and Kennedy 1993	Report on Inadvertent Discovery of Remains	Waikīkī Aquarium	Discovery of unidentified bone fragments, all remains turned over to SHPD.
Hammatt and Chiogioji 1993	Archaeological Assessment	16-Acre Portion of the Ala Wai Golf Course	Not associated with any know surface archaeological site, however pre-contact and early historic occupation layers associated with *lo'i* system remain intact below modern fill. Specific sampling strategy and potential burial testing recommended.
Maly et al. 1994	Archaeological and Historical Assessment Study	Convention Center Project Area	Recommend subsurface testing to determine presence or absence of cultural deposits and features.
McMahon 1994	SHPD Burial Report	Intersection of Kalākaua and Kuamo'o Streets	Inadvertent Burial Discovery: misc. bones uncovered in back dirt pile during construction. Follow up by CSH.
Hammatt and Shideler 1995	Sub-surface Inventory Surface	Hawai'i Convention Center SIHP site, 1777 Kalākaua Ave.	No further work recommended.
Jourdane 1995	Report of Inadvertent Discovery of Human Remains	Paoakalani Avenue	Human skeletal remains discovered in planted strip between street and sidewalk fronting hotel.
Simons et al. 1995	Data Recovery Excavations	Fort DeRussy	Historic and pre-contact artifacts, artifact debris, and midden materials collected from 7 occupational layers. 6 pre-contact cultural features recorded: *'auwai* bunds and channels, fishpond walls and sediments, a possible *lo'i*, and hearths.
Cleghorn 1996	Inventory Survey	TMK: 2-6-016:23, 25, 26, 28, 61, 69	7 backhoe trenches excavated, no sites located.
Grant 1996	Historical Reference	Waikīkī	Historical information about Waikīkī prior to 1900.

Reference	Type of Investigation	General Location	Findings
Hammatt and Shideler 1996	Data Recovery	Hawai'i Convention Center Site	No clear evidence that Kuwili Pond sediments present in project area; no further work recommended.
McDermott et al. 1996	Inventory Survey	'Āinahau Estate	Buried remnants of *'auwai* and *lo'i* and human burial found on grounds of 'Āinahau Estate, ^{14}C dates
Denham et al. 1997	Data Recovery Report	Fort DeRussy	Excavations conducted at fishponds, ^{14}C dates mid-17th C.
Denham and Pantaleo 1997	Monitoring and Excavations Report	Fort DeRussy	Final Report does not include SHPD recommendations. 10 subsurface features and 9 burial locations found. ^{14}C dates
Beardsley and Kaschko 1997	Monitoring and Data Recovery Report	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposits and 2 human burials. 3 ^{14}C dates
Hammatt and Chiogioji. 1998	Assessment	King Kalākaua Plaza Phase II	No surface archaeological sites, documented human burials, presence of subsurface cultural deposits (both of pre-contact Hawaiian and historic provenance).
Hammatt and McDermott 1999	Burial Disinterment Plan and Report	Kalākaua Avenue	Two human burials found
Perzinski et al. 1999	Monitoring Report	Along Portions of Ala Wai Boulevard, Kalākaua Avenue, Ala Moana Boulevard, and 'Ena Road	Two human burials found (1 preceding monitoring); pockets of undisturbed layers still exist. Burial #2 previously disturbed.
Rosendahl 1999	Interim Report: Inventory Survey	Fort DeRussy	This area is part of the old shoreline.
Hammatt et al. 2000	Archaeological Assessment	Honolulu Zoo Parcel	Majority of zoo parcel unlikely to yield significant cultural deposits. However, strong possibility of significant subsurface cultural deposits in the southwestern portion, and archaeological monitoring is recommended in this area.
LeSuer et al. 2000	Inventory Survey	King Kalākaua Plaza Phase II	SIHP # 50-80-14-5796 has been adversely affected by land alteration of the project area. SIHP # 50-80-14-4970, has been adequately documented.
Perzinski et al. 2000	Burial Findings	Kalākaua Ave. between Kai'ulani and Monsarrat Avenues	44 sets of human remains; 37 disinterred, 7 left in place; believed to be Native Hawaiian, prior to 1820.

Reference	Type of Investigation	General Location	Findings
Cleghorn 2001	Mitigation	Burger King Construction Site	Concerning three incidents of uncovered human remains while locating a buried sewer-line for the ABC's store.
Corbin 2001	Inventory Survey	Hilton Waikikian Property	No arch. sites were found during excavations of the area
Elmore and Kennedy 2001	Burial Report	Royal Hawaiian Hotel	Human remains found during trench excavations for conduit. In situ remains left in place, remains disturbed reentered with others.
McDermott and Chiogioji 2001	Inventory Survey	Honolulu Zoo Parcel	No culturally modified sediments, cultural layers, or archaeological features were found. Historic fill has contaminated lower natural sediments.
McGuire and Hammatt 2001	Cultural Assessment	Along Lewers St., Beach Walk, Kālia Rd. and Saratoga Rd. Proposed Waikīkī Beach Walk project (Outrigger properties renovations)	Primary cultural concern identified as inadvertent burial discovery. Cultural monitoring recommended for all subsurface work within project area.
Perzinski and Hammatt 2001a	Monitoring Report	Kapi'olani Bandstand	A charcoal layer was observed, more concentrated on the southwest side of the bandstand; recovered indigenous artifact, basalt lamp with a handle, from the southeast end of the bandstand.
Perzinski and Hammatt 2001b	Monitoring Report	Kapi'olani Park	No cultural layer, artifacts, midden or human burials were encountered during the excavations.
Perzinski and Hammatt 2001c	Monitoring Report	Kalākaua Avenue from the Natatorium to Poni Mo'i Road	No cultural layer, artifacts, midden or human burials were encountered during the excavations.
Rosendahl 2001	Assessment Study	Outrigger Beach Walk	Assessment of previous archaeological and historical literature.
Winieski and Hammatt 2001	Monitoring Report	TMK: 1-2-6-025:000	There is a possibility that Hawaiian or Historic materials as well as human burials may still be present within the project area.
Borthwick et al. 2002	Inventory Survey	71,000 sq. ft. parcel, TMK: 2-6-016:002	No burials were encountered during testing; absence of dry Jaucus sand deposits indicate that burial finds are unlikely in project area.

Reference	Type of Investigation	General Location	Findings
Bush et al. 2002	Monitoring Report	Kalākaua Avenue, between Ala Moana Blvd. and Kapahulu Ave.	Encountered 4 Human burials, analysis suggests pre-contact Native Hawaiians; several historic trash pits; entire pig within an *imu* pit (estimated date, A.D. 1641-1671); gleyed muck associated with former ponds.
Calis 2002	Monitoring Report	Lemon Road	No historic deposits, major previous disturbance
Elmore and Kennedy 2002	Monitoring Report	Fort DeRussy	No findings.
Mann and Hammatt 2002	Monitoring Report	Lili'uokalani Avenue and Uluniu Avenue	5 burial finds of 6 individuals; two historic trash pits.
Putzi and Cleghorn 2002	Monitoring Report	Hilton Hawaiian Village	No findings during monitoring of trench excavations for sewer connections.
Winieski, Perzinski, Shideler and Hammatt 2002	Monitoring Report	Kalākaua Ave. between Ka'iulani and Monsarrat Avenues.	44 human burials encountered, 37 disinterred; buried habitation layer identified which contained traditional Hawaiian artifacts, midden, hearths, firepits, and charcoal concentrations; fragment of light gauge rail, remnant of Honolulu Transit trolley system, observed; low energy alluvial sediments associated with the now channelized *muliwai* Kukaunahi also observed.
Winieski, Perzinski, Souza and Hammatt 2002	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals, six disinterred, only 2 in situ. 4 indigenous artifacts, none in situ. Discontinuous cultural layer, historic seawall.
Bush et al. 2003	Monitoring Report	International Marketplace	Historic trash found.
Tome and Dega 2003	Monitoring Report	Waikīkī Marriot	No in situ remains, recommends monitoring if more work to be done, one isolated not in situ possible human bone fragment. Not identifiable.
Tulchin and Hammatt 2003	Archaeological and Cultural Impact Assessment	2284 Kalākaua Ave.	Notes possibility of burials within the project area; recommends an inventory survey with subsurface testing.
McIntosh and Cleghorn 2004	Inventory Survey	Launiu Street	A single buried pond-field, or *lo'i*, (SIHP # 50-80-14-6680) was discovered.

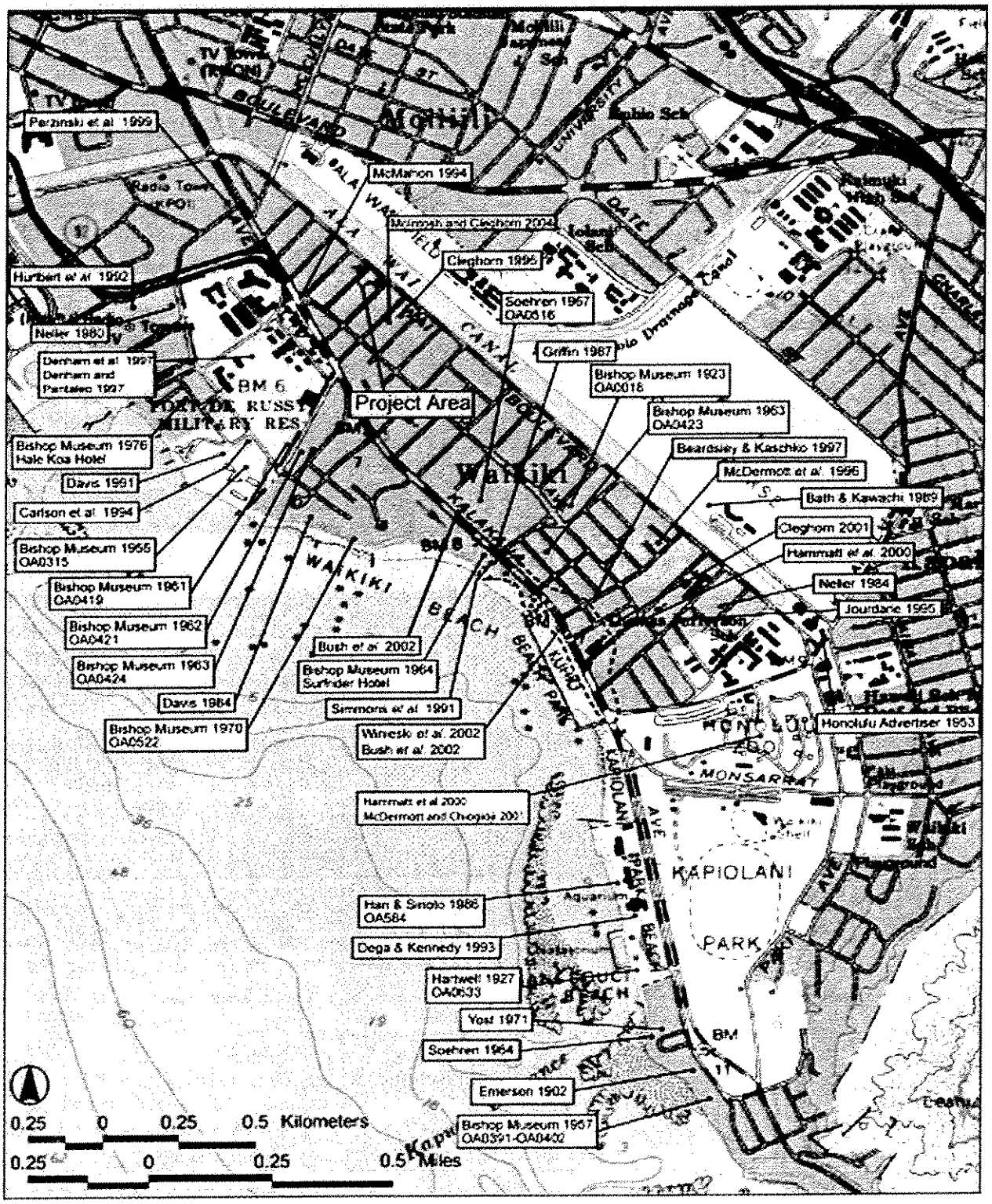


Figure 11. Location of known burials in Waikīkī, showing select previous archaeological work in the nearby vicinity.

In 1976, during construction of the Hale Koa Hotel, adjacent to the Hilton Hawaiian Village Hotel, six burials were unearthed, five of apparent pre-contact or early historic age, and one of more recent date (Bishop Museum Site Files).

In 1980, three burials were exposed at the Hilton Hawaiian Village during construction of the hotel's Tapa Tower, south-southeast of the present project area. Earl Neller of the (then named) State Historic Preservation Program was called in upon discovery of the burials and conducted fieldwork limited to three brief inspection of the project area. Neller's (1980) report noted:

> The bones from three Hawaiian burials were partially recovered; one belonged to a young adult male, on a young adult female, and one was represented by a single bone. An old map showed that rapid shoreline accretion had occurred in the area during the 1800s, and that the beach in the construction area was not very old. It is possible the burials date back to the smallpox epidemic of 1853. It is likely that burials will continue to be found in the area. It is also possible that early Hawaiian sites exist farther inland, beneath Mō'ili'ili, adjacent to where the shoreline would have been 1000 years ago. (Neller 1980:5)

Neller also documented the presence of trash pits, including one from the 1890s, which contained "a large percentage of luxury items, including porcelain tablewares imported from China, Japan, the United States, and Europe" (Neller 1980:5). He further notes:

> It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits related to the different ethnic and social groups that occupied Waikīkī over the last 200 years [Neller 1980:5].
>
> Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekūlani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date . . . settlement in Waikīkī to no later than the mid-1600s" (Neller 1980:5).

In 1983, at the Lili'uokalani Gardens condominium construction site, seven traditional Hawaiian burials were recovered (Neller 1984). This had been the site of a bungalow owned by Queen Lili'uokalani at the end of the nineteenth century. In addition to the burials, the site contained plentiful historic artifacts, and a pre-historic cultural layer pre-dating the burials.

In 1985, International Archaeological Research Institute, Inc. performed archaeological monitoring and data recovery at the Pacific Beach Hotel Office Annex (Beardsley and Kaschko 1997). Two traditional Hawaiian burials were discovered and removed. Intact buried traditional Hawaiian cultural deposits, including a late pre-contact habitation layer, contained pits, firepits, post molds, artifacts, and food debris. The artifacts included basalt and volcanic glass flakes and cores, a basalt adze and adze fragments, worked pearl shells, a coral file and abraders, and a pearl shell fishhook fragment. Additionally, a late nineteenth century trash pit was discovered, which contained a variety of ceramics, bottles, and other materials.

> During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph.D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikīkī. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered

during the monitoring, all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The three partial burials reported by Neller (1980) were found within this project area (see above). No further burials were encountered during the PHRI field work (Hurlbett et. al. 1992).

In 1987, a human burial was discovered and removed at the intersection of Kalākaua Avenue and Ka'iulani Street during excavations for a gas pipe fronting the Moana Hotel (Griffin 1987).

In 1988, the Moana Hotel Historical Rehabilitation Project (Simons et. al. 1991) encountered human remains that amounted to at least 17 individuals. Based on stratigraphic association these burials were interred over time as the land form at the site changed. The sediment surrounding these burials yielded traditional midden and artifact assemblages. The burials and human remains were found in the Banyan Court and beneath the hotel itself.

In 1989, skeletal remains were unearthed on the grounds of the Ala Wai Golf Course during digging of an electrical line trench for a new sprinkler system. The trench had exposed a pit containing two burials (Bath and Kawachi 1989: 2). The report suggests that one of the burials may have been disturbed earlier during grading for the Territorial Fair Grounds. The osteological analysis included in the report concludes that both sets of remains "appear ancient." (Bath and Kawachi 1989: 2)

Davis' (1989, 1991) excavation and monitoring work at Fort DeRussy documented substantial subsurface archaeological deposits, pre-contact, historic, and modern. These deposits included buried fishpond sediments, '*auwai* [irrigation ditch] sediments, midden and artifact enriched sediments, structural remains such as post holes and fire pits, historic trash pits, and a human burial. Davis' (1991) report documents human activity in the Fort DeRussy beach front area from the sixteenth century to the present.

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simons et al. 1995). BioSystems research documents the development and expansion of the fishpond and '*auwai* system (SIHP # 50-80-14-4970) in the area. Remains of the fishpond and '*auwai* deposits, as well as habitation deposits, were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late pre-contact/early historic subsurface deposits, even amidst the development of Waikīkī.

In 1992, Hurlbett et al. (1992) conducted additional monitoring and testing in this same area as Neller (1980). SIHP # 50-80-14-2870 was given to the three burials first found by Neller. Additional subsurface features, postdating 1881, were found during trenching operations.

The realignment of Kālia Road at Fort DeRussy in 1993 uncovered approximately 40 human burials. A large majority of these remains were recovered in a large communal burial feature (Carlson et. al. 1994). The monitoring and excavations associated with this realignment uncovered a cultural enriched layer, which contained post-holes.

In 1993, during construction activities at the Waikīkī Aquarium, approximately 3 km (1.86 miles) southwest of the present project area, fragmentary human remains were discovered scattered in a back dirt pile, although no burial pit was identified (Dega and Kennedy 1993).

On April 28, 1994, an inadvertent burial discovery was made during excavation for a water line at the intersection of Kalākaua Avenue and Kuamo'o Street (just *mauka* of Fort. DeRussy). These remains represented a single individual (McMahon 1994).

In 1995, the remains of one individual were discovered in situ during construction activities on Paoakalani Street, fronting the Waikīkī Sunset Hotel (Jourdane 1995).

In 1996, Pacific Legacy, Inc. conducted an archaeological inventory survey of the block bounded by Kalākaua Avenue, Kūhiō Avenue, 'Olohana Street, and Kālaimoku Street (Cleghorn 1996). The survey included excavation of seven backhoe trenches. The subsurface testing indicated that

. . . this area was extremely wet and probably marshy. This type of environment was not conducive for traditional economic practices. . . . The current project area appears to have been unused because it was too wet and marshy. Several peat deposits, containing the preserved remains of organic plant materials were discovered and sampled. These deposits have the potential to add to our knowledge of the paleoenvironment of the area [Cleghorn 1996:15].

The report concluded that no further archaeological investigations of the parcel were warranted since "no potentially significant traditional sites or deposits were found", but cautioned of the "possibility, however remote in this instance, that human burials may be encountered during large scale excavations" (Cleghorn 1996:15).

In 1996, a traditional Hawaiian burial was discovered and left in place during test excavations on two lots at Lili'uokalani Avenue and Tusitala Street (McDermott et al. 1996). Indigenous Hawaiian artifacts and historic artifacts were also found within the project area.

Garcia and Associates completed a large project on the Fort DeRussy Military Reservation in Waikīkī in 1997 (Denham and Pantaleo 1997; Denham et al. 1997). In addition to historic trash pits and several human burials these two reports document the remains of three fishponds that were discovered: SIHP #s 50-80-14-4574, -4575, and -4576. The authors place the construction and principle use of the ponds to between the fifteenth and eighteenth centuries. Pollen analysis by Linda Scott Cummings documented a possible shift in Loko Paweo II pond from a fishpond (prior to AD 1400s) to more agricultural uses some time between the AD 1400s and AD 1600s. Foraminifera were also very common in early deposits indicating the presence of seawater and are virtually absent in later deposits indicating relatively fresh water. The presence of large quantities of Cruciferae pollen in later deposits was thought to indicate the presence of either an agricultural crop or a weed associated with agriculture (Denham et al 1997:E-6).

In 1997, during archaeological monitoring by CSH for the Waikīkī Force Main Replacement project, scattered human bones were encountered on 'Ōhua Street (Winieski and Hammatt 2000). These included the proximal end and mid-shaft of a human tibia, a patella, and the distal end and mid-shaft of a femur. These remains occurred within a coralline sand matrix that had been heavily disturbed by previous construction, and by the on-going construction project. No precise location for the original burial site was identified.

In April 1999, two human burials were inadvertently encountered near the intersection of Ena Road and Kalākaua Avenue during excavation activities for the first phase of the Waikīkī Anti-Crime Lighting Improvements Project (Perzinski et al. 1999). These discoveries were approximately 350 m (0.2 mile) east of the present project area, on the *makai* side of Kalakaua Avenue.

From July 1999 to October 2000, four sets of human remains were inadvertently encountered during excavation activities relating to the Waikīkī Anti-Crime Street Lighting Improvement project along portions of Kalākaua Avenue (Bush et al. 2002). The first burial was encountered on Kalākaua Avenue, just before Dukes Lane and assigned SIHP # 50-80-14-5864. The burial was left in place however, and the light post was repositioned. The second burial was encountered at the intersection of Kalākaua Avenue and Ka'iulani Avenue. Earlier, during archaeological monitoring for the water mains project, two burials were encountered in the immediate area of the second burial find and assigned SIHP # 50-80-14-5856 features A and B. Due to the close proximity to the previously encountered burials, the second burial was assigned the same SIHP # 50-80-14-5856, and designated feature C. Burials 3 and 4 were recovered at the intersection of Kalākaua Avenue and Kealohilani, near an area of concentrated burials assigned SIHP # 50-80-14-5860 during monitoring for the water mains project. Consequently, burials 3

and 4 were also assigned SIHP # 50-80-14-5860, features U and V. In addition to human remains, pre-contact deposits, historic and modern rubbish concentrations, and pond sediments were also encountered.

From November 1999 to May 2000, 44 human burials, with associated cultural deposits, were encountered during excavation for a waterline project on Kalākaua Avenue between the Ka'iulani and 'Ōhua Avenues (Winieski et al. 2002a). Except for previously disturbed partial burials in fill, the bulk of the burials were encountered within a coralline sand matrix. Additionally, a major cultural layer was found and documented.

From January 2000, to October 2000, 10 human burials were encountered during archaeological monitoring of the Kūhiō Beach Extension/Kalākaua Promenade project (Winieski et al. 2002b). Six of these were located within a coralline sand matrix. The four others were partial and previously disturbed within fill. Additionally, a major cultural layer was found and documented, apparently part of the same major cultural layer associated with the waterline project between Ka'iulani and 'Ōhua Avenues.

Hammatt et al. (2000) conducted an archaeological assessment of the Honolulu Zoo Parcel. The authors concluded that the majority of the zoo lands were unlikely to yield significant cultural deposits. The one exception to this was the southwestern corner of the project area closest to Kupalaha Heiau, which once existed immediately to the west of the zoo.

In April 2001 human remains were inadvertently disturbed during excavations associated with the construction of a spa at the Royal Hawaiian Hotel (Elmore et al. 2001), approximately 1.30 km north of the current project area. Archaeological Consultants of the Pacific, Inc. was responsible for the documentation of the remainder of the burial and carrying out the instruction of DLNR/ SHPD. The burial and place it was encountered was designated SIHP # 50-80-14-5937. The burial was encountered on the north side of the hotel in the spa garden. The burial was partially disturbed through the thoracic region and anatomical left side. The disturbed remains were wrapped in muslin cloth and placed with the in-situ remains and reburied. The burial was recorded as a post contact burial based on artifacts associated with it. The associated artifacts included one shell button found *in-situ* and three more shell buttons found in the disturbed material. A single drilled dogtooth was found also during excavation but could not be positively associated with the site.

On May 2nd and June 14th, 2001, two in situ and two previously disturbed human burials were encountered at the site of a new Burger King (Cleghorn 2001a) and an adjoining ABC Store (Cleghorn 2001b). The finds were located at the intersection of 'Ōhua Street and Kalākaua Avenue (Cleghorn 2001a and 2001b). Because of their proximity to five burials encountered during the Kalākaua 16-inch Water Main Installation (Winieski et al. 2002a), they were included in the previously assigned SIHP # 50-80-14-5861. Three of these burials were recovered, and one was left in place. Volcanic glass fragments were found in association with one of the burials. A cultural layer was also observed which contained moderate to heavy concentrations of charcoal and fragments of volcanic glass. Historic era artifacts, including a bottle fragment, plastic and glass buttons, a ceramic fragment, and metal fragments were also encountered within fill materials.

McDermott and Chiogioji (2001) completed an inventory survey of the Honolulu Zoo Parcel. Eighteen backhoe trenches were excavated and other than historic fill deposits, no culturally modified sediments, cultural layers, or archaeological features were found within the project area. Low energy alluvial depositional environments were discovered, but the sandy nature of the deposits prevented the extraction of sediment cores. The authors noted the historic fill deposits had contaminated the underlying naturally deposited sediments.

In 2001 and 2002, CSH (Mann and Hammatt 2002) performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili'uokalani Avenue During the course of monitoring, five burial finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these inadvertent finds were found in fill sediment.

Due to the nature of the three burial finds in fill, it was concluded that no SIHP #s be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned SIHP # 50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was recorded from Lili'uokalani Avenue. Since three burials had been found in the immediate vicinity during a previous project (Winieski et al. 2002b) and had been assigned to SIHP # 50-80-14-5859, the two new individuals were recorded as Feature H of this previously recorded site.

McIntosh and Cleghorn (2004) conducted an inventory survey of 0.687 acres on the east side of Launiu Street. A total of nine backhoe trenches were excavated (McIntosh and Cleghorn 2004: 24). Trenches six, seven, and eight revealed a greenish gray (Gley 1: 5/1) clay, massive sticky, plastic layer that was determined to be an old *lo'i* deposit. The authors conclude that they only found the eastern end of the *lo'i* and that it probably continued under Launiu Street to the west. A single radiocarbon date was submitted from the layer that returned a date of 1280 to 1010 BC at 2 Sigma. This date is extremely early for Hawai'i and the authors declare it to be anomalous (McIntosh and Cleghorn 2004: 44-45). No palynological work was undertaken during this inventory survey.

In summary, past archaeological research, from the beginning of the twentieth century to the present has produced evidence that traditional Hawaiian cultural deposits, historic trash deposits, and, most notably, human burials, do exist throughout the breadth of the Waikīkī area.

3.3 Background Summary and Predictive Model

This predictive model is based on previous archaeological findings and traditional Hawaiian historical sources, which provided evidence for prehistoric land-use and settlement pattern for the Waik♣k♣ Ahupua'a region. This information is supplemented by the historic documentation specific to the project area and its environs presented in Section II above. The predictive model establishes how the archaeological record might reflect the cultural praxis documented for this area, based on the above research.

The prehistoric Hawaiian settlement pattern was based on the system of *ahupua'a* land division. Prior to the Mahele of 1848 O)ahu was divided into six *moku* or *kalana* (districts): Ko'olaupoko, Ko'olauloa, Waialua, Wai'anae, *'Ewa*, and Kona; these are said to be the same divisions established by the *ali'i Ma'ilikukahi* around 1500 A.D. Contained within these six districts were 86 (known) prehistoric *ahupua'a* land divisions. The *ahupua'a*, as described by Kirch (1985:2, Chapter 11), ideally, is represented by a pie-shaped slice of an island or region, usually running from the mountains to the sea. Each *ahupua`a*, ideally, contained adequate amounts of all the natural resources a Hawaiian island could provide.

The current project area lies within the *ahupua`a* of Waik♣k♣ in the *moku* (district) of Kona. Waik♣k♣ Ahupua'a deviates somewhat from the usual pie-shape land division in that its sides, the northwest to southeast breath, are wider. It does, however, fit all the other traditional criteria for an ideal *ahupua'a*, as described above both environmentally and in the archaeological record. Within Waik♣k♣ Ahupua'a, the *mauka* to *makai* region relative to the current project area extends from the Ko)olau Mountain range to the lower valleys of Manoa and Palolo, to the dry lowland of M∩)ili)ili and extending on through the inland wetlands (before late historic modifications), and the coastal zone to the sea.

The project area is located in what was once the wetland plains of Waik♣k♣. This area provided ancient Hawaiians with the environment needed for the cultivation of fishponds and subsistence crops such as taro and banana. The features expected from these cultural activities include berms, *lo)i* (pond fields), streambeds, pond banks, and *`auwai* levee remnants. Following the initial years of European contact, Westerners engaged in new large-scale agricultural ventures. Immigrant workers from Asia were brought to Hawai)i to labor in these new agricultural ventures, and subsequently engaged in their own farming

enterprises, most notably *rice* and aquaculture. The wetlands of Waik♣k♣ provided an ideal environment for the cultivation of rice, and the area yielded much of its traditional taro cultivation land to rice production. The same area, in the early 20th century, was altered more intensely by land-reclamation plans, the resulting dredge and fill projects obliterated what remained of traditional Hawaiian cultivation processes, in the wetlands of Waik♣k♣.

Plans for reclamation of the wetlands of Waik♣k♣ were generated in the early decades of the 20th century. The most extensive reclamation project took place in the 1920's, with the off-shore and inland dredging for the creation of the Ala Wai Canal. The wetland plains of Waik♣k♣ were filled-in with materials dredged from the sea-floor and the area of the present Ala Wai Canal. Drainage from the Ko)olau Mountains was diverted through the new Ala Wai Canal, leaving the rich agricultural land buried below layers of imported dredged sediments and coral fill.

Historic documentation indicates that the project area and its immediate environs included, up to the mid-nineteenth century, traditional Hawaiian irrigated taro fields, water course features, ponds, and associated house sites. Historic maps indicate that, by the late nineteenth and early twentieth centuries, this portion of Waik♣k♣ included rice fields, banana fields, and other orchards.

Documents specific to the project area identify a "pauku of stream taro" extending across the *mauka* portion of the project area (in Mahele records for Land Commission Award 775, Apana 2 to Paoa) with a *kuauna* – a soil embankment -- defining the *makai* boundary of the *pauku* (on a 1922 survey map for Land Court Application 537). An *'auwai* (irrigation ditch) is shown entering the *mauka* side of the project area.

Early 20th century maps and photographs – dated before the construction of the Ala Wai Canal – show a pond feature just *makai* portion of the project area.

Historic photographs show that the present surface of the urban blocks in this portion of Waik♣k♣ is landfill created during the construction of the Ala Wai Canal. By the early 1950's, as shown on a fire insurance map of the period, the project area comprised five parcels containing single-story dwellings and two- and three-story and apartment buildings. Episodes of demolition and new construction upon these parcels took place during the second half of the twentieth century.

It is anticipated that subsurface remnants of: the original Native Hawaiian agricultural wetland environment – including an *'auwai*, a "pauku of stream taro", a *kuauna*, and possibly a pond – will be encountered during subsurface testing within the project area. It is further anticipated that evidence of fill episodes from land-reclamation programs – including the Ala Wai Canal project and, perhaps, off-shore dredging projects – will also be encountered. Evidence of late historic construction, demolition, and landscaping activities are expected to overlay the dredged strata.

Section 4 Results of Fieldwork

4.1 Survey Findings

A pedestrian inspection of the project area did not reveal any historic properties.

4.2 Test Excavations Findings

Subsurface testing was undertaken for several purposes. First, was to find evidence of prehistoric land-use and occupation. Second, excavation was an attempt to discover the historic agricultural features that were present at the time of the creation of the Ala Wai Canal. Third, excavation had the potential to reveal subsurface wetland deposits that could have provided valuable paleoenvironmental data.

Subsurface testing revealed three basic stratigraphic componenets, designated Strata I, II, and III. The uppermost layers, labeled as Ia-d in the profiles and sediment descriptions below, are the materials that were removed from the Ala Wai Canal during dredging and used as a fill, as a capping layer for future construction activities within Waikīkī. Strata I layers (Ia, and Ib) were a coarse sandy loam mixed with basalt and coral inclusions. Some construction debris was also found in them. Beneath the 'dry fill' layers were fine sands, silts, and clays that were deposited from the dredging of the canal as a pumped slurry. These fine-grained sands, silts, and clays differ from the overlying layers in that instead of being dumped they were pumped into the various low-lying areas of Waikīkī. Within this project area there are several thin layers (5-10 cm) that represent separate pump-dredge events. Within these thin layers there is extremely fine banding which firmed as the particles of sediment dropped out of suspension. This banding and the very abrupt boundary between Layers I and II is shown in the trench profiles.

The middle layers, labeled as IIa-b, are sediments that originally comprised the agricultural wetland soils of Waikiki. These layers contained a high level of organic material and large quantities of land snails. The excellent preservation of the organic materials and shells suggests that the area was covered rapidly with materials pumped from the canal.

The lowest stratigraphic layers, labeled Strata III and IV, were marine deposited sterile sand mixed with coral fragments.

Trench 1 was a 22 m long trench that paralleled Ala Wai Boulevard in the most mauka (east) portion of the project area. Trench 1 was broken down into three sections for detailed stratigraphic description. Each section receives its own subheading and independent discussion. This trench, three times as long as CSH usual test trench length, was placed in order to intercept subsurface agricultural features thought to exist on the property, according to several old maps researched.

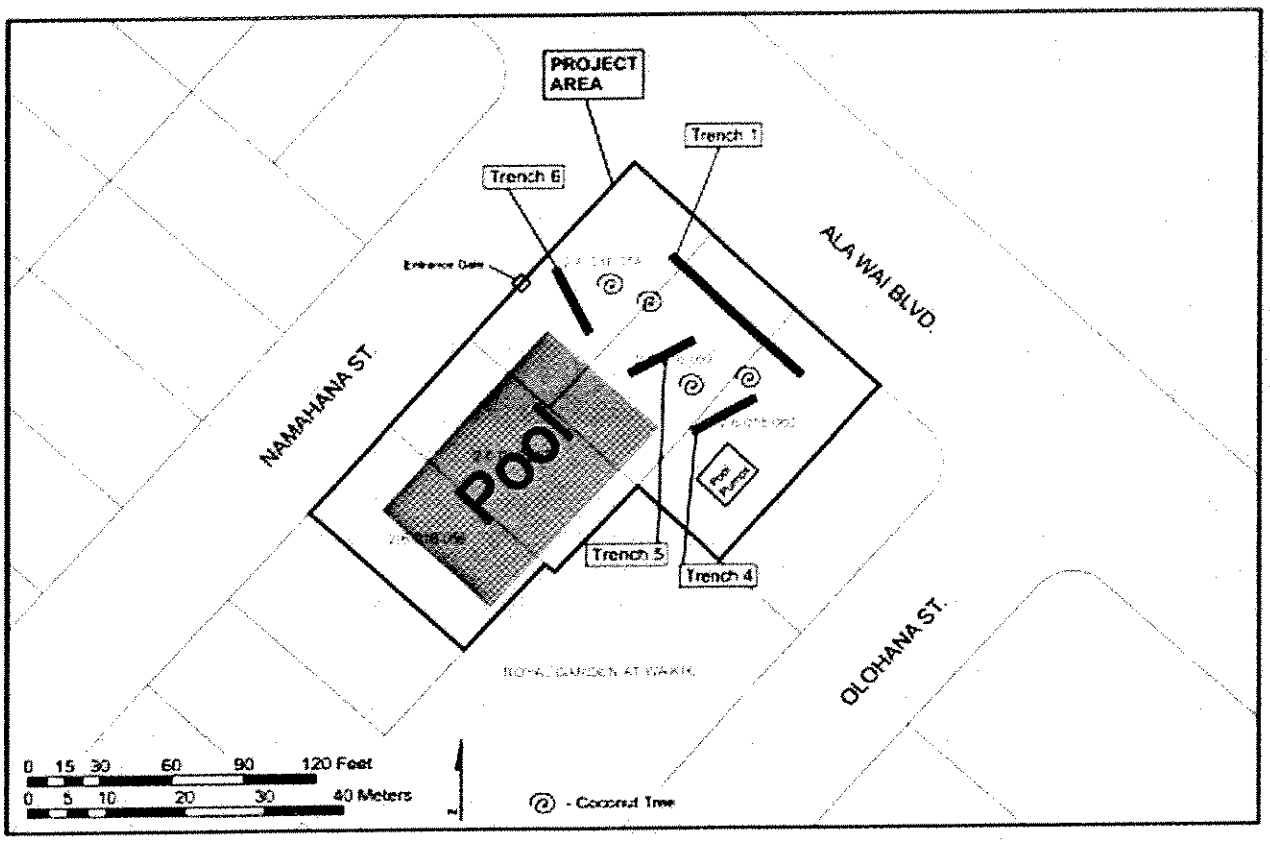
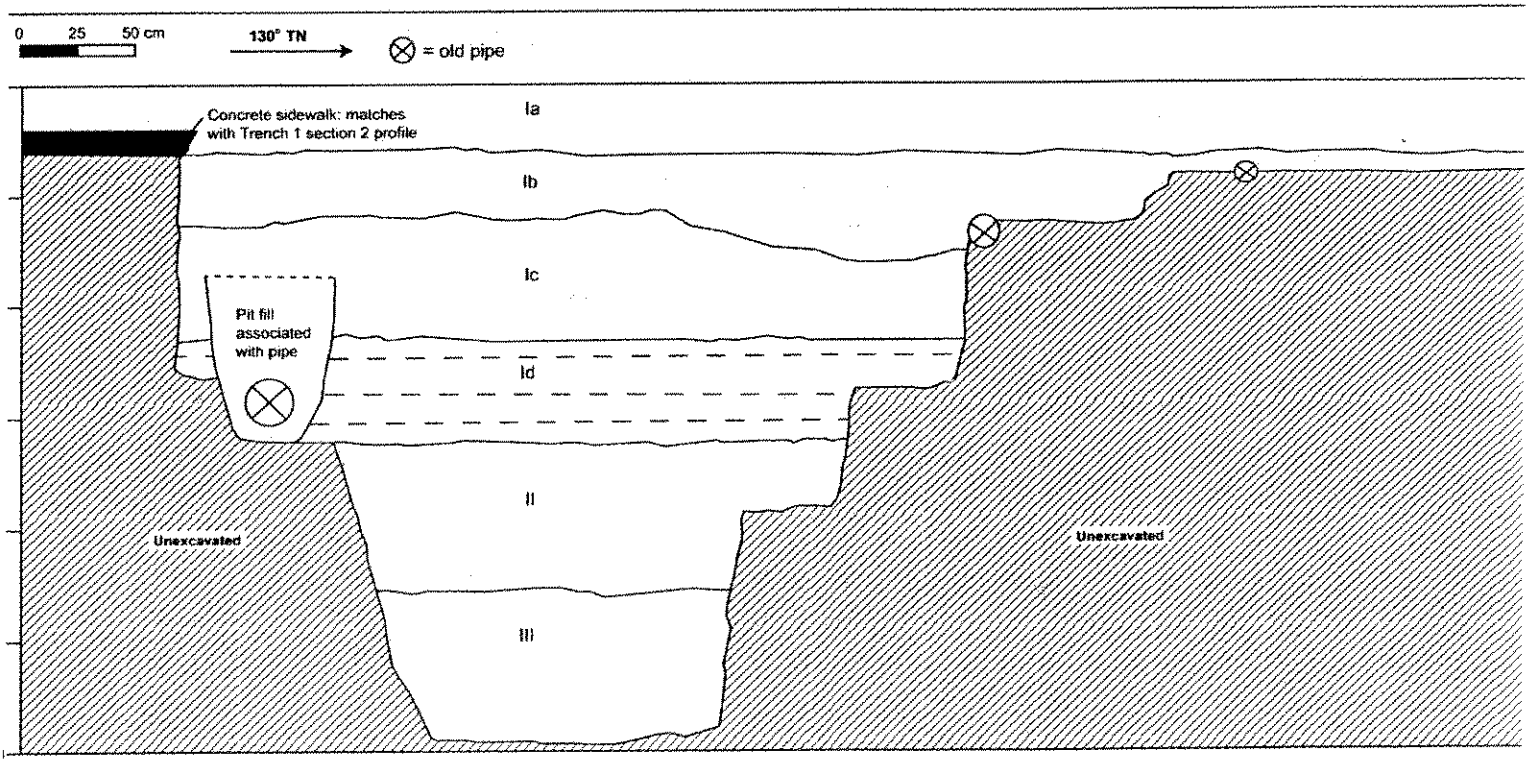


Figure 12. Map showing the location of the 6 test trenches in relation to the foundation plan for the proposed development.

ench 1 Section 1

Section 1 was 7 m long, 0.9 m wide, and 2.75 m deep (Figure 12). It was oriented 130°T.N. (southeast-northwest). The stratig :corded is of the north-facing wall. Due to consistent stratigraphy throughout Trench 1, the soil descriptions for sections 1-3, are inc ure 12 only.



3. Stratigraphic profile of the northeast wall of Trench 1 Section 1

Stratum Ia: 0-30 cmbs	Fill Horizon; 5 YR 3/3, dark reddish brown; sandy loam; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; 60% coconut palm roots and rootlets.
Stratum Ib: 30-62 cmbs	Fill Horizon; 5 YR 3/3, dark reddish brown; sandy loam; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; same as Ia except no coconut palm roots or rootlets.
Stratum Ic: 62-115 cmbs	Fill Horizon; 10 YR 6/3, pale brown; medium grain sand with 70% coral rubble; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; coral rubble fill layer.
Stratum Id: 115-210 cmbs	Fill Horizon; 10 YR 5/1 to 5/3, gray to brown; bands of silty sand; weak, fine, single grain structure;friable, firm; non-plastic; weak cementation; and clay, structureless, sticky, plastic, abrupt wavy lower boundary; consists of pumped dredged microlayers from Ala Wai dredging project.
Stratum II: 210-245 cmbs	A-Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless, plastic; no cementation; abrupt wavy lower boundary; contains organic material, land snails.
Stratum III: 245-275 cmbs	10 YR 5/2, grayish brown; medium grain sand; weak, fine, single grain structure; wet non-sticky consistency; non-plastic; no cementation; below the water table.

4.2.2 Trench 1 Section 2

Trench 1 Section 2 was 7.0 m long, 0.9 m wide and 2.4 m at the maximum depth (Figure 13). As with Section 1 and Section 3, Section 2 was oriented 130° T.N. The stratigraphic profile recorded is of the north wall of the trench.

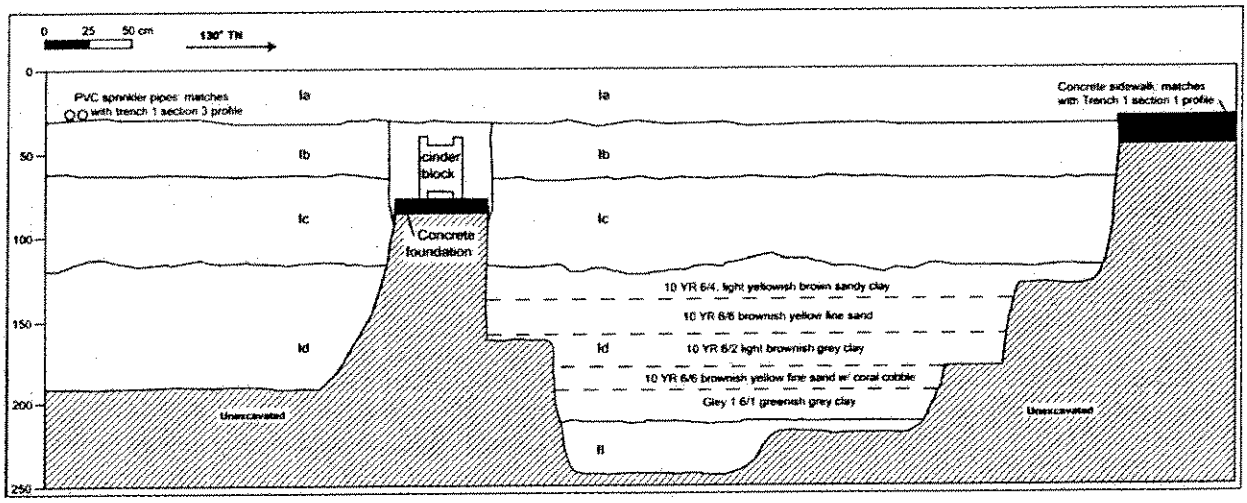


Figure 14. Stratigraphic profile of the northeast wall of Trench 1 Section 2

4.2.3 Trench 1 Section 3

Trench 1 Section 3 was 8.0 m long, 0.9 m wide and 2.5 m at the maximum depth (Figure 14). As with Section 1 and Section 2, Section 3 was oriented 130° T.N. The stratigraphic profile recorded is of the north wall of the trench.

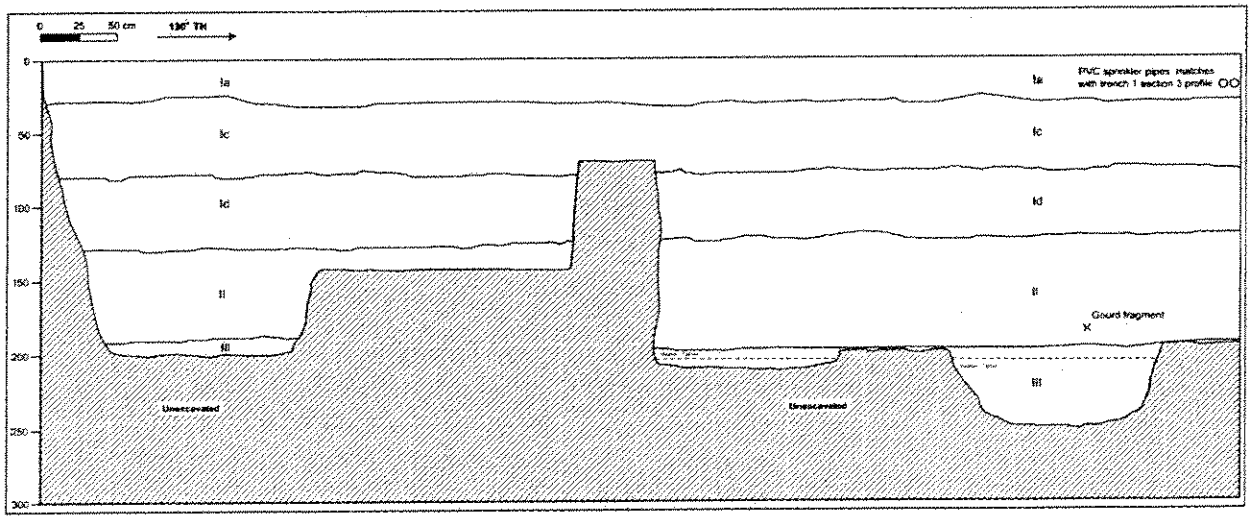


Figure 15. Stratigraphic profile of the northeast wall of Trench 1 Section 3

4.2.4 Trench 4

Trench 4 was placed to further sample the southeastern corner of the project area. Trench 4 was 7 m long, 0.8 m wide, and 2.9 m deep (Figure 15). It was oriented at 44°T.N. (northeast-southwest). The stratigraphic profile recorded is of the east-facing wall.

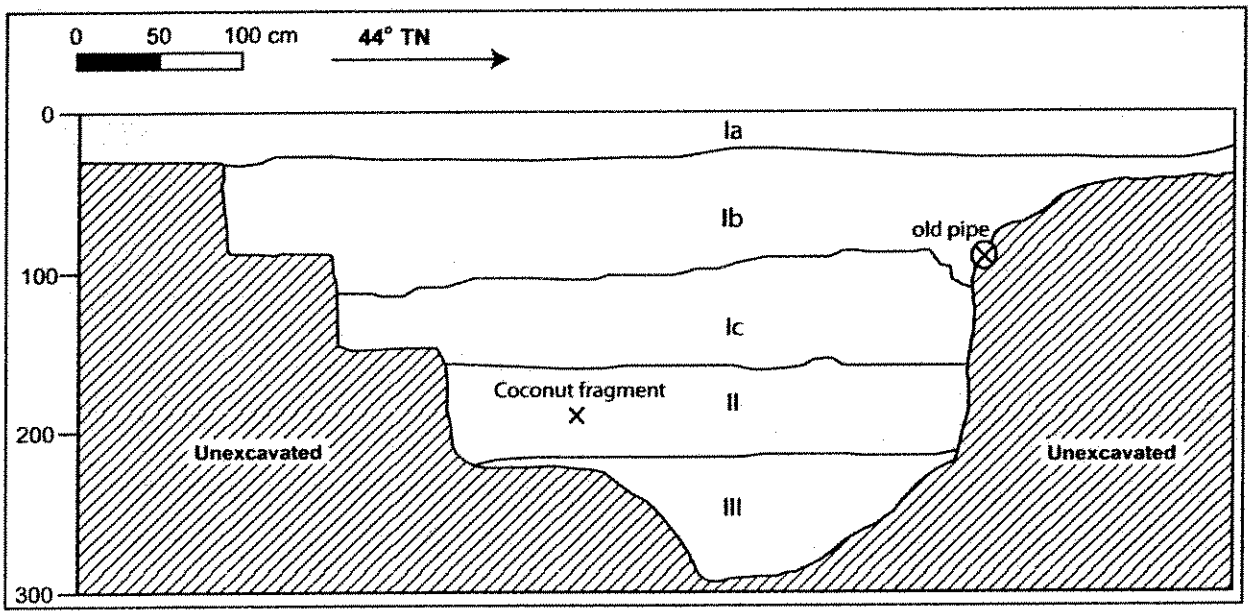


Figure 16. Stratigraphic profile of the east wall of Trench 4.

Stratum Ia: 0-45/105 cmbs	Fill Horizon; 5 YR 3/3, dark reddish brown; sandy loam; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; 60% coconut palm roots and rootlets.
Stratum Ib: 45/105-160 cmbs	Fill Horizon; 10 YR 6/3, pale brown; medium grain sand with 70% coral rubble; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; coral rubble fill layer.
Stratum Ic: 160-210 cmbs	Fill Horizon; 10 YR 5/1 to 5/3, gray to brown; bands of silty sand; weak, fine, single grain structure;friable, firm; non-plastic; weak cementation; and clay, structureless, sticky, plastic, abrupt wavy lower boundary; consists of pumped dredged microlayers from Ala Wai dredging project.
Stratum II: 210-245 cmbs	A-Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless; plastic; no cementation; abrupt wavy lower boundary; organic material, land snails, gourd fragment.

Stratum III: 245-275 cmbs	10 YR 5/2, grayish brown; medium grain sand; weak, fine, single grain structure; wet non-sticky consistency; non-plastic; no cementation; below the water table.

4.2.5 Trench 5

Trench 5 was placed to further sample the middle area of the project, just north of the existing swimming pool.. Trench 5 was 10.4 m long, 0.8 m wide, and 2.9 m deep (Figure 16). It was oriented 41°T.N. (northeast-southwest). The stratigraphic profile recorded is of the west-facing wall.

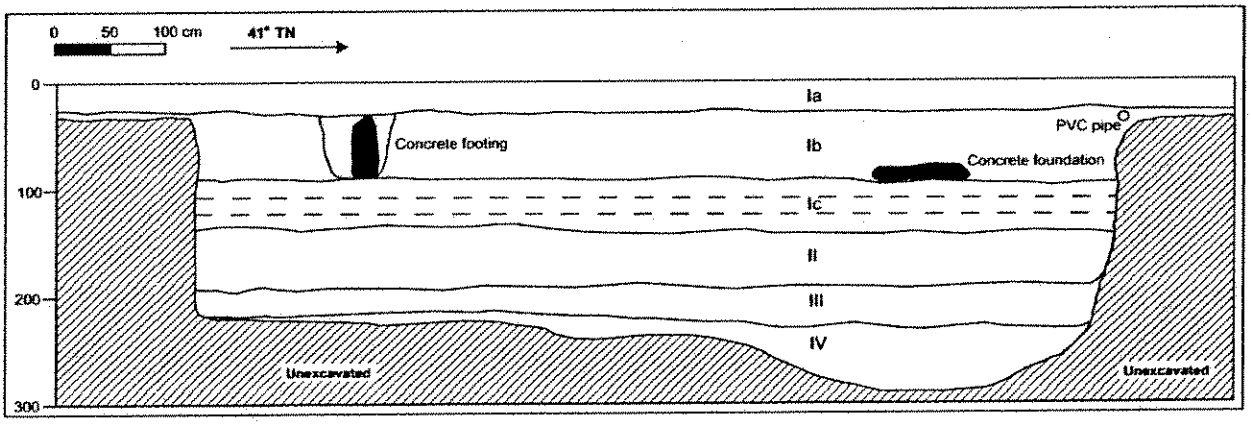


Figure 17. Stratigraphic profile of the west wall of Trench 5

Stratum Ia: 0-30 cmbs	Fill Horizon; 5 YR 3/3, dark reddish brown; sandy loam; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; 60% coconut palm roots and rootlets.
Stratum Ib: 30-89 cmbs	Fill Horizon; 10 YR 6/3, pale brown; medium grain sand with 70% coral rubble; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; coral rubble fill layer.
Stratum Ic: 89-135 cmbs	Fill Horizon; 10 YR 5/1 to 5/3, gray to brown; bands of silty sand; weak, fine, single grain structure;friable, firm; non-plastic; weak cementation; and clay, structureless, sticky, plastic, abrupt wavy lower boundary; consists of pumped dredged microlayers from Ala Wai dredging project.
Stratum II: 135-190 cmbs	A-Horizon; 10 YR 3/2, very dark grayish brown; clay loam; structureless, plastic; no cementation; abrupt wavy lower boundary; contains organic material, land snails.

Stratum III: 190-230 cmbs	10 YR 3/2, very dark grayish brown, sand to clay loam, mixed with coral rubble (mix of Stratum II and IV).
Stratum IV: 230-290 cmbs	10 YR 5/2, grayish brown; medium grain sand; weak, fine, single grain structure; wet non-sticky consistency; non-plastic; no cementation; ponded or marine sand mixed with decomposing coral rubble.

4.2.6 Trench 6

Trench 6 was placed in the western portion of the project area. Trench was 7 m long, 0.9 m wide, and 2.75 m deep (Figure 17). It was oriented 130°T.N. (southeast-northwest). The stratigraphic profile recorded is of the north-facing wall.

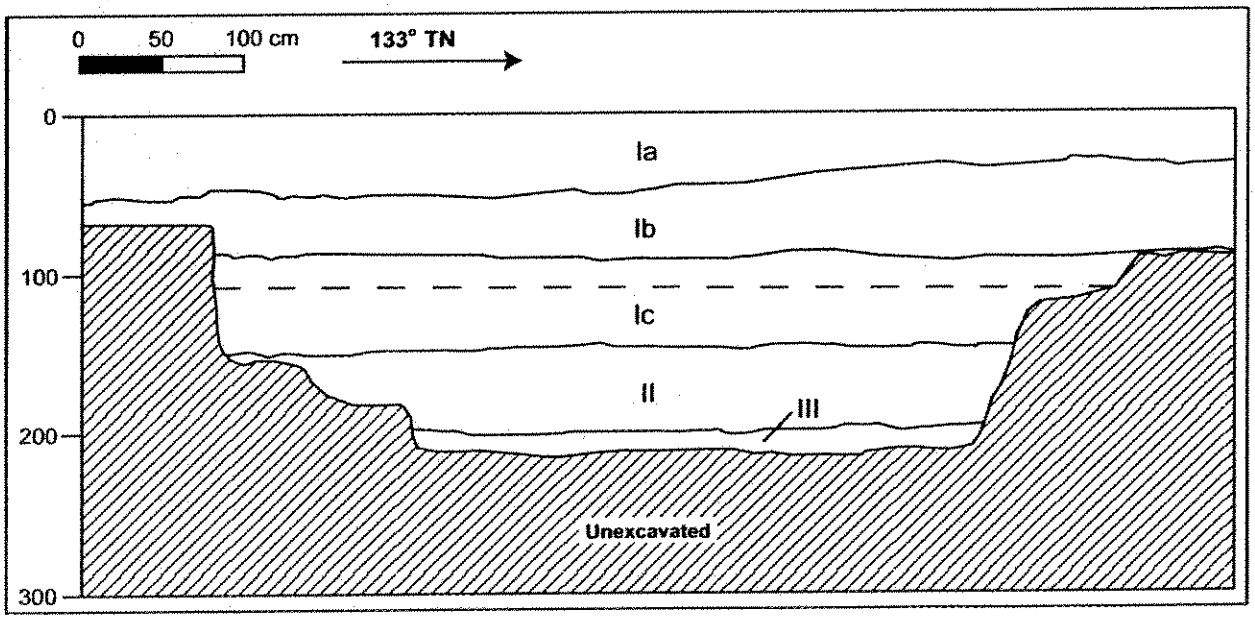


Figure 18. Stratigraphic profile of the north wall of Trench 6.

Stratum Ia: 0-35/55 cmbs	Fill Horizon; 5 YR 3/3, dark reddish brown; sandy loam; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; 60% coconut palm roots and rootlets.
Stratum Ib: 35/55-90 cmbs	Fill Horizon; 10 YR 6/3, pale brown; medium grain sand with 70% coral rubble; weak, fine, crumb structure; loose dry consistency; non-plastic; no cementation; abrupt wavy lower boundary; coral rubble fill layer.

Stratum Ic: 90-151 cmbs	Fill Horizon; 10 YR 5/1 to 5/3, gray to brown; bands of silty sand; weak, fine, single grain structure;friable, firm; non-plastic; weak cementation; and clay, structureless, sticky, plastic, abrupt wavy lower boundary; consists of pumped dredged microlayers, from Ala Wai dredging project.
Stratum II: 151-200 cmbs	A-Horizon; 10 YR 3/2, very dark grayish brown; sandy loam; structureless; plastic; no cementation; abrupt wavy lower boundary; contains organic material, land snails.
Stratum III: 200-220 cmbs	10 YR 5/2, grayish brown; medium grained sand; weak, fine, single grain structure; wet, non-sticky consistency; non-plastic; no cementation; excavated to below the water table.

4.3 Site Descriptions

No historic properties were identified during this archaeological inventory survey.

Section 5 Results of Laboratory Analysis

A piece of gourd that had been preserved in the Stratum II A-horizon layer was collected from Trench 4 sidewall (Figure 15). As no good samples of charcoal were noted, this gourd fragment was sent to Beta Analytic for analysis and C14 dating. Results returned indicated that the gourd sample had an age of AD 1430 – 1460 (1 Sigma calibrated result (68% probability)). This is consistent with other dates analyzed in the immediate area in recent reports (Borthwick et al. 2002). This indicates that the agricultural use of this particular area most likely began or continued from at least the 1400s.

Section 6 Summary and Interpretation

The predictive model suggested that the project area, which was part of the original wetland plains of Waikiki, would contain evidence of this former pre-contact and post contact agricultural use, including irrigated taro fields, rice fields and possible *lo'i* fields, fishponds, and associated house sites, based on the location of the project area and LCA documentation. Historic maps of the area depict rice fields, banana fields, and other orchards. Specific to the project area CSH believes that a "*pauku* of stream taro" extended across the project area. Additionally, just before the construction of the Ala Wai Canal, a pond feature is noted in the *makai* portion of the project area, in several early 20th century maps and photographs. The project area was then directly affected by the Ala Wai Canal land reclamation project, with tons of pumped dredged material being dumped directly on the current project area. Finally, around the 1950's, the project area was split into five separate parcels, each with low-rise apartment buildings. The five parcels form the current project parcel.

CSH test excavation trenches were placed to sample the 'available' portions of the project area (Figure 3). However approximately half of the project area is currently covered with a large swimming pool that extends in some places to a depth of over 10 feet. This area was not accessible to sample during this inventory survey but CSH also feels that the need to sample this area may be diminished due to the fact that most of it has been excavated previously to install the pool and its' pumps and infrastructure. Based on test trenching it appears that the entire pool extends below the water table.

Trench 1, Sections 1, 2 & 3 did reveal several old utility lines and concrete/cinder block remnants of old apartment building footings. Trench 4 contained the gourd fragment that was sent to Beta Analytic for analysis, as well as several utilities. Trench 5 contained more possible concrete footing remnants, as well as more utilities. No 'historic era' evidence of any kind was found in Trench 6. All trenches contained the culturally enriched agricultural soils (i.e. Stratum II), found throughout much of Waikiki.

Overall the findings of this inventory survey are sparser than originally anticipated in the predictive model. No presumed pre-contact or early historic features (*e.g. kua'ana*, *pauku* of stream taro) was encountered in any trench, except for one piece of gourd preserved in the A-horizon layer (Stratum II), taken from the sidewall for analysis. Shown to be approximately 600 years old. The gourd fragment being preserved in Stratum II (A-horizon) indicates that agricultural use of this specific area spanned possibly 100's of years.

The "*pauku* of stream taro", a possible *'auwai* crossing the project area, or any other feature types were not encountered. Trench 1 was extended to three times its planned length in order to try to intercept the *pauku* or *'auwai*, but to no avail. Evidence of the land reclamation project, however, was encountered, in the form of Stratum Ic-Id, noted in all six of the trench profiles.

Although no structural cultural material was encountered, evidence suggests that pre-contact agricultural infrastructure does indeed exist, in close proximity to the project area. Structural evidence within the current project area may have been destroyed or removed by historic construction within the confines of the current project area.

Section 7 Project Effect and Mitigation Recommendations

7.1 Project Effect

CSH's project specific effect recommendation is "no effect." The proposed commercial building development should have not direct effect on significant historic properties. The subsurface testing did not locate significant subsurface sites, and the existing pool most likely removed all sediments, down to the water table.

7.2 Mitigation Recommendations

CSH recommends no further work for this project area. Furthermore, due the lack of structural or feature-specific findings, archaeological monitoring does not appear warranted for the project area at this time. If however, during future construction activities, further cultural evidence, or human burials are encountered, work should be halted and appropriate agencies (e.g. SHPD-DLNR) should be contacted.

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ACOUSTIC STUDY FOR THE ALA WAI GARDEN PLAZA PROJECT HONOLULU, HAWAII

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CHAPTER I. SUMMARY

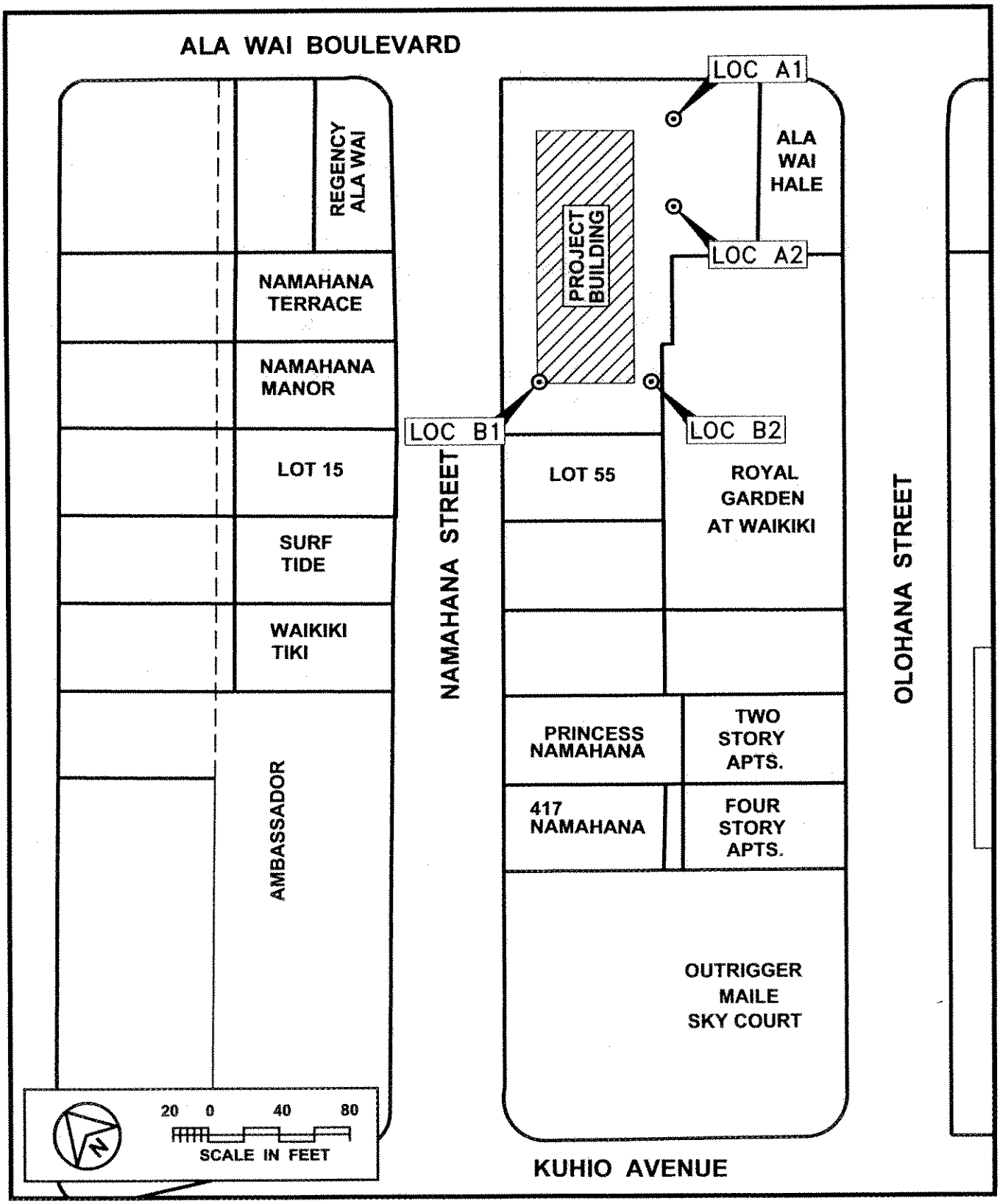
The existing and future traffic noise levels in the vicinity of the proposed Ala Wai Garden Plaza Project in Waikiki (see FIGURE 1) were evaluated for their potential impacts and their relationship to the current FHA/HUD noise standard. The traffic noise level increases along the access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Ala Wai Boulevard or Kuhio Avenue as a result of project plus non-project traffic following project build-out by CY 2009. Moderate increases in the relatively low traffic noise levels along Namahana Street are predicted to occur as a result of project plus non-project traffic by CY 2009. Traffic noise from Ala Wai Boulevard and Kuhio Avenue will continue to control background ambient noise levels in the project environs, with traffic noise levels exceeding 65 Ldn at existing residential and resort units which front Ala Wai Boulevard and Kuhio Avenue. Future traffic noise levels are predicted to exceed the FHA/HUD standard of 65 Ldn at the mauka (north) units of the project building, but should be less than 65 Ldn at the remaining units.

Project traffic will add less than 0.2 Ldn additional units of noise along the high volume and high noise level roadways such as Ala Wai Boulevard and Kuhio Avenue. The increases in future traffic noise levels resulting from project generated traffic are not considered to be significant.

A larger increase in traffic noise levels of 1.1 Ldn is predicted to occur along Namahana Street following the proposed project development. Because existing traffic noise levels along Namahana Street are controlled by traffic noise from Ala Wai Boulevard and Kuhio Avenue, these increases will be difficult to measure or perceive, and are not considered to be significant.

Unavoidable, but temporary, noise impacts may occur during the excavation and construction activities within the project area, and particularly during the earthwork 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 low-rise, mid-rise, and high-rise buildings near the project site, and the potential for damage to these buildings from vibration during impact pile driving operations, vibration monitoring is recommended during close-in pile driving operations where vibration levels are expected to exceed 0.2 inches/second. In addition, it is expected that the design and construction methods for the project's buildings will be optimized to minimize risks of damage to adjacent structures from



PROJECT LOCATION MAP AND NOISE MEASUREMENT LOCATIONS

FIGURE 1

settling or heaving. A vibration limit of 2.0 inches/second should not be exceeded at any of the adjacent buildings, and modifications to the project's plans prior to design and construction are recommended if these limits are expected to be exceeded.

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future noise environment in the environs of the proposed Ala Wai Garden Plaza Project in Waikiki on the island of Oahu. Traffic noise level increases and impacts associated with the proposed development were to be determined along the public roadways which are expected to service the project related 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 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 FHA/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 Ldn 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 Ldn 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 Ldn descriptor system are shown in FIGURE 2. As a general rule, noise levels of 55 Ldn 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, Ldn levels generally range from 55 to 65 Ldn, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 Ldn, and as high as 75 Ldn when the roadway is a high speed freeway. In the Waikiki area, Ldn levels tend to be high and greater than 65 Ldn due to the higher concentration of tour and city buses, and due to the higher activity levels during the nighttime period.

In the project area, traffic noise levels along the Rights-of-Way of Ala Wai Boulevard and Kuhio Avenue are greater than 65 Ldn due to the large volumes of traffic and heavy vehicles (trucks and buses) on those major thoroughfares. Adding to the noise from the normal traffic along the various roadways are the relatively high noise levels of tour buses idling at curbside, sirens on police and emergency vehicles, outdoor mechanical equipment (fans and air conditioning equipment) at the commercial and resort buildings, maintenance activities, and garbage and delivery truck operations.

For purposes of determining noise acceptability for funding assistance from federal agencies (FHA/HUD and VA), an exterior noise level of 65 Ldn 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 Ldn does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 3, a lower level of 55 Ldn is considered to be 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 Ldn, government agencies such as FHA/HUD and VA have selected 65 Ldn as a more appropriate regulatory standard.

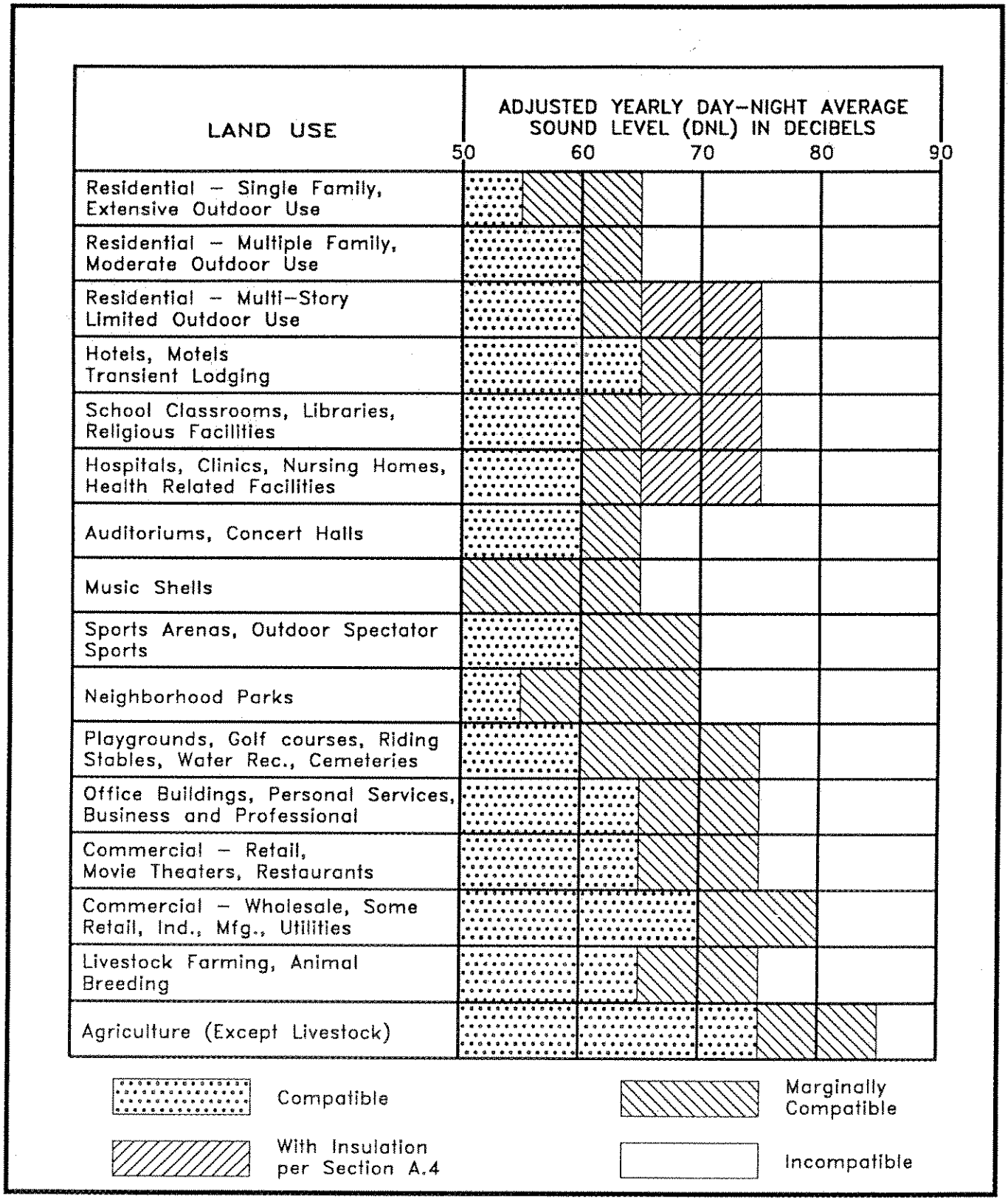
TABLE 1

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.



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)

FIGURE 2

For commercial, industrial, and other non-noise sensitive land uses, exterior noise levels as high as 75 Ldn are generally considered acceptable. Exceptions to this occur when naturally ventilated office and other commercial establishments are exposed to exterior levels which exceed 65 Ldn.

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 Ldn (see Reference 4). Although they are not directly comparable to noise criteria expressed in Ldn, State DOH noise limits for single family residential lands equate to approximately 55 Ldn. For multifamily residential, commercial, and resort lands, the State DOH noise limits equate to approximately 60 Ldn. For light and heavy industrial lands, the State DOH noise limits equate to approximately 76 Ldn. 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 4 ground level locations (A1, A2, B1, and B2) to provide a basis for describing the existing noise environment in the project environs. The locations of the measurement sites are shown in FIGURE 1. The traffic and background ambient noise measurements were performed during the month of May 2007, and those results are summarized in TABLE 2. The results of these measurements plus the results of the traffic noise predictions were used to describe the existing and future noise levels in the project environs.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2009 were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (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 "Pavement" (or hard ground) 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 2007 and 2009, which were used to model existing and future traffic noise along the streets surrounding the project site. For existing and future traffic along the streets surrounding the project site, it was assumed that the average noise levels, or Leq(h), during the highest peak traffic hour were approximately 2 dB less than the 24-hour Ldn along those roadways. This assumption was based on the traffic counts from Reference 6 as well as those from 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.

TABLE 2

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
B1. 50 FT from the center-line of Namahana Street (5/21/07)	1530 TO 1630	25	133	2	4	57.8	54.4 ***
B2. 113 FT from the center-line of Namahana Street (5/21/07)	1530 TO 1630	25	133	2	4	57.6	50.3 ***
B1. 50 FT from the center-line of Namahana Street (5/22/07)	0730 TO 0830	25	79	2	4	60.4 * 57.5 **	53.4 ***
B2. 113 FT from the center-line of Namahana Street (5/22/07)	0730 TO 0830	25	79	2	4	59.1 * 57.7 **	49.3 ***
A1. 50 FT from the center-line of Ala Wai Boulevard (5/25/07)	0710 TO 0810	27	2,279	59	11	65.8	65.6

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume -------- AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
A2. 100 FT from the center-line of Ala Wai Boulevard (5/25/07)	0710 TO 0810	27	2,279	59	11	59.6	62.6
A1. 50 FT from the center-line of Ala Wai Boulevard (5/25/07)	1530 TO 1630	24	2,369	54	13	64.8	64.7
A2. 100 FT from the center-line of Ala Wai Boulevard (5/25/07)	1530 TO 1630	24	2,369	54	13	59.8	61.7

Notes:

* Includes noise contributions from refuse truck, ambulance siren, and motorcycle idling.
** Without noise contributions from refuse truck, ambulance siren, and motorcycle idling.
*** Predicted noise level lower than measured noise level due to traffic noise contributions from Ala Wai Boulevard.

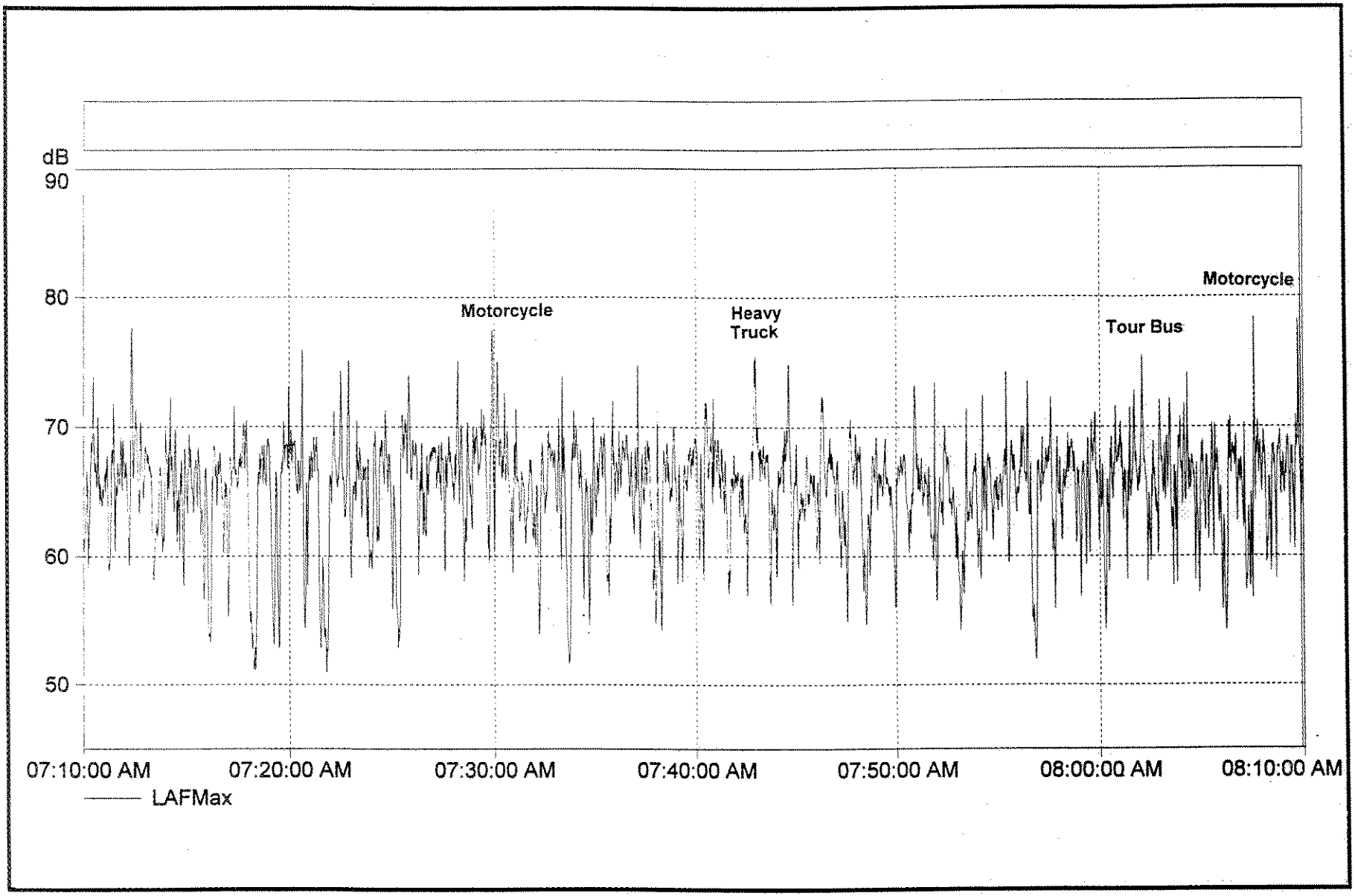
V. EXISTING ACOUSTICAL ENVIRONMENT

Major contributors to the existing background ambient noise levels within the project area are: traffic along Ala Wai Boulevard and Kuhio Avenue; refuse collection trucks; tour buses and delivery trucks which are idling or positioning at curbside; loud motorcycles; the sirens of emergency and police vehicles; and nearby construction activities. Sample strip charts of the louder noise events which were recorded at noise measurement Locations A1 and B1 during the early morning period before 9:00 AM are shown in FIGURES 3 and 4. The louder motorcycle, siren, refuse truck, and tour bus noise events can range from 75 to 90 dBA, and are clearly audible above the other background ambient noise sources.

The typical hourly variations in noise levels within the project area are controlled by motor vehicle traffic along two high volume roadways: Ala Wai Boulevard and Kuhio Avenue. Traffic noise levels tend to be lowest during the early morning hours between 3:00 and 5:00 AM, and tend to be highest during the AM and PM peak commuting hours. The estimated variation in average hourly noise levels along Ala Wai Boulevard is shown in FIGURE 5, which was developed using available traffic counts from References 7 and 8.

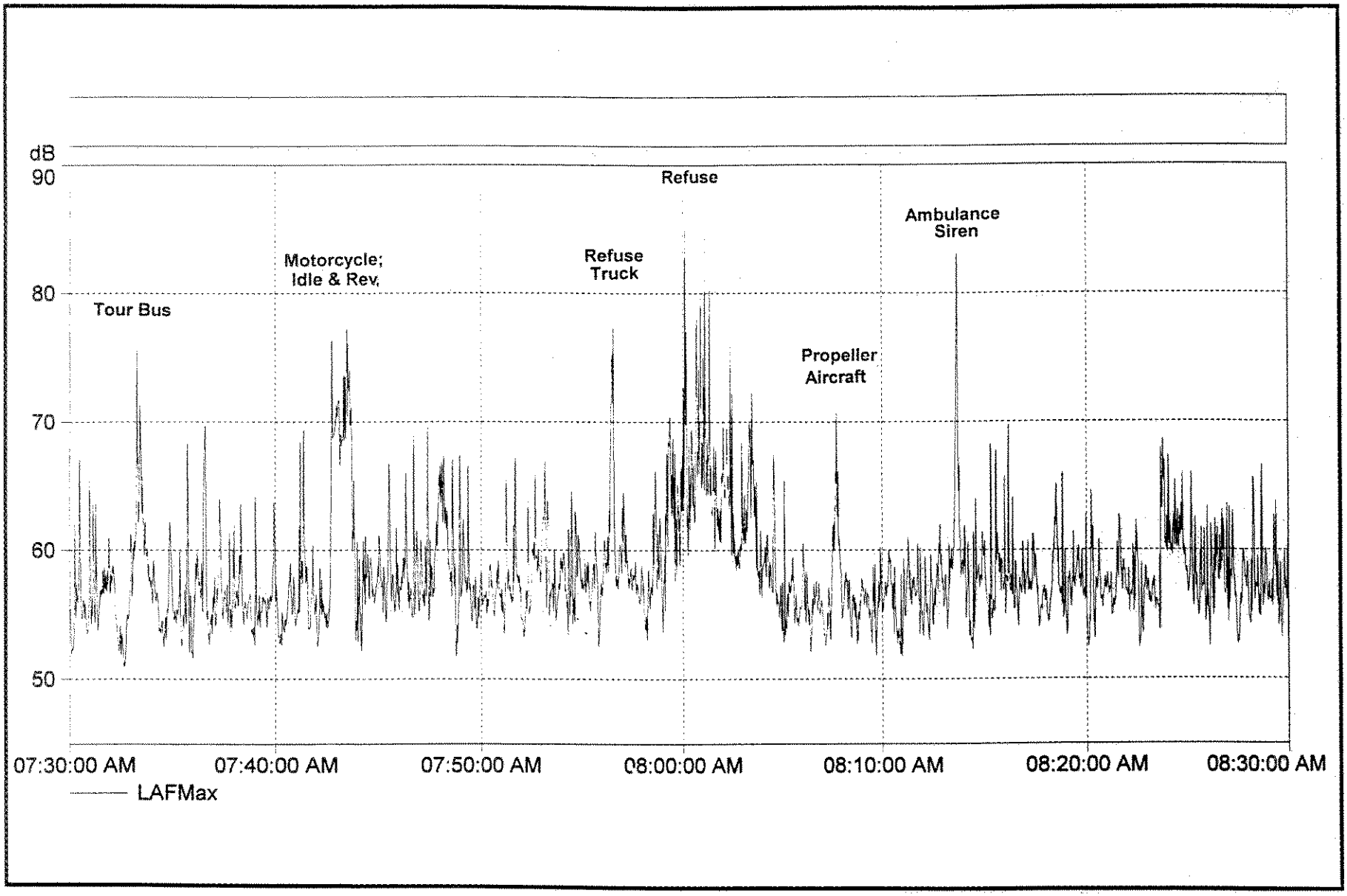
The existing peak hour traffic volumes and their noise contributions at 50, 100, and 200 feet setback distances from the centerlines of the roadways servicing the project are shown in APPENDIX C and TABLE 3. The corresponding setback distances from the roadways' centerlines to their corresponding 65, 70, and 75 Ldn traffic noise contours for ground level receptors are shown in TABLE 4. Based on the results shown in TABLES 3 and 4, as well as the measured sound levels at the various locations, it was concluded that existing background noise levels in the project environs currently exceed 65 Ldn at essentially all buildings which front Ala Wai Boulevard and Kuhio Avenue. In addition, at the upper floors of buildings which front the lower volume streets such as Namahana Street and Olohana Street, distant traffic noise plus the other non-traffic noise sources in the area can cause ambient noise levels to exceed 65 Ldn. At those receptor locations which front Ala Wai Boulevard, existing background ambient noise levels exceed 65 Ldn, and are approximately 72 Ldn.

At receptor locations such as Location B2, which are partially shielded from traffic noise, existing background ambient noise levels can be lower due to the noise shielding effects of the buildings. Noise reductions of 5 to 20 dBA can be expected from these noise shielding effects. Calculations of existing traffic noise levels at various receptor locations in the project environs and which accounted for the noise shielding effects from the existing low-rise, mid-rise, and high-rise buildings were performed using the FHWA model. The results of these calculations are shown in TABLE 5. The receptor locations where the calculations were performed are shown in FIGURE 6. As indicated in TABLE 5, those receptor locations in the Ala Wai Hale and Outrigger Maile Sky Court, which have direct lines-of-sight to Ala Wai Boulevard or Kuhio Avenue, are currently experiencing traffic noise levels which range between 70 to 72 Ldn. At the



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "A1" (5/25/07; 7:10 TO 8:10 AM)

FIGURE 3



MAXIMUM SOUND LEVEL VS. TIME MEASURED AT LOCATION "B1" (5/22/07; 7:30 TO 8:30 AM)

FIGURE 4

FIGURE 5

ESTIMATED HOURLY VARIATIONS OF TRAFFIC NOISE AT 50 FOOT SETBACK DISTANCE FROM THE CENTERLINE OF ALA WAI BOULEVARD (NOVEMBER 30 – DECEMBER 1, 2004)

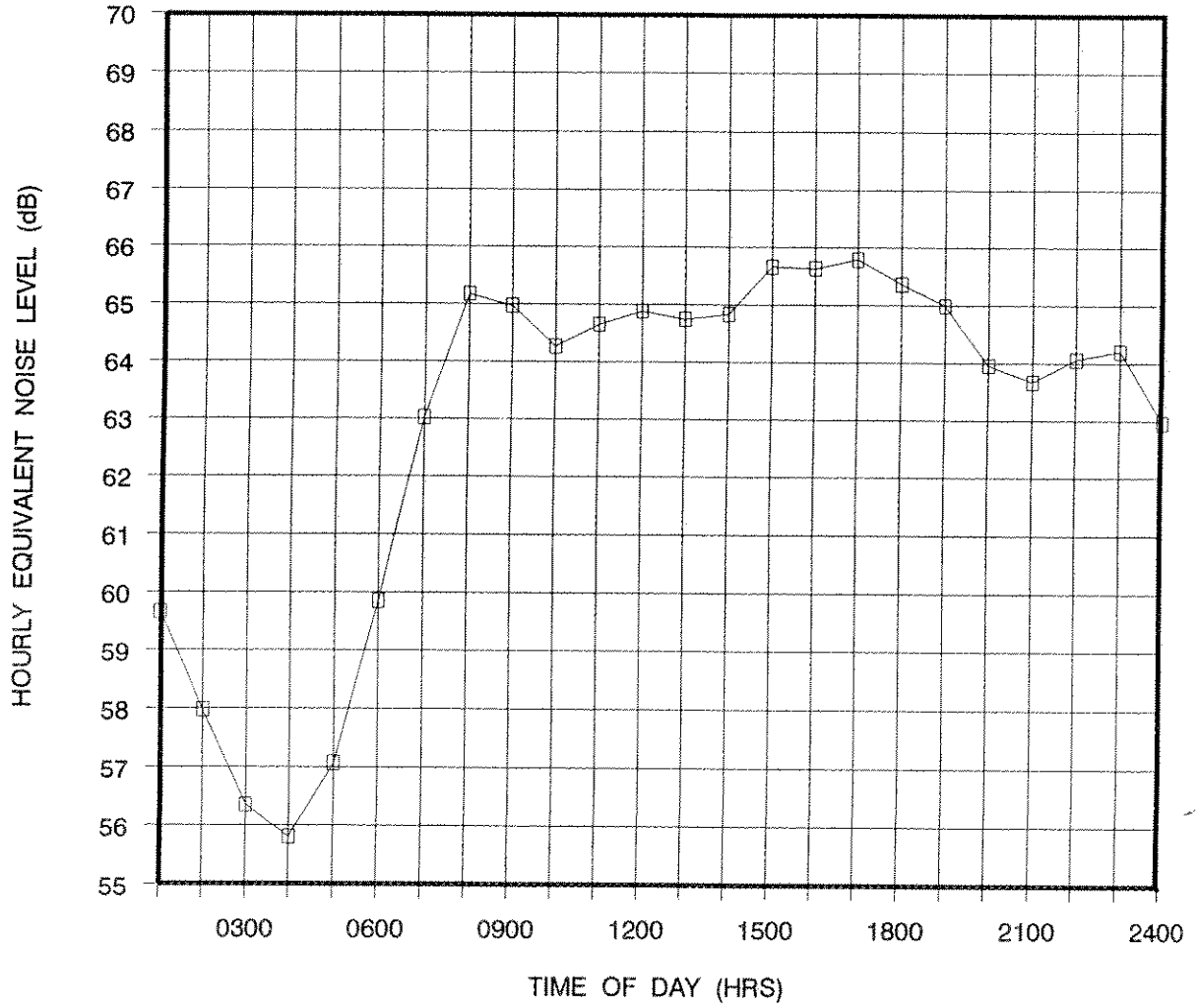


TABLE 3

EXISTING (CY 2007) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	******* VOLUMES (VPH) ********* AUTOS	M TRUCKS	H TRUCKS	50' Leq	100' Leq	200' Leq
Ala Wai Blvd. - Fronting Project (WB) (AM)	27	2,431	2,358	61	12	66.6	63.2	59.7
Ala Wai Blvd. - West of Namahana (WB) (AM)	27	2,500	2,424	63	13	66.8	63.4	59.9
Kuhio Avenue - West of Namahana (PM)	32	873	821	13	39	65.3	62.0	58.6
Kuhio Avenue - Fronting Project (PM)	32	938	882	14	42	65.6	62.3	59.0
Namahana St. - Fronting Project (PM)	25	151	144	2	5	55.1	52.1	48.8

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard ground and unobstructed field-of-view conditions assumed.

TABLE 4

EXISTING AND CY 2009 DISTANCES TO 65, 70, AND 75 LDN CONTOURS

STREET SECTION	65 Ldn SETBACK (FT)		70 Ldn SETBACK (FT)		75 Ldn SETBACK (FT)	
	EXISTING	CY 2009	EXISTING	CY 2009	EXISTING	CY 2009
Ala Wai Blvd. - Fronting Project (WB) (AM)	104	108	41	42	16	16
Ala Wai Blvd. - West of Namahana (WB) (AM)	108	110	42	43	16	17
Kuhio Avenue - West of Namahana (PM)	81	86	27	29	<12	<12
Kuhio Avenue - Fronting Project (PM)	86	90	29	31	<12	<12
Namahana St. - Fronting Project (PM)	<12	<12	<12	<12	<12	<12

Notes:

(1) All setback distances are from the roadways' centerlines.
(2) See Tables 3 and 6 for traffic volume, speed, and mix assumptions.
(3) Setback distances are for ground level receptors with unobstructed fields-of-view.
(4) "Pavement" or hard ground conditions assumed along all roadways.

TABLE 5

EXISTING AND FUTURE TRAFFIC NOISE LEVELS
(NO BUILD AND BUILD ALTERNATIVES)

RECEPTOR LOCATION	SETBACK DIST. FROM ROADWAY C.L.	RECEPTOR ELEVATION	EXISTING (CY 2007) Ldn	FUTURE (CY 2009) LEVELS NO BUILD Ldn	FUTURE (CY 2009) LEVELS BUILD Ldn
Receiver 1 (3F)	55 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	67.4	67.5	67.4
Receiver 2 (3F)	48 FT from the Centerline of Namahana Street	20 FT Above Ground	66.4	66.6	64.4
Receiver 3 (3F)	48 FT from the Centerline of Namahana Street	20 FT Above Ground	63.4	63.6	61.5
Receiver 4 (3F)	48 FT from the Centerline of Namahana Street	20 FT Above Ground	62.2	62.4	60.6
Receiver 5 (3F)	48 FT from the Centerline of Namahana Street	20 FT Above Ground	60.5	60.7	59.4
Receiver 6 (3F)	55 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	67.1	67.3	67.2
Receiver 7 (3F)	65 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	66.0	66.2	63.3
Receiver 8 (3F)	113 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	62.6	62.8	59.0
Receiver 9 (3F)	144 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	61.1	61.3	57.1
Receiver 10 (3F)	169 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	60.1	60.3	55.7
Receiver 1 (4F)	55 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	67.4	67.5	67.4
Receiver 2 (4F)	48 FT from the Centerline of Namahana Street	29 FT Above Ground	66.5	66.7	64.5
Receiver 3 (4F)	48 FT from the Centerline of Namahana Street	29 FT Above Ground	63.5	63.7	61.5
Receiver 4 (4F)	48 FT from the Centerline of Namahana Street	29 FT Above Ground	62.3	62.4	60.7
Receiver 5 (4F)	48 FT from the Centerline of Namahana Street	29 FT Above Ground	60.6	60.8	59.5
Receiver 6 (4F)	55 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	67.2	67.4	67.3
Receiver 7 (4F)	65 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	66.2	66.4	63.6
Receiver 8 (4F)	113 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	62.8	63.0	59.4
Receiver 9 (4F)	144 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	61.3	61.5	57.7

TABLE 5 (CONTINUED)

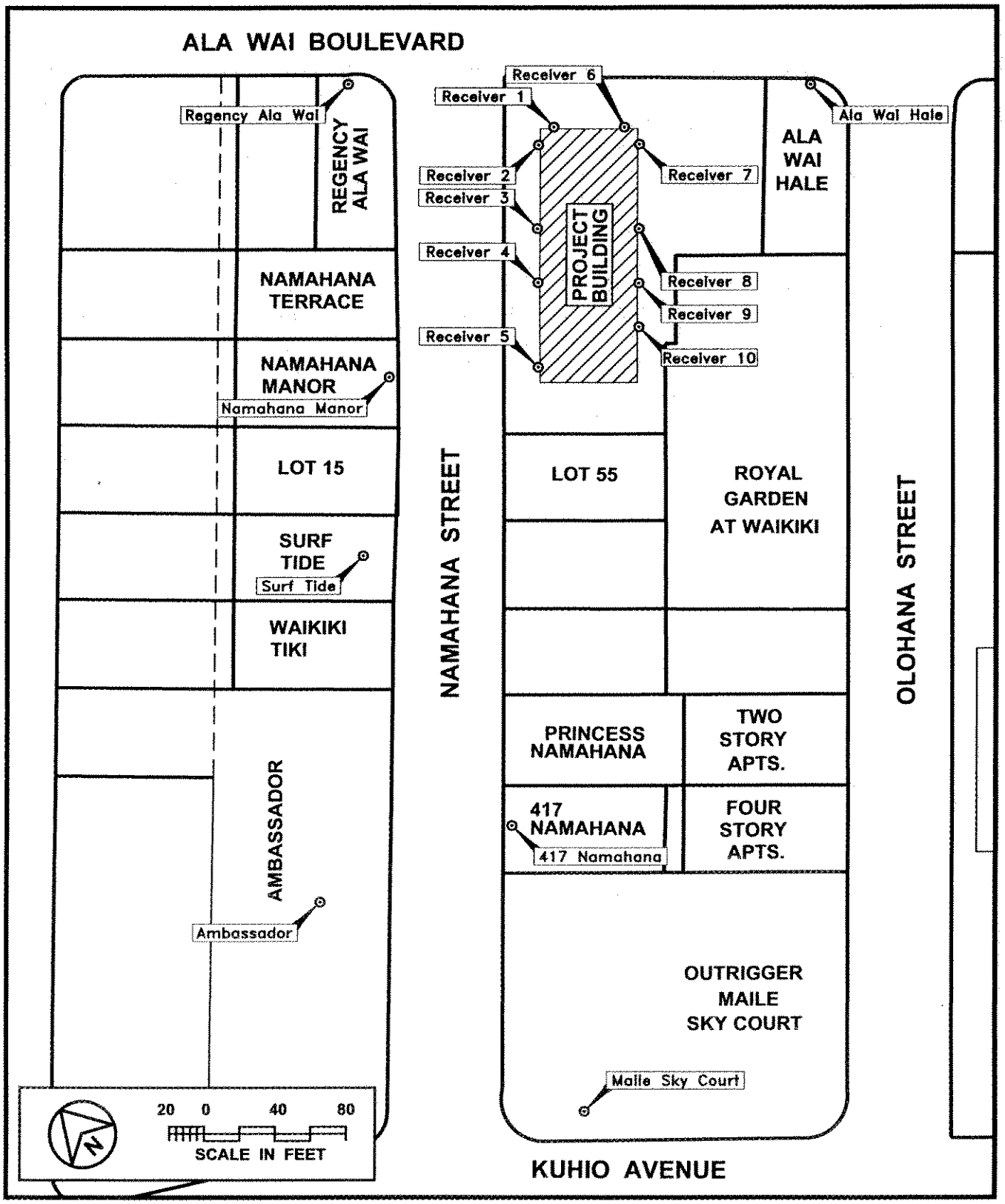
EXISTING AND FUTURE TRAFFIC NOISE LEVELS
(NO BUILD AND BUILD ALTERNATIVES)

RECEPTOR LOCATION	SETBACK DIST. FROM ROADWAY C.L.	RECEPTOR ELEVATION	EXISTING (CY 2007) Ldn	FUTURE (CY 2009) LEVELS NO BUILD Ldn	FUTURE (CY 2009) LEVELS BUILD Ldn
Receiver 10 (4F)	169 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	60.2	60.4	55.9
Receiver 1 (5F)	55 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	67.3	67.5	67.4
Receiver 2 (5F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	66.4	66.5	64.2
Receiver 3 (5F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	63.5	63.6	61.4
Receiver 4 (5F)	48 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	62.4	62.6	60.6
Receiver 5 (5F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	60.8	61.0	59.7
Receiver 6 (5F)	55 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	67.2	67.4	67.3
Receiver 7 (5F)	65 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	66.2	66.4	63.6
Receiver 8 (5F)	113 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	63.0	63.2	59.9
Receiver 9 (5F)	144 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	61.7	61.9	58.5
Receiver 10 (5F)	169 FT from the Centerline of Ala Wai Boulevard	29 FT Above Ground	60.6	60.8	56.9
Receiver 1 (6F)	55 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	67.4	67.5	67.5
Receiver 2 (6F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	66.5	66.6	64.5
Receiver 3 (6F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	63.6	63.8	61.5
Receiver 4 (6F)	48 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	62.5	62.7	60.8
Receiver 5 (6F)	48 FT from the Centerline of Namahana Street	38 FT Above Ground	61.1	61.2	59.8
Receiver 6 (6F)	55 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	67.3	67.5	67.4
Receiver 7 (6F)	65 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	66.4	66.5	64.2
Receiver 8 (6F)	113 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	63.3	63.4	60.4

TABLE 5 (CONTINUED)

EXISTING AND FUTURE TRAFFIC NOISE LEVELS
(NO BUILD AND BUILD ALTERNATIVES)

RECEPTOR LOCATION	SETBACK DIST. FROM ROADWAY C.L.	RECEPTOR ELEVATION	EXISTING (CY 2007) Ldn	FUTURE (CY 2009) LEVELS NO BUILD Ldn	FUTURE (CY 2009) LEVELS BUILD Ldn
Receiver 9 (6F)	144 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	62.0	62.2	59.0
Receiver 10 (6F)	169 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	61.0	61.2	57.8
Ala Wai Hale	43 FT from the Centerline of Ala Wai Boulevard	38 FT Above Ground	70.2	70.3	70.3
Regency Ala Wai	31 FT from the Centerline of Ala Wai Boulevard	20 FT Above Ground	70.3	70.4	70.5
Namahana Manor	36 FT from the Centerline of Namahana Street	20 FT Above Ground	60.7	60.8	60.8
Surf Tide	50 FT from the Centerline of Namahana Street	20 FT Above Ground	58.0	58.0	58.2
Ambassador	74 FT from the Centerline of Namahana Street	20 FT Above Ground	56.9	57.0	57.5
417 Namahana	34 FT from the Centerline of Namahana Street	20 FT Above Ground	60.0	60.1	60.9
Maile Sky Court	50 FT from the Centerline of Kuhio Avenue	20 FT Above Ground	67.5	67.7	67.8



LOCATIONS OF NOISE SENSITIVE RECEPTORS WHERE TRAFFIC NOISE LEVELS WERE MODELED FOR EXISTING AND FUTURE CONDITIONS

FIGURE 6

site of the proposed project's residential building, existing traffic noise levels at ground level and at 20 foot above ground level are currently above 65 Ldn along Ala Wai Boulevard, so the mauka (north) section of the proposed residential building site is in the "Significant Exposure, Normally Unacceptable" noise exposure category. Existing traffic noise contributions from Namahana Street are well below 65 Ldn, and traffic noise levels along the west side of the project site are currently controlled by vehicles traveling along Ala Wai Boulevard.

Aircraft noise levels at the project site do not exceed 60 Ldn, which is the level above which the Hawaii State Department of Transportation, Airports Division, considers to be unacceptable for residences. The most recently published airport noise contours for Honolulu International Airport indicate that the project site is located beyond (or outside) the 55 Ldn contour for the Year 2007. Therefore, special noise mitigation measures for aircraft noise should not be required.

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels were made using the traffic volume assignments of Reference 6 for CY 2009 with and without the proposed project. The future projections of non-project and project traffic volumes for the No Build and Build Alternatives are shown in APPENDIX C.

TABLE 6 contains the CY 2009 traffic volumes and noise levels at 50, 100, and 200 feet from the roadways' centerlines for the Build Alternative during the highest peak traffic hour. TABLE 4 contains the setback distances to the 65, 70, and 75 Ldn contours for CY 2009 under the Build Alternative. Future average vehicle speeds and traffic mixes along all roadways were assumed to be identical to those used for CY 2007 (see TABLE 3).

In CY 2009, the dominant traffic noise sources in the project area will continue to be traffic noise from Ala Wai Boulevard and Kuhio Avenue. This situation will continue to occur with or without the proposed project. Traffic noise levels along Namahana Street between Kuhio Avenue and Ala Wai Boulevard will remain relatively low (less than 65 Ldn) with or without the proposed project.

Calculations of future traffic noise levels (with and without the project) at various receptor locations in the project environs were performed as shown in TABLE 5. The receptor locations where the calculations were performed are shown in FIGURE 6. As indicated in TABLE 5, those receptor locations in the Ala Wai Hale and Outrigger Maile Sky Court which have direct lines-of-sight to Ala Wai Boulevard or Kuhio Avenue will experience traffic noise levels which range between 70 to 72 Ldn. At the site of the proposed project residential building, CY 2009 traffic noise levels will range from 69 Ldn at the mauka end to 62 Ldn at the makai end. Traffic noise levels at the mauka living units which front Ala Wai Boulevard will exceed 65 Ldn, so traffic noise mitigation measures should be incorporated into the design of those living units.

TABLE 7 presents the predicted increases in future traffic noise levels associated with non-project and project related traffic by CY 2009. Except for the 1.1 dB (or Ldn) increase in traffic noise along Namahana Street attributable to project traffic, the predicted increases in traffic noise from project traffic should be less than 0.2 dB. Along Namahana Street west of the project site, future traffic noise levels should remain below 65 Ldn at 50 feet setback distance from the roadway's centerline. The increases in future traffic noise levels resulting from project traffic are not significant, and will be difficult to measure or perceive. For these reasons, traffic noise mitigation measures should not be required.

Aircraft noise levels over the project site should not change significantly between CY 2007 and 2009, and should remain at or near the current levels and below 55 and 60 Ldn. Aircraft noise mitigation measures should not be required.

TABLE 6

FUTURE (CY 2009) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR, BUILD)

LOCATION	SPEED (MPH)	TOTAL VPH	******* VOLUMES (VPH) ********* AUTOS	M TRUCKS	H TRUCKS	50' Leq	100' Leq	200' Leq
Ala Wai Blvd. - Fronting Project (WB) (AM)	27	2,531	2,455	63	13	66.8	63.4	59.9
Ala Wai Blvd. - West of Namahana (WB) (AM)	27	2,609	2,531	65	13	66.9	63.5	60.0
Kuhio Avenue - West of Namahana (PM)	32	924	868	14	42	65.6	62.3	58.9
Kuhio Avenue - Fronting Project (PM)	32	988	929	15	44	65.8	62.5	59.2
Namahana St. - Fronting Project (PM)	25	209	200	3	6	56.3	53.3	50.0

Notes:

1. Traffic noise levels calculated for ground level receptors.
2. Hard ground and unobstructed field-of-view conditions assumed.

TABLE 7

CALCULATIONS OF PROJECT AND NON-PROJECT TRAFFIC NOISE CONTRIBUTIONS (CY 2009) (AM OR PM PEAK HOUR)

STREET SECTION	NOISE LEVEL INCREASE (IN DB) DUE TO: NON-PROJECT TRAFFIC	PROJECT TRAFFIC
Ala Wai Blvd. - Fronting Project (WB) (AM)	0.2	0.0
Ala Wai Blvd. - West of Namahana (WB) (AM)	0.1	0.0
Kuhio Avenue - West of Namahana (PM)	0.2	0.1
Kuhio Avenue - Fronting Project (PM)	0.2	0.0
Namahana St. - Fronting Project (PM)	0.1	1.1

CHAPTER VII. DISCUSSION OF PROJECT-RELATED NOISE IMPACTS AND POSSIBLE MITIGATION MEASURES

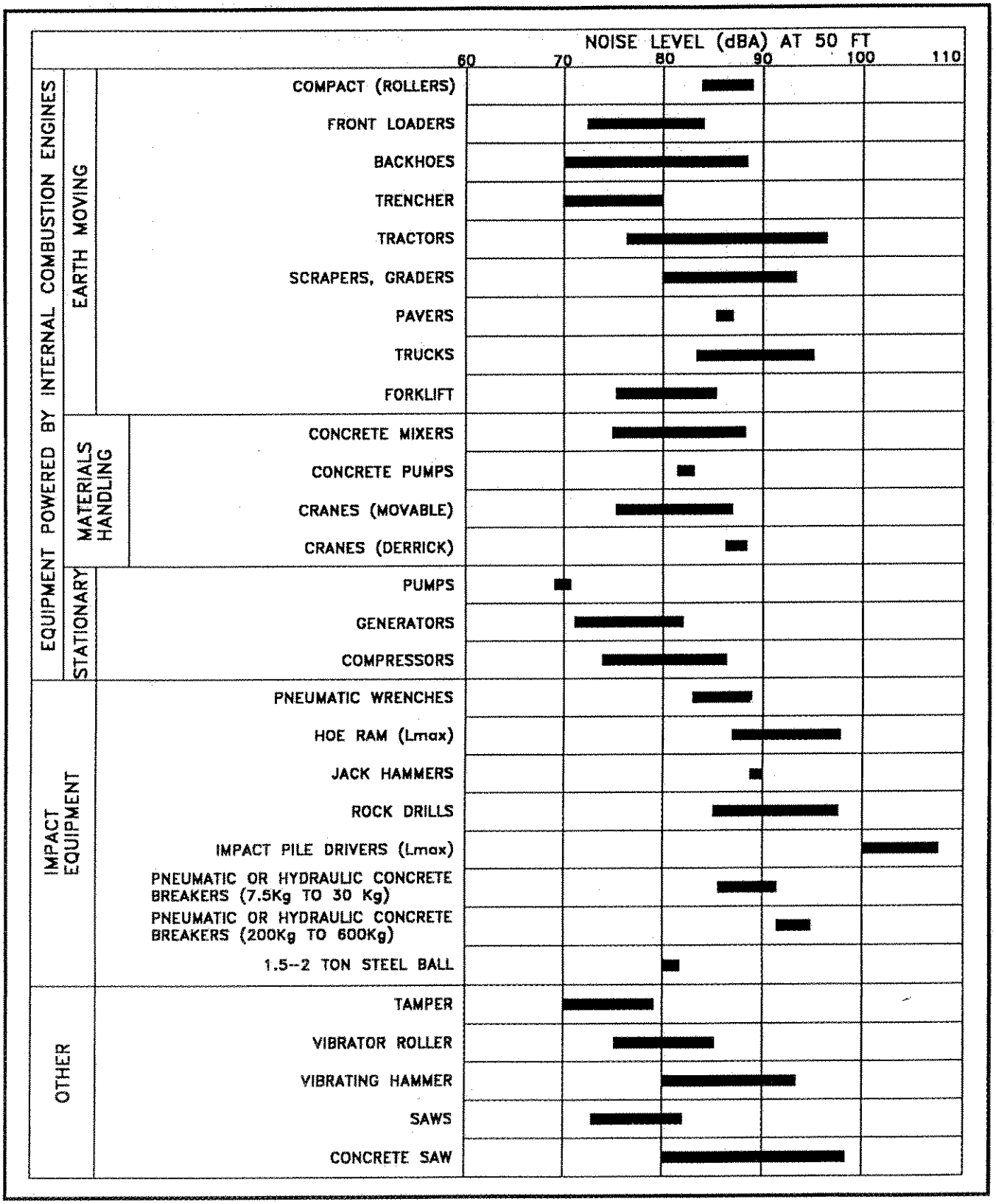
Traffic Noise. Because of the relatively small increases in traffic noise attributable to project related traffic, the proposed project is not expected to generate adverse noise impacts. Special traffic noise mitigation measures should not be required. Potential noise impacts from tire squeal within the project's parking structure should be minimized through the use of coarse finishes for the circulation driveway surfaces within the parking structure. Because the mauka living units of the project will experience traffic noise levels greater than 65 Ldn, provisions for air conditioning at these units will be incorporated into the project. The use of air conditioning allows for closure of exterior windows and doors, which can typically provide acceptable attenuation of outside traffic noise.

General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the project is anticipated to be 14 months. It is expected 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.

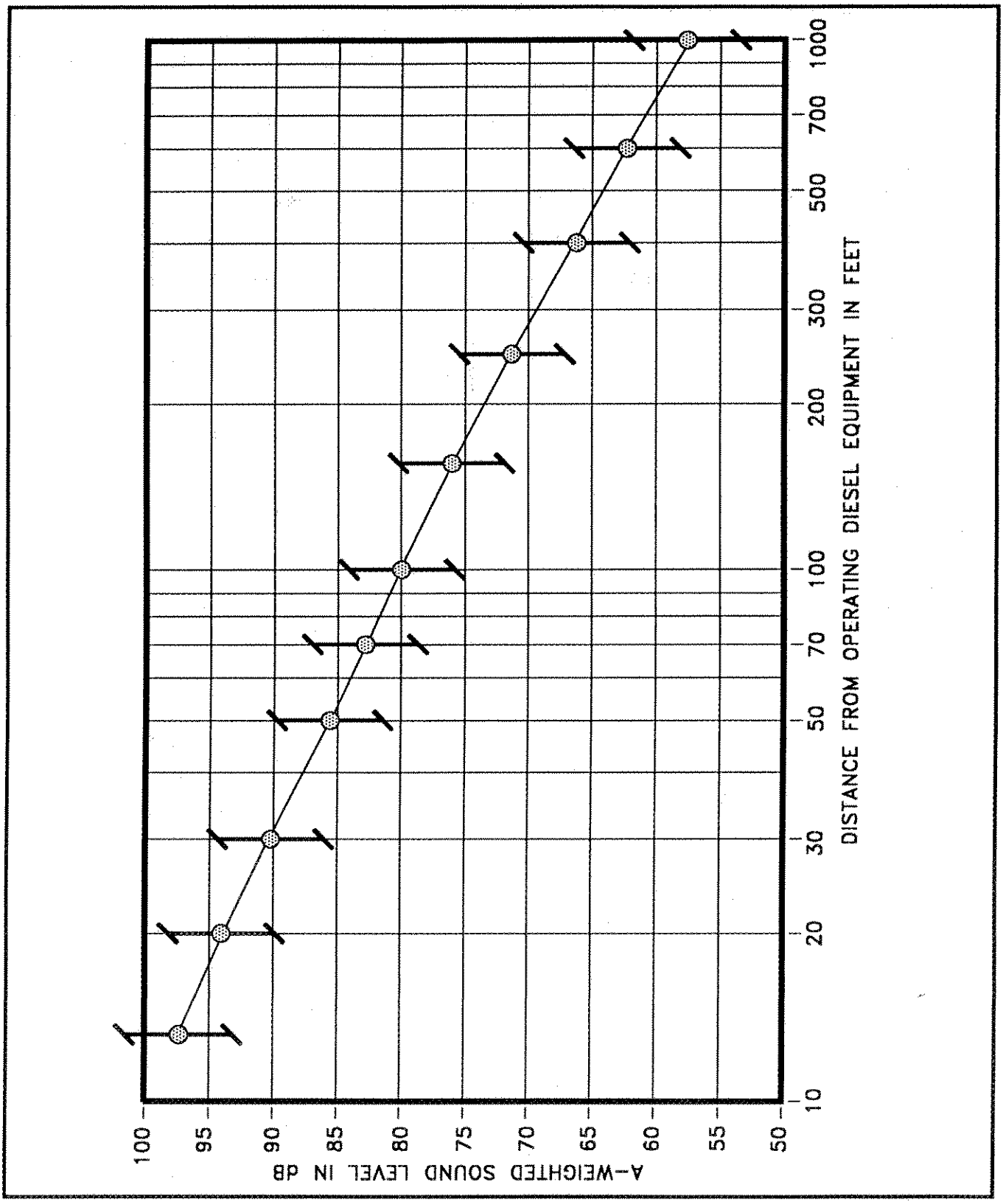
FIGURE 8 is useful for predicting exterior noise levels at short distances (within 100 FT) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing resort, apartment, and commercial buildings will range from 15 FT to 200+ FT, with corresponding average noise levels of 100 to 74 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of FIGURE 8 should be reduced by approximately 8 dBA when the work is occurring at the intersection with the cross street, and should be reduced by 15 dBA when work is occurring at least 100 FT from the intersection (and the visual line-of-sight is blocked by intervening buildings). 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 multifamily residential and resort buildings (Ala Wai Hale, Royal Garden At Waikiki, Regency Ala Wai, Namahana Terrace, and Namahana Manor) closest to the project site are predicted to experience the highest noise levels during construction activities due to their close proximity to the construction site. Adverse impacts from



RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS

FIGURE 7



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

FIGURE 8

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 site.

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 distance), and due to the exterior nature of the work (excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

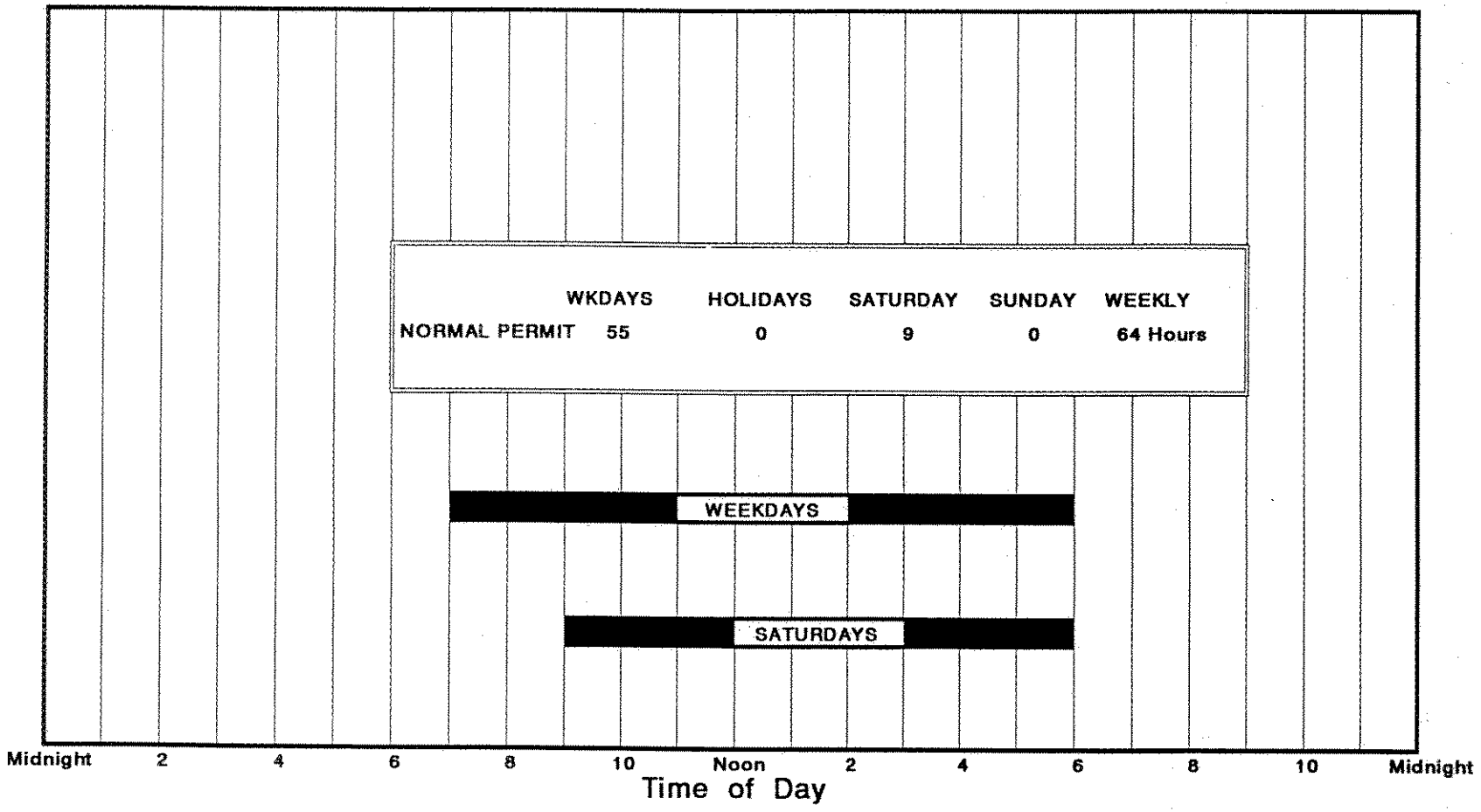
Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 FT from the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 FT to 450 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 8. 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. distance 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,



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

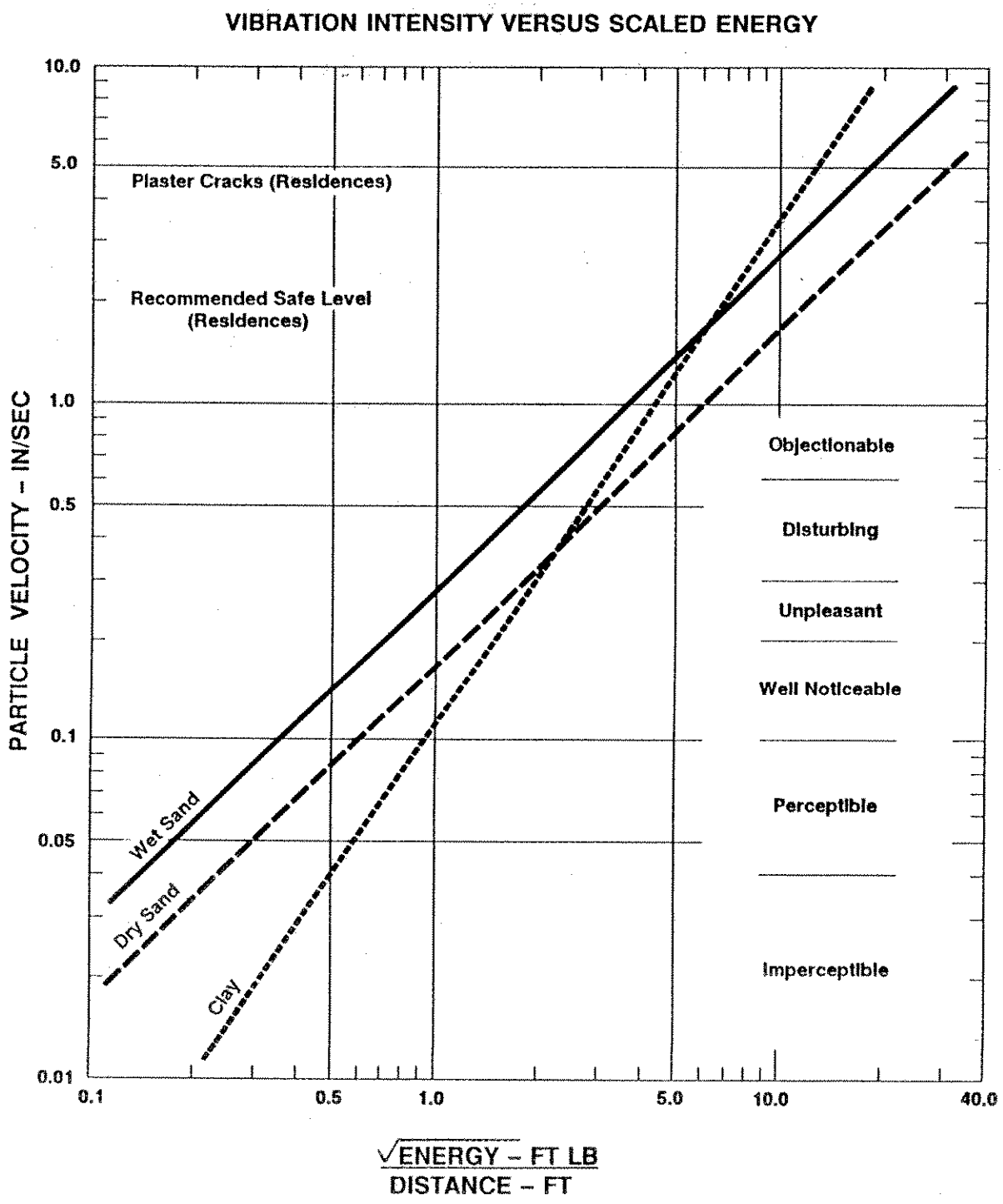
FIGURE 9

TABLE 8

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%).
		No structural damage.
33.02	1.3	Threshold of risk of 'architectural' damage for houses.
25.4	1.0	No data showing damage to structures for vibration <1 in./sec.
15.24	0.6	No risk of 'architectural' damage to normal buildings.
10.16	0.4	Threshold of damage in older homes.
5.08	0.2	Statistically significant percentage of structures may experience minor damage (including earthquake, nuclear event, and blast data for old and new structures).
		No 'architectural' damage.
3.81	0.5 to 0.15	Upper limits for ruins and ancient monuments.
1.0	0.04	Vertical vibration clearly perceptible to humans.
0.32	0.01	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 1983.



MINIMUM VIBRATION INTENSITIES EXPECTED FROM PILE DRIVING

FIGURE 10

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 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 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 following preventive 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 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, I979.

(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 46, 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 2.5 Upgrade (April 14, 2004).

(6) "Traffic Impact Report for the Ala Wai Garden Plaza;" Wilson Okamoto Corporation; March 2007.

(7) 24-Hour Traffic Counts At Station SL-52, McCully Street at Ala Wai Canal Bridge; Hawaii State Department of Transportation; November 30 through December 2, 2004.

(8) 24-Hour Traffic Counts At Station SL-51, Kalakaua Avenue at Ala Wai Canal Bridge; Hawaii State Department of Transportation; November 30 through December 2, 2004.

(9) Wiss, John F., Janney, Elstner 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

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. 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 I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., 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.....). 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 II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" 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 85 and 75 dB respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "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, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB. Lpn = 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 bel except for prefixes indicating its multiples or submultiples (e.g., deci).

Noise 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 Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

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 a $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine).

SOURCE: EPA ACOUSTIC TERMINOLOGY GUIDE, BNA 8-14-78,

APPENDIX B (CONTINUED)

TABLE II

RECOMMENDED DESCRIPTOR LIST

	TERM	A-WEIGHTING	ALTERNATIVE[1] A-WEIGHTING	OTHER[2] WEIGHTING	UNWEIGHTED
1.	Sound (Pressure)[3] Level	L_A	L_{pA}	L_B, L_{pB}	L_p
2.	Sound Power Level	L_{WA}		L_{WB}	L_W
3.	Max. Sound Level	L_{max}	L_{Amax}	L_{Bmax}	L_{pmax}
4.	Peak Sound (Pressure) Level	L_{Apk}		L_{Bpk}	L_{pk}
5.	Level Exceeded x% of the Time	L_x	L_{Ax}	L_{Bx}	L_{px}
6.	Equivalent Sound Level	L_{eq}	L_{Aeq}	L_{Beq}	L_{peq}
7.	Equivalent Sound Level[4] Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
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	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
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 Leq(1). Time may be specified in non-quantitative terms (e.g., could be specified as Leq(WASH) to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF BASE YEAR AND CY 2009 TRAFFIC VOLUMES IN PROJECT ENVIRONS

ROADWAY LANES	**** CY 2007 ***** AM VPH	PM VPH	CY 2009 (NO BUILD) AM VPH	PM VPH	CY 2009 (BUILD) AM VPH	PM VPH
Ala Wai Blvd. - Fronting Project (WB)	2,431	2,259	2,529	2,349	2,531	2,358
One-Way (WB)	2,431	2,259	2,529	2,349	2,531	2,358
Ala Wai Blvd. - West of Namahana (WB)	2,500	2,363	2,600	2,458	2,609	2,463
One-Way (WB)	2,500	2,363	2,600	2,458	2,609	2,463
Kuhio Ave. - West of Namahana (WB)	86	100	89	104	91	106
Kuhio Ave. - West of Namahana (EB)	594	773	618	804	620	818
Two-Way	680	873	707	908	711	924
Kuhio Ave. - Fronting Project (WB)	140	188	145	196	146	200
Kuhio Ave. - Fronting Project (EB)	598	750	622	780	631	788
Two-Way	738	938	767	976	777	988
Namahana St. - Fronting Project (NB)	91	129	95	135	101	146
Namahana St. - Fronting Project (SB)	32	22	33	22	40	63
Two-Way	123	151	128	157	140	209

Traffic Impact Report

Ala Wai Garden Plaza

Prepared for:
Gerald Park Urban Planner

Prepared by:
Wilson Okamoto Corporation

March 2007

TRAFFIC IMPACT REPORT

FOR THE

ALA WAI GARDEN PLAZA

Prepared for:

Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, HI 96814

Prepared by:

Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref: 7661-01

March 2007

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LIST OF EXHIBITS

LIST OF APPENDICES

I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the proposed Ala Wai Garden Plaza in Waikiki on the island of Oahu. The proposed project entails the construction of a six-story apartment building adjacent to Ala Wai Boulevard.

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.

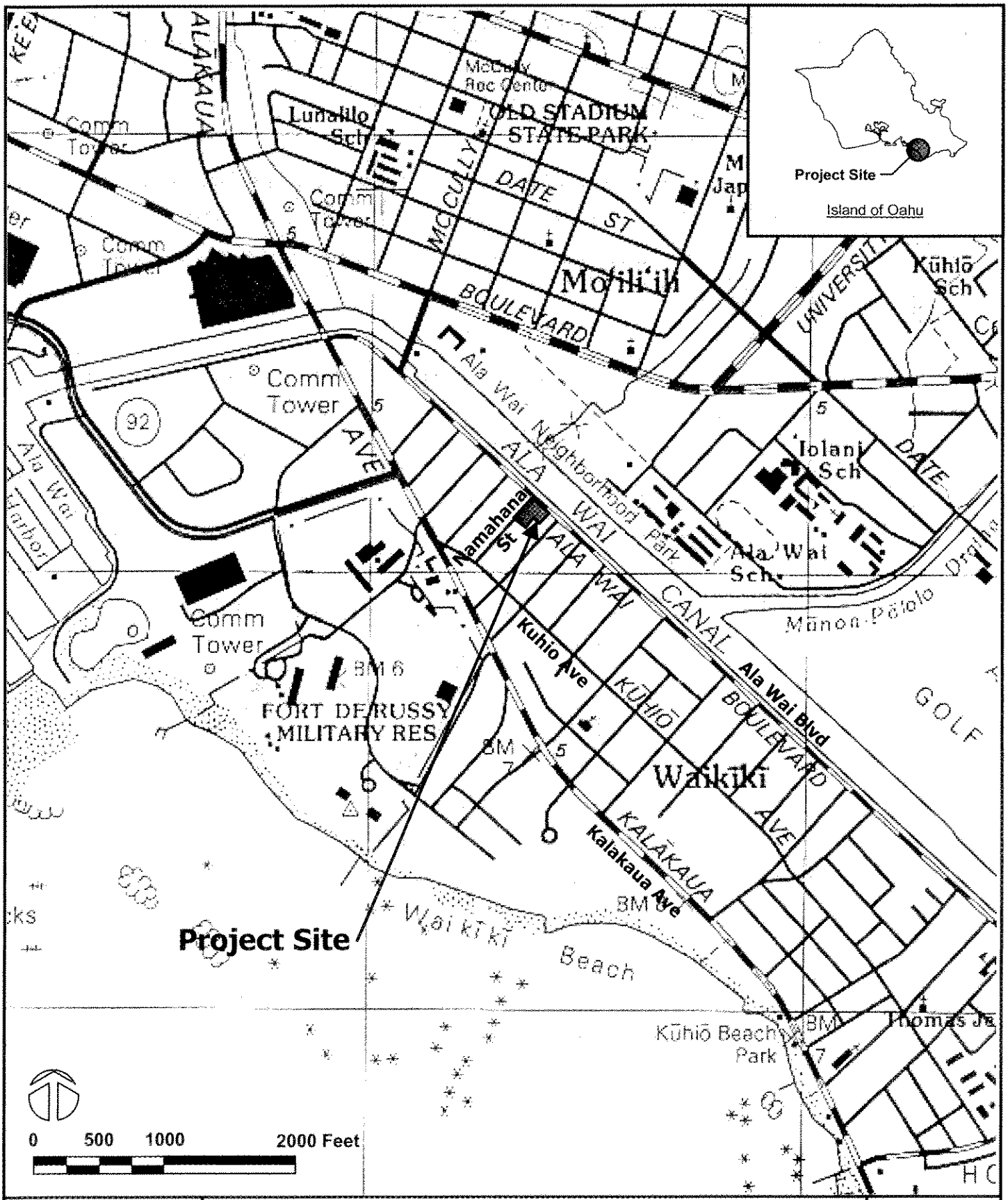
II. PROJECT DESCRIPTION

A. Location

The proposed Ala Wai Garden Plaza will be located on the southeast corner of the intersection of Ala Wai Boulevard with Namahana Street in Waikiki on the island of Oahu (See Figure 1). The project site is further identified as Tax Map Keys: 2-6-016: 056, 057, 058, 059, and 060. Access to the proposed project will be provided via driveways off Namahana Street.

B. Project Characteristics

The proposed Ala Wai Garden Plaza will be located on an approximately 23,750 square foot site adjacent to Ala Wai Boulevard in Waikiki.



WILSON OKAMOTO CORPORATION ENGINEERS - PLANNERS	ALA WAI GARDEN PLAZA LOCATION MAP AND VICINITY MAP	FIGURE 1

The proposed project entails the construction of a six-story apartment building with approximately 44 one-bedroom units and parking areas. The project is expected to be completed and occupied by the Year 2009 with access provided via driveways off Namahana Street. Figure 2 shows the proposed site plan.

III. EXISTING TRAFFIC CONDITIONS

A. General

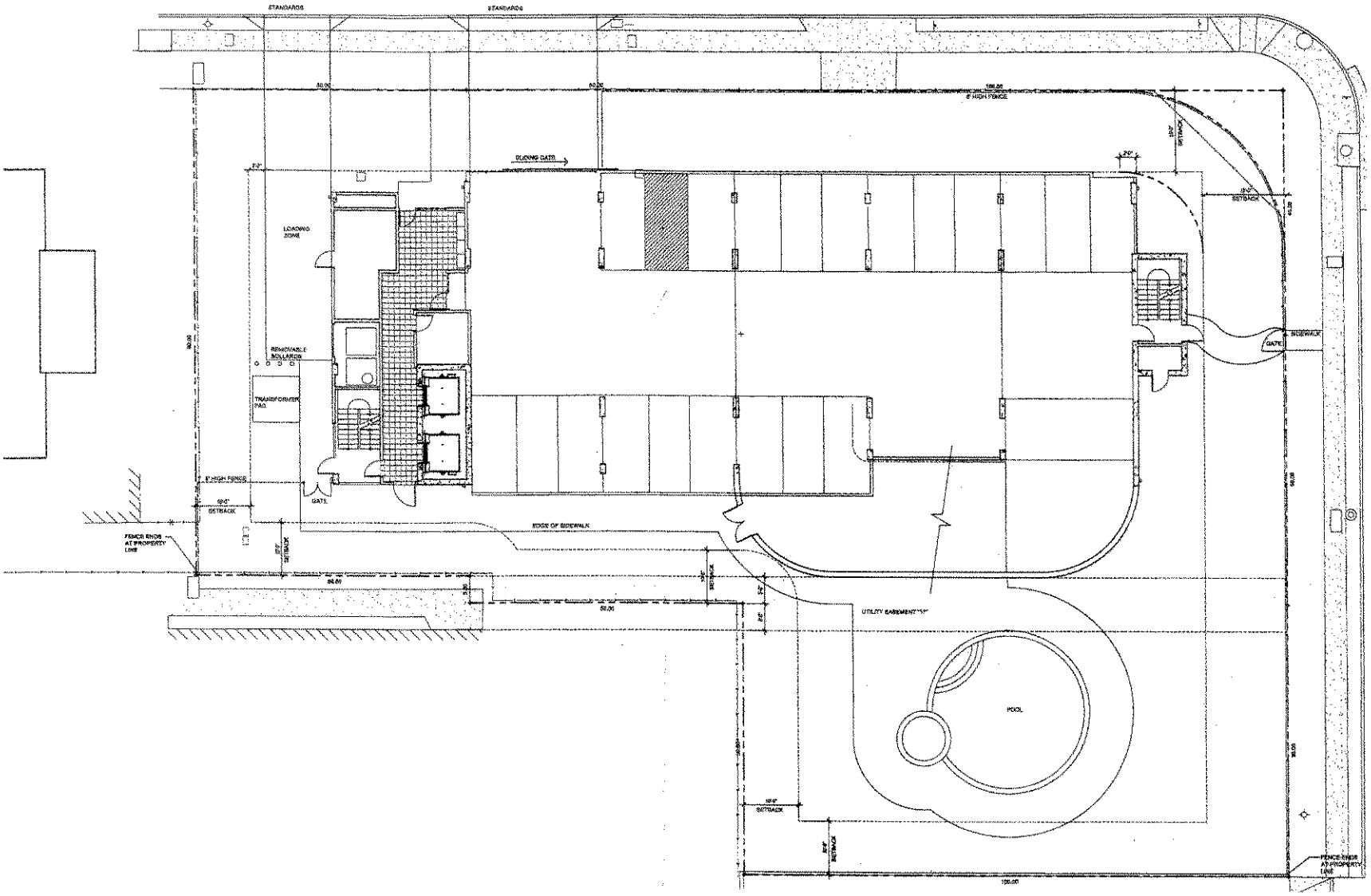
The proposed project will be located adjacent to Ala Wai Boulevard, a predominantly three-lane, one-way (westbound) City and County of Honolulu roadway generally oriented in the east-west direction that with Kalakaua Avenue forms a couplet system that provides access through Waikiki. Kuhio Avenue runs parallel to this couplet and also serves as an access roadway through Waikiki.

B. Area Roadway System

At the northwest corner of the project site, Ala Wai Boulevard intersects Namahana Street. At this unsignalized T-intersection, the Ala Wai Boulevard approach has three lanes that serve through and left-turn traffic movements and a 24-hour parking lane located on the north side of the roadway. Namahana Street is a two-lane, two-way City and County of Honolulu roadway generally oriented in the north-south direction. At the intersection with Ala Wai Boulevard, the Namahana Street approach has one lane that serves only left-turn traffic movements.

South of the intersection with Ala Wai Boulevard, Namahana Street intersects Kuhio Avenue. At this unsignalized T- intersection, the Namahana Street approach has one lane that serves left-turn and right-turn traffic movements. The eastbound approach of Kuhio Avenue has two lanes at this intersection that serve left-turn and through traffic movements while the westbound approach has one lane that serves through and right-turn traffic movements.

Namahana Street



Ala Wai Boulevard

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ALA WAI GARDEN PLAZA

PROJECT SITE PLAN

FIGURE 2

C. Traffic Volumes and Conditions

1. General

a. Field Investigation

The field investigations were conducted on January 24, 2007 and consisted of manual turning movement count surveys and traffic flow assessments during the morning peak hours of 7:00 AM and 9:00 AM, and between the afternoon peak hours of 3:00 PM and 6:00 PM at the intersections of Namahana Street with Ala Wai Boulevard and Kuhio Avenue. 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).

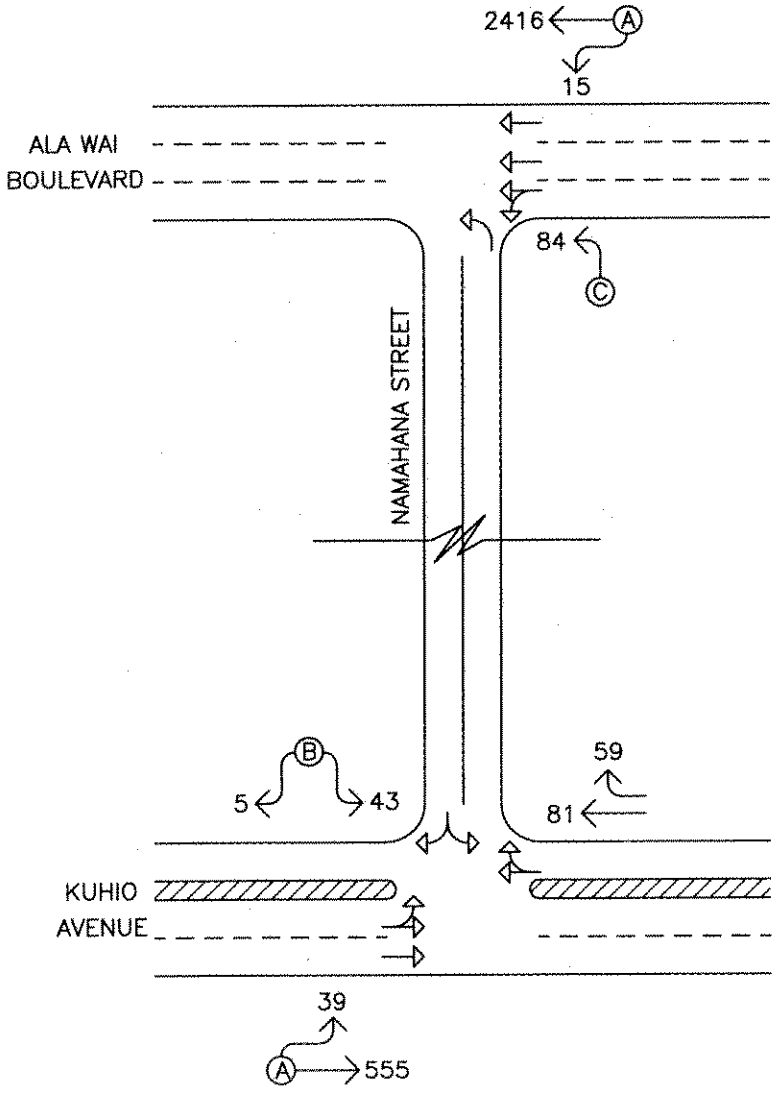
LOS is a quantitative and qualitative assessment of traffic operations. Levels of Service are defined by LOS "A" through "F"; LOS "A" representing ideal or free-flow traffic operating conditions and LOS "F" representing unacceptable or potentially congested traffic operating conditions.

"Volume-to-Capacity" (v/c) ratio is another measure indicating the relative traffic demand to the roadway carrying capacity. A v/c ratio of one (1.00) indicates that the roadway is operating at or near capacity. A v/c ratio of greater than 1.00 generally indicates that the traffic demand exceeds the road's carrying capacity. The LOS definitions are included in Appendix B.

2. Existing Peak Hour Traffic

a. General

Figures 3 and 4 show the existing AM and PM peak period traffic volumes and traffic operating conditions. The AM peak hour of



LEGEND

90 TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

Ⓐ LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: January 24, 2007

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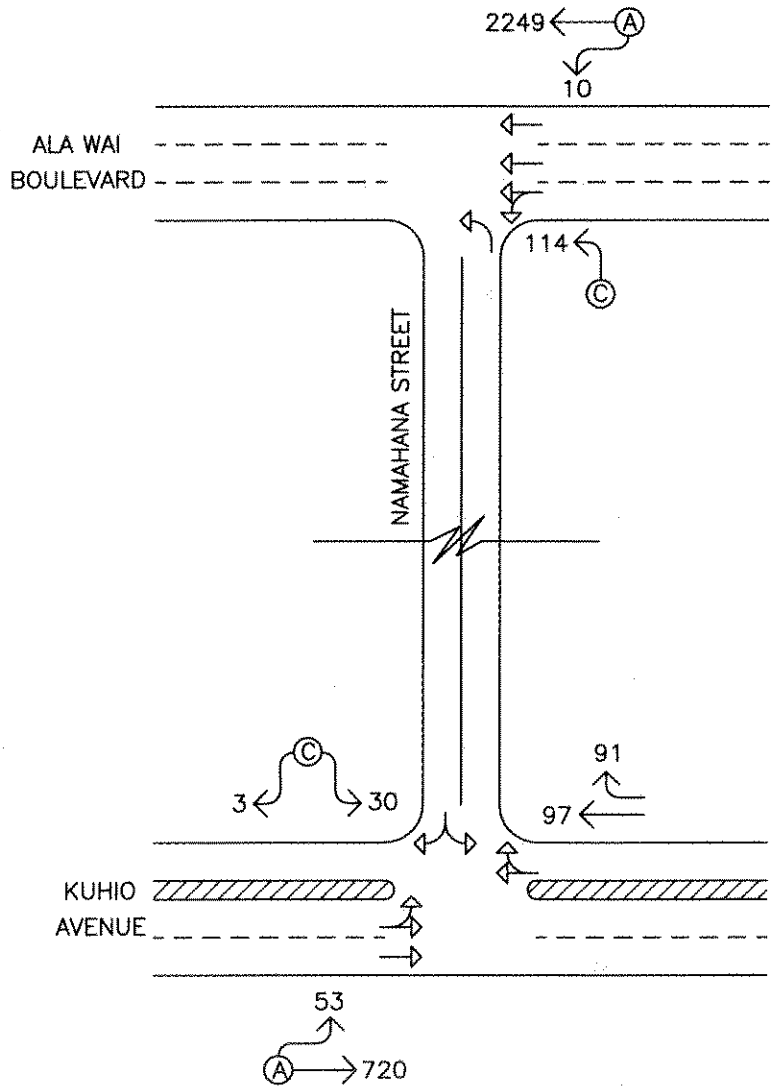
ALA WAI GARDEN PLAZA

EXISTING AM PEAK HOUR OF TRAFFIC

FIGURE 3



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

Ⓐ LANE GROUP LEVEL OF SERVICE

DATE OF COUNT: January 24, 2007

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ALA WAI GARDEN PLAZA

EXISTING PM PEAK HOUR OF TRAFFIC

FIGURE 4

traffic generally occurs between the hours of 7:30 AM and 8:30 AM. In the afternoon, the PM peak hour of traffic generally occurs between the hours of 3:30 PM and 4:30 PM. The analysis is based on these peak hour time periods for each intersection to identify the traffic impacts resulting from the proposed project. LOS calculations are included in Appendix C.

b. Namahana Street and Ala Wai Boulevard

At the intersection with Ala Wai Boulevard, Namahana Street carries 84 vehicles northbound during the AM peak period. During the PM peak period, the traffic volume is slightly higher with 114 vehicles traveling northbound. The Namahana Street approach operates at LOS "C" during both peak periods.

The Ala Wai Boulevard approach of this intersection carries 2,431 vehicles westbound during the AM peak period. During the PM peak period, the traffic volume is less with 2,259 vehicles traveling westbound. The Ala Wai Boulevard approach operates at LOS "A" during both peak periods.

c. Namahana Street and Kuhio Avenue

At the intersection with Kuhio Avenue, Namahana Street carries 48 vehicles southbound during the AM peak period. During the PM peak period, the traffic volume is less with 33 vehicles traveling southbound. The Namahana Street approach operates at LOS "B" and LOS "C" during the AM and PM peak periods, respectively.

The Kuhio Avenue approach carries 594 vehicles eastbound and 140 vehicles westbound at this intersection during the AM peak period. During the PM peak period, traffic volumes are higher with 773 vehicles traveling eastbound and 188 vehicles traveling westbound. The critical traffic movement on the Kuhio Avenue approaches is the eastbound left turn and through traffic movement which operates at LOS "A" during both peak periods.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

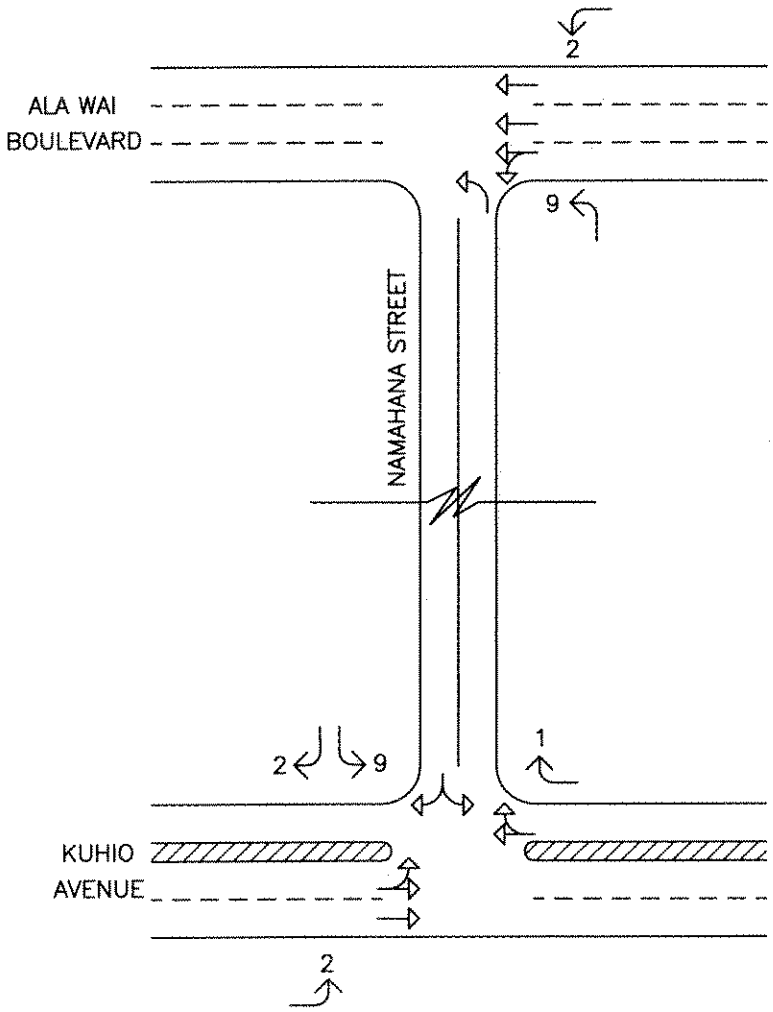
The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 7th Edition," 2003. The ITE trip generation rates are developed empirically by correlating the vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per dwelling unit. Table 1 summarizes the project site trip generation characteristics applied to the AM and PM peak periods of traffic.

Table 1: Peak Hour Trip Generation

APARTMENT INDEPENDENT VARIABLE: Dwelling Units = 44		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	5
	EXIT	20
	TOTAL	25
PM PEAK	ENTER	27
	EXIT	15
	TOTAL	42

2. Trip Distribution

Figures 5 and 6 show the distribution of site-generated vehicular trips at the study intersections during the AM and PM peak hours of traffic. Access to the project will be provided via driveways off Namahana Street. The directional distribution of site-generated traffic was based upon the prevalent directional distribution of traffic through Waikiki utilizing collected and available traffic count data in the vicinity. As such, 43.3% of the vehicles were assumed to be traveling eastbound while 56.7% were assumed to be traveling westbound during the AM peak period. During the PM peak period, 50.8% of the vehicles were assumed to be traveling eastbound while 49.2%



LEGEND

90 TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

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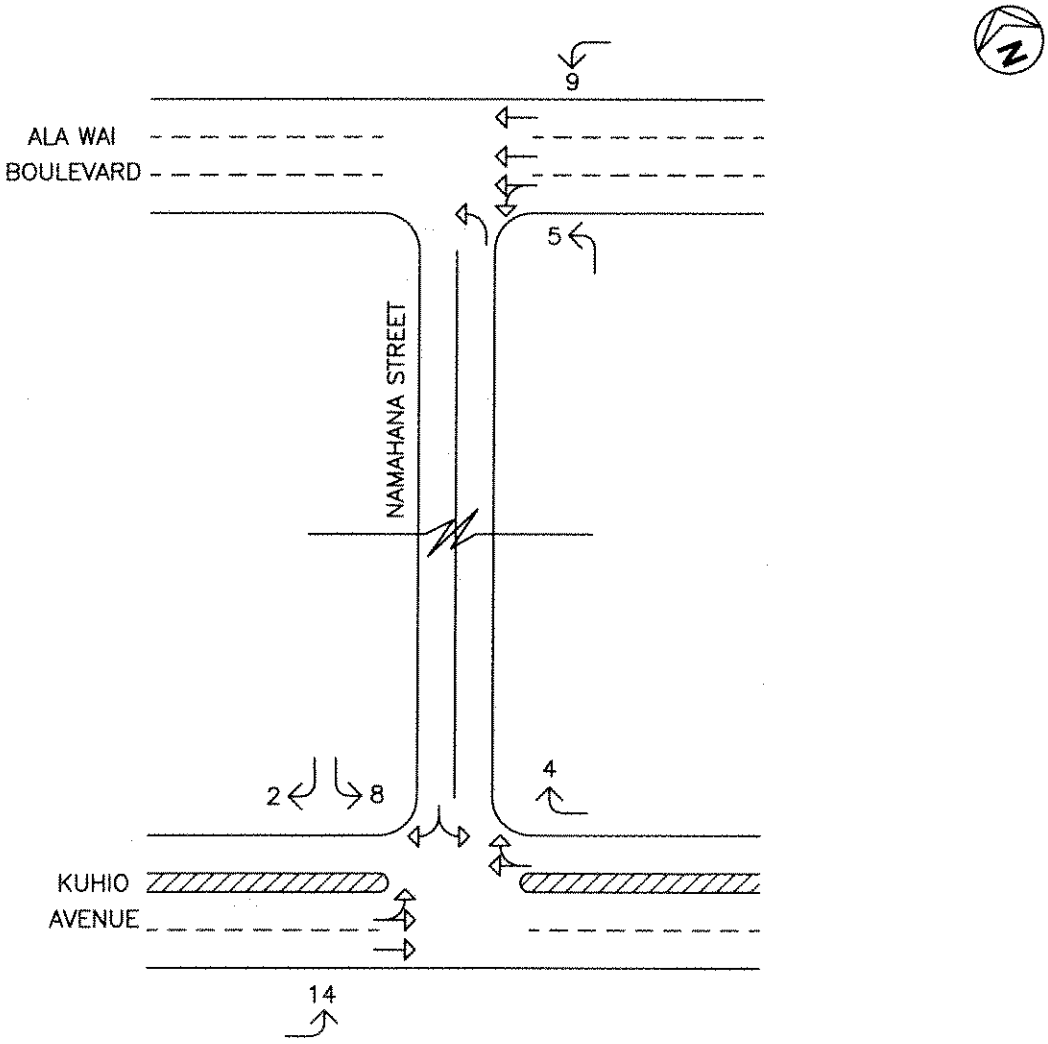
ALA WAI GARDEN PLAZA

DISTRIBUTION OF SITE-GENERATED VEHICLES - AM PEAK HOUR OF TRAFFIC

FIGURE 5



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ALA WAI GARDEN PLAZA

DISTRIBUTION OF SITE-GENERATED VEHICLES - PM PEAK HOUR OF TRAFFIC

FIGURE 6

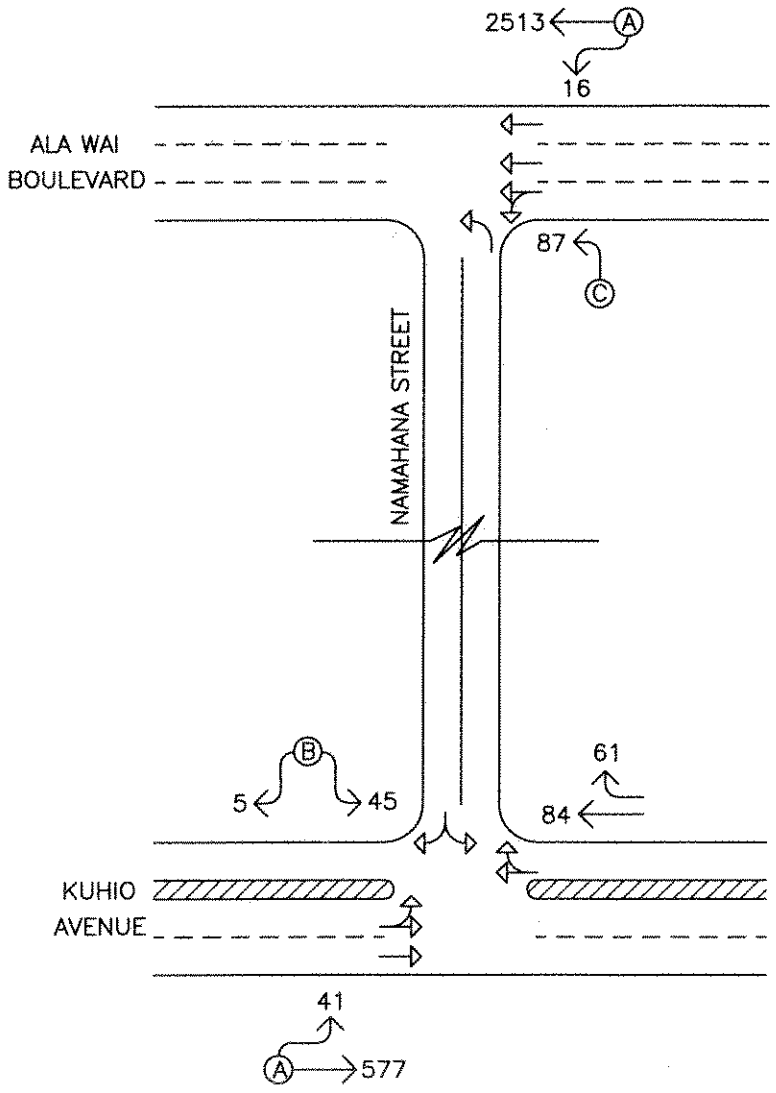
were assumed to be traveling westbound. All eastbound vehicles, entering and exiting, were assumed to utilize Kuhio Avenue to access the project site while all westbound vehicles were assumed to utilize either Kuhio Avenue or Ala Wai Boulevard. The directional distribution of westbound vehicles was based upon the relative distribution of traffic between Ala Wai Boulevard and Kuhio Avenue. As such, 78.6% of vehicles were assumed to utilize Ala Wai Boulevard during the AM peak period while 21.4% were assumed to utilize Kuhio Avenue. Similarly, during the PM peak period, 73.0% were assumed to utilize Ala Wai Boulevard while 27.0% were assumed to utilize Kuhio Avenue.

B. Through Traffic Forecasting Methodology

The travel forecast is based upon historical traffic count data obtained from the State DOT, Highways Division. The historical data were analyzed by linear regression analyses techniques to obtain an average traffic growth rate of approximately 2% in the project vicinity. For the purpose of this study, this annual traffic growth rate was conservatively assumed to apply to all traffic movements at the study intersections. As such, using the 2007 as the Base Year, a growth rate factor of 1.04 was applied to the existing traffic demands at the study intersections to simulate projected Year 2009 traffic demands at those intersections.

C. Total Traffic Volumes Without Project

The projected year 2009 AM and PM peak period traffic volumes and operating conditions without the proposed Ala Wai Garden Plaza are shown in Figures 7 and 8, and summarized in Table 2. The existing levels of service are included for comparison purposes. LOS calculations are included in Appendix D.



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) LANE GROUP LEVEL OF SERVICE

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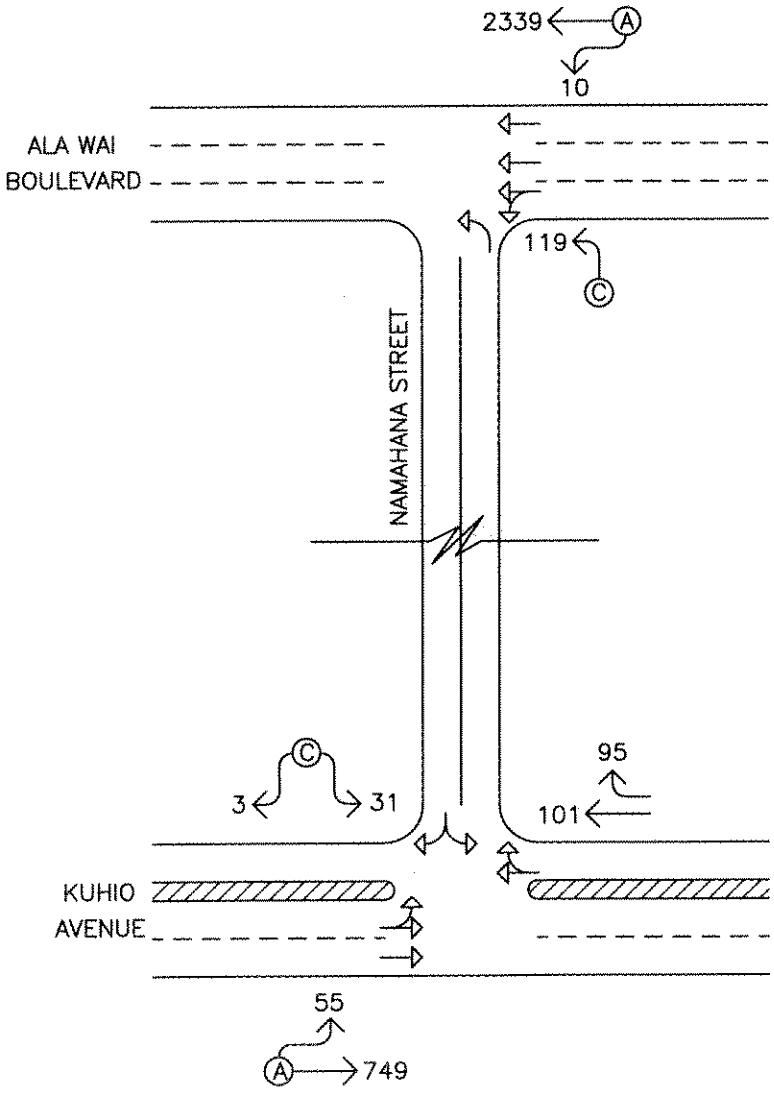
ALA WAI GARDEN PLAZA

YEAR 2009 AM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 7



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

Ⓐ — LANE GROUP LEVEL OF SERVICE

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ALA WAI GARDEN PLAZA

YEAR 2009 PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 8

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

Intersection	Critical Traffic Movement		AM		PM	
			Exist	Year 2009 w/out Proj	Exist	Year 2009 w/out Proj
Namahana St/ Ala Wai Blvd	Northbound	LT	C	C	C	C
	Westbound	TH-LT	A	A	A	A
Namahana St/ Kuhio Ave	Southbound	LT-RT	B	B	C	C
	Eastbound	TH-LT	A	A	A	A

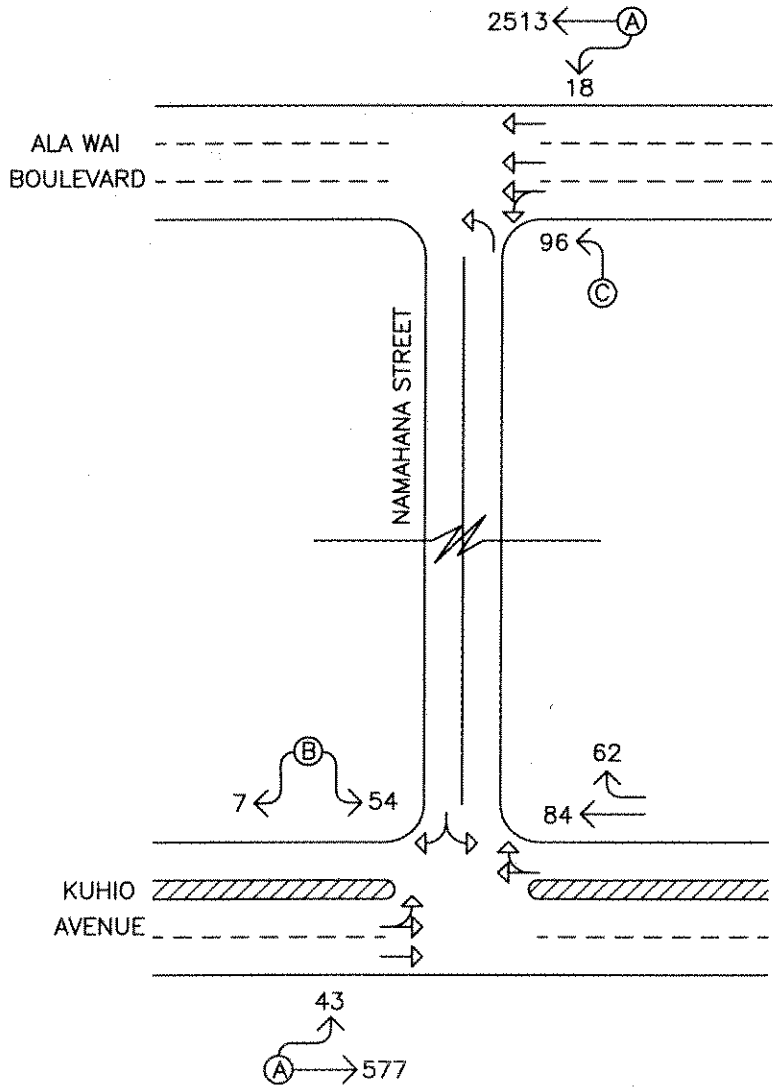
Traffic operations under Year 2009 without project conditions are expected to remain similar to existing conditions. The northbound and westbound approaches of the intersection of Namahana Street with Ala Wai Boulevard are expected to continue operating at LOS "C" and LOS "A," respectively, during both peak periods. Similarly, the southbound approach of the intersection of Namahana Street with Kuhio Avenue is expected to operate at LOS "B" and LOS "C" during the AM and PM peak periods, respectively, while the eastbound approach is expected to continue operating at LOS "A" during both peak periods.

D. Total Traffic Volumes With Project

The projected Year 2009 AM and PM peak period traffic volumes and operating conditions with the proposed Ala Wai Garden Plaza are shown in Figures 9 and 10. The cumulative volumes consist of site-generated traffic superimposed over Year 2009 projected traffic demands. The traffic impacts resulting from the proposed development are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2009 cumulative AM and PM peak hour traffic conditions with the proposed Ala Wai Garden Plaza are summarized in Table 3. The existing and projected Year 2009 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

Ⓐ — LANE GROUP LEVEL OF SERVICE

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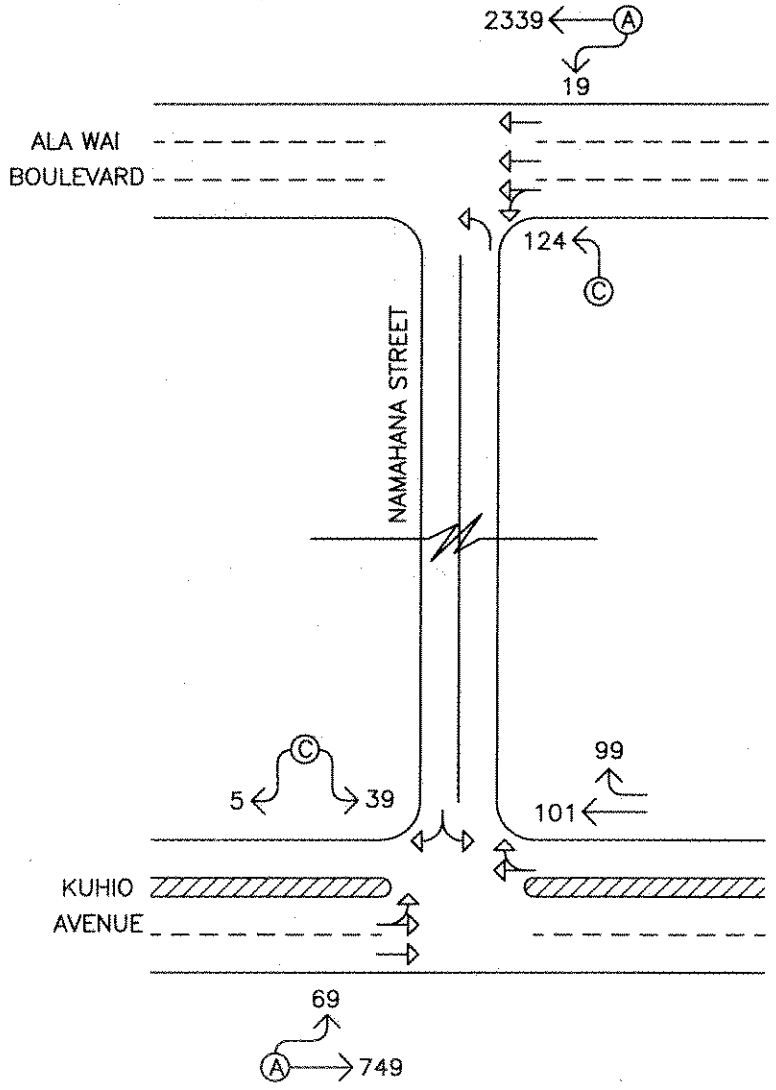
ENGINEERS • PLANNERS

ALA WAI GARDEN PLAZA

YEAR 2009 AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 9



LEGEND

90 — TRAFFIC MOVEMENT VOLUME (VPH)

LANE USAGE

(A) — LANE GROUP LEVEL OF SERVICE

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ALA WAI GARDEN PLAZA

YEAR 2009 PM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 10

Table 3: Existing and Projected (With and Without Project) Traffic Operating Conditions

Intersection	Critical Movement		AM			PM		
			Exist	Year 2009		Exist	Year 2009	
				w/out Proj	w/ Proj		w/out Proj	w/ Proj
Namahana St/ Ala Wai Blvd	Northbound	LT	C	C	C	C	C	C
	Westbound	TH-LT	A	A	A	A	A	A
Namahana St/ Kuhio Ave	Southbound	LT-RT	B	B	B	C	C	C
	Eastbound	TH-LT	A	A	A	A	A	A

Traffic operations under Year 2009 with project conditions are expected to remain similar to existing and Year 2009 without project conditions during both peak periods. The critical movements at the study intersections along Namahana Street are expected to continue operating at levels of service similar to existing and Year 2009 without project conditions. The total traffic volumes entering the intersection of Namahana Street with Ala Wai Boulevard are expected to increase by less than 1% during both peak periods with the proposed project while those entering the intersection with Kuhio Avenue are expected to increase by approximately 2-3% during both peak periods. These increases in total traffic volumes are in the range of daily volume fluctuations along those roadways and represent a minimal increase in the overall traffic volumes.

VI. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study associated with the project implementation:

1. Maintain sufficient sight distance for motorists to safely enter and exit all project driveways.

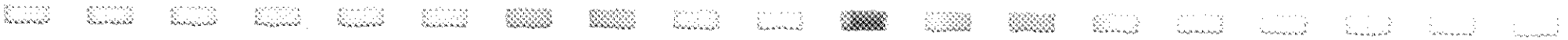
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.

3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto City and County of Honolulu roadways.

4. Provide sufficient turning radii at all project driveways to avoid or minimize vehicle encroachments to oncoming traffic lanes.

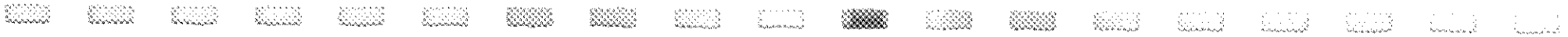
VII. CONCLUSION

With the implementation of the aforementioned recommendations, the proposed Ala Wai Garden Plaza is not expected to have a significant impact on traffic operations in the project vicinity. Traffic operations under Year 2009 with project conditions are expected to remain similar to existing and Year 2009 without project conditions during both peak periods. In addition, the total traffic volumes entering the intersection of Namahana Street with Ala Wai Boulevard are expected to increase by less than 1% during both peak periods with the proposed project while those entering the intersection with Kuhio Avenue are expected to increase by approximately 2-3% during both peak periods. These increases in total traffic volumes are in the range of daily volume fluctuations along those roadways and represent a minimal increase in the overall traffic volumes.



APPENDIX A

EXISTING TRAFFIC COUNT DATA



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1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counter:D4-3891, D4-3890
Counted:TO, Steve
Weather:Clear

File Name : AlaNamAM
Site Code : 00000001
Start Date : 1/24/2007
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Blvd. Westbound				Namahana Street Northbound				Eastbound	
Start Time	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Int. Total
07:00 AM	0	0	453	3	456	0	0	28	28	0	484
07:15 AM	0	0	569	6	575	0	0	21	21	0	596
07:30 AM	0	0	640	5	645	0	0	20	20	0	665
07:45 AM	0	0	604	4	608	0	0	16	16	0	624
Total	0	0	2266	18	2284	0	0	85	85	0	2369
08:00 AM	0	0	547	4	551	0	0	25	25	0	576
08:15 AM	0	0	625	2	627	0	0	23	23	0	650
08:30 AM	0	0	482	1	483	0	0	24	24	0	507
08:45 AM	0	0	395	2	397	0	0	33	33	0	430
Total	0	0	2049	9	2058	0	0	105	105	0	2163
Grand Total	0	0	4315	27	4342	0	0	190	190	0	4532
Apprch %		0	99.4	0.6		0	0	100			
Total %	0	0	95.2	0.6	95.8	0	0	4.2	4.2	0	

	Southbound	Ala Wai Blvd. Westbound				Namahana Street Northbound				Eastbound	
Start Time	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	0	0	**640**	**5**	**645**	0	0	20	20	0	**665**
07:45 AM	0	0	604	4	608	0	0	16	16	0	624
08:00 AM	0	0	547	4	551	0	0	**25**	**25**	0	576
08:15 AM	0	0	625	2	627	0	0	23	23	0	650
Total Volume	0	0	2416	15	2431	0	0	84	84	0	2515
% App. Total		0	99.4	0.6		0	0	100			
PHF	.000	.000	.944	.750	.942	.000	.000	.840	.840	.000	.945

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Weather:Clear

File Name : AlaNamPM
Site Code : 00000001
Start Date : 1/24/2007
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Blvd. Westbound				Namahana Street Northbound				Eastbound	
Start Time	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Int. Total
03:00 PM	0	0	556	6	562	0	0	26	26	0	588
03:15 PM	0	0	581	2	583	0	0	26	26	0	609
03:30 PM	0	0	558	0	558	0	0	24	24	0	582
03:45 PM	0	0	503	4	507	0	0	20	20	0	527
Total	0	0	2198	12	2210	0	0	96	96	0	2306
04:00 PM	0	0	594	5	599	0	0	45	45	0	644
04:15 PM	0	0	594	1	595	0	0	25	25	0	620
04:30 PM	0	0	534	4	538	0	0	29	29	0	567
04:45 PM	0	0	509	8	517	0	0	19	19	0	536
Total	0	0	2231	18	2249	0	0	118	118	0	2367
05:00 PM	0	0	543	3	546	0	0	29	29	0	575
05:15 PM	0	0	528	2	530	0	0	25	25	0	555
05:30 PM	0	0	481	5	486	0	0	25	25	0	511
05:45 PM	0	0	459	3	462	0	0	27	27	0	489
Total	0	0	2011	13	2024	0	0	106	106	0	2130
Grand Total	0	0	6440	43	6483	0	0	320	320	0	6803
Apprch %		0	99.3	0.7		0	0	100			
Total %	0	0	94.7	0.6	95.3	0	0	4.7	4.7	0	

	Southbound	Ala Wai Blvd. Westbound				Namahana Street Northbound				Eastbound	
Start Time	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:30 PM											
03:30 PM	0	0	558	0	558	0	0	24	24	0	582
03:45 PM	0	0	503	4	507	0	0	20	20	0	527
04:00 PM	0	0	**594**	**5**	**599**	0	0	**45**	**45**	0	**644**
04:15 PM	0	0	594	1	595	0	0	25	25	0	620
Total Volume	0	0	2249	10	2259	0	0	114	114	0	2373
% App. Total		0	99.6	0.4		0	0	100			
PHF	.000	.000	.947	.500	.943	.000	.000	.633	.633	.000	.921

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Weather:Clear

File Name : KuhNamAM
Site Code : 00000002
Start Date : 1/24/2007
Page No : 1

Groups Printed- Unshifted

	Namahana Street Southbound				Kuhio Avenue Westbound				Northbound	Kuhio Avenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Right	Thru	Left	App. Total	Int. Total
07:00 AM	5	0	6	11	21	19	0	40	0	0	91	12	103	154
07:15 AM	2	0	14	16	21	17	0	38	0	0	90	9	99	153
07:30 AM	1	0	14	15	9	22	0	31	0	0	129	11	140	186
07:45 AM	2	0	8	10	11	15	0	26	0	0	164	7	171	207
Total	10	0	42	52	62	73	0	135	0	0	474	39	513	700
08:00 AM	2	0	15	17	22	19	0	41	0	0	122	15	137	195
08:15 AM	0	0	6	6	17	25	0	42	0	0	140	6	146	194
08:30 AM	3	0	10	13	20	19	0	39	0	0	138	7	145	197
08:45 AM	3	0	12	15	26	31	0	57	0	0	140	7	147	219
Total	8	0	43	51	85	94	0	179	0	0	540	35	575	805
Grand Total	18	0	85	103	147	167	0	314	0	0	1014	74	1088	1505
Apprch %	17.5	0	82.5		46.8	53.2	0			0	93.2	6.8		
Total %	1.2	0	5.6	6.8	9.8	11.1	0	20.9	0	0	67.4	4.9	72.3	

	Namahana Street Southbound				Kuhio Avenue Westbound				Northbound	Kuhio Avenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	2	0	**15**	**17**	22	19	0	41	0	0	122	**15**	137	195
08:15 AM	0	0	6	6	17	25	0	42	0	0	**140**	6	146	194
08:30 AM	**3**	0	10	13	20	19	0	39	0	0	138	7	145	197
08:45 AM	3	0	12	15	**26**	**31**	0	**57**	0	0	140	7	**147**	**219**
Total Volume	8	0	43	51	85	94	0	179	0	0	540	35	575	805
% App. Total	15.7	0	84.3		47.5	52.5	0			0	93.9	6.1		
PHF	.667	.000	.717	.750	.817	.758	.000	.785	.000	.000	.964	.583	.978	.919

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Counted:GMT, ER
Weather:Clear

File Name : KuhNamPM
Site Code : 00000002
Start Date : 1/24/2007
Page No : 1

Groups Printed- Unshifted

	Namahana Street Southbound				Kuhio Aenue Westbound				Northbound	Kuhio Aenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Right	Thru	Left	App. Total	Int. Total
03:00 PM	0	0	10	10	16	23	0	39	0	0	166	15	181	230
03:15 PM	1	0	10	11	22	22	0	44	0	0	166	15	181	236
03:30 PM	0	0	7	7	16	23	0	39	0	0	162	12	174	220
03:45 PM	0	0	10	10	25	26	0	51	0	0	175	13	188	249
Total	1	0	37	38	79	94	0	173	0	0	669	55	724	935
04:00 PM	3	0	7	10	23	22	0	45	0	0	210	13	223	278
04:15 PM	0	0	6	6	27	26	0	53	0	0	173	15	188	247
04:30 PM	7	0	5	12	27	26	0	53	0	0	174	13	187	252
04:45 PM	1	0	11	12	14	29	0	43	0	0	183	7	190	245
Total	11	0	29	40	91	103	0	194	0	0	740	48	788	1022
05:00 PM	2	0	7	9	18	22	0	40	0	0	180	13	193	242
05:15 PM	2	0	7	9	15	23	0	38	0	0	180	13	193	240
05:30 PM	4	0	8	12	21	22	0	43	0	0	176	9	185	240
05:45 PM	4	0	6	10	22	23	0	45	0	0	199	17	216	271
Total	12	0	28	40	76	90	0	166	0	0	735	52	787	993
Grand Total	24	0	94	118	246	287	0	533	0	0	2144	155	2299	2950
Apprch %	20.3	0	79.7		46.2	53.8	0			0	93.3	6.7		
Total %	0.8	0	3.2	4	8.3	9.7	0	18.1	0	0	72.7	5.3	77.9	

	Namahana Street Southbound				Kuhio Aenue Westbound				Northbound	Kuhio Aenue Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 03:45 PM														
03:45 PM	0	0	**10**	10	25	**26**	0	51	0	0	175	13	188	249
04:00 PM	3	0	7	10	23	22	0	45	0	0	**210**	13	**223**	**278**
04:15 PM	0	0	6	6	**27**	26	0	**53**	0	0	173	**15**	188	247
04:30 PM	**7**	0	5	**12**	27	26	0	53	0	0	174	13	187	252
Total Volume	10	0	28	38	102	100	0	202	0	0	732	54	786	1026
% App. Total	26.3	0	73.7		50.5	49.5	0			0	93.1	6.9		
PHF	.357	.000	.700	.792	.944	.962	.000	.953	.000	.000	.871	.900	.881	.923

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

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

"Highway Capacity Manual," Transportation Research Board, 2000.

APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
EXISTING PEAK HOUR TRAFFIC ANALYSIS

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: AM Peak
Intersection: AlaNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID: Namahana 7661-01
East/West Street: Ala Wai Blvd
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				15	1611	
Peak-Hour Factor, PHF				0.94	0.94	
Hourly Flow Rate, HFR				15	1713	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration				LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	84					
Peak Hour Factor, PHF	0.84					
Hourly Flow Rate, HFR	100					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		15	100					
C(m) (vph)		1623	399					
v/c		0.01	0.25					
95% queue length		0.03	1.00					
Control Delay		7.2	17.0					
LOS		A	C					
Approach Delay				17.0				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: AlaNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID: Namahana 7661-01
East/West Street: Ala Wai Blvd
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				10	1500	
Peak-Hour Factor, PHF				0.94	0.94	
Hourly Flow Rate, HFR				10	1595	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration				LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	114					
Peak Hour Factor, PHF	0.63					
Hourly Flow Rate, HFR	180					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		10	180					
C(m) (vph)		1623	431					
v/c		0.01	0.42					
95% queue length		0.02	2.12					
Control Delay		7.2	19.3					
LOS		A	C					
Approach Delay				19.3				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.:
Date Performed: 2/9/2007
Analysis Time Period: AM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	39	555			81	59
Peak-Hour Factor, PHF	0.87	0.87			0.83	0.83
Hourly Flow Rate, HFR	44	637			97	71
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration	LT	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				43		5
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				60		7
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	44						67	
C(m) (vph)	1407						483	
v/c	0.03						0.14	
95% queue length	0.10						0.48	
Control Delay	7.6						13.7	
LOS	A						B	
Approach Delay							13.7	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.:
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Existing
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	53	720			97	91
Peak-Hour Factor, PHF	0.87	0.87			0.89	0.89
Hourly Flow Rate, HFR	60	827			108	102
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration		LT T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				30		3
Peak Hour Factor, PHF				0.83		0.83
Hourly Flow Rate, HFR				36		3
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	60						39	
C(m) (vph)	1358						378	
v/c	0.04						0.10	
95% queue length	0.14						0.34	
Control Delay	7.8						15.6	
LOS	A						C	
Approach Delay							15.6	
Approach LOS							C	

APPENDIX D

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2009 PEAK HOUR TRAFFIC
ANALYSIS WITHOUT PROJECT

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: AM Peak
Intersection: AlaNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/o project
Project ID: Namahana 7661-01
East/West Street: Ala Wai Blvd
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				16	1675	
Peak-Hour Factor, PHF				0.94	0.94	
Hourly Flow Rate, HFR				17	1781	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration					LT T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	87					
Peak Hour Factor, PHF	0.84					
Hourly Flow Rate, HFR	103					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		17	103					
C(m) (vph)		1623	383					
v/c		0.01	0.27					
95% queue length		0.03	1.10					
Control Delay		7.2	17.8					
LOS		A	C					
Approach Delay				17.8				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: JW
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: AlaNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/o project
Project ID: Namahana 7661-01
East/West Street: Ala Wai Blvd
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				10	1559	
Peak-Hour Factor, PHF				0.94	0.94	
Hourly Flow Rate, HFR				10	1658	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration					LT T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	119					
Peak Hour Factor, PHF	0.63					
Hourly Flow Rate, HFR	188					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes		1				
Configuration		L				

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		10	188					
C(m) (vph)		1623	416					
v/c		0.01	0.45					
95% queue length		0.02	2.42					
Control Delay		7.2	20.7					
LOS		A	C					
Approach Delay				20.7				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: AM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/o project
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	41	577			84	61
Peak-Hour Factor, PHF	0.87	0.87			0.83	0.83
Hourly Flow Rate, HFR	47	663			101	73
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration		LT	T			TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				45		5
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				63		7
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	47						70	
C(m) (vph)	1400						464	
v/c	0.03						0.15	
95% queue length	0.10						0.53	
Control Delay	7.7						14.1	
LOS	A						B	
Approach Delay							14.1	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: JW
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/o project
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	55	749			101	95
Peak-Hour Factor, PHF	0.87	0.87			0.89	0.89
Hourly Flow Rate, HFR	63	860			113	106
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration		LT T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				31		3
Peak Hour Factor, PHF				0.83		0.83
Hourly Flow Rate, HFR				37		3
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	63						40	
C(m) (vph)	1348						361	
v/c	0.05						0.11	
95% queue length	0.15						0.37	
Control Delay	7.8						16.2	
LOS	A						C	
Approach Delay							16.2	
Approach LOS							C	

APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2009 PEAK HOUR TRAFFIC
ANALYSIS WITH PROJECT

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:	JW
Agency/Co.:	woc
Date Performed:	2/9/2007
Analysis Time Period:	AM Peak
Intersection:	AlaNam
Jurisdiction:	
Units: U. S. Customary	
Analysis Year:	Year 2009 w/ project
Project ID: Namahana 7661-01	
East/West Street:	Ala Wai Blvd
North/South Street:	Namahana St
Intersection Orientation: EW	Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				18	1675	
Peak-Hour Factor, PHF				1.00	0.94	
Hourly Flow Rate, HFR				18	1781	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration				LT	T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	96					
Peak Hour Factor, PHF	0.84					
Hourly Flow Rate, HFR	114					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		18	114					
C(m) (vph)		1623	382					
v/c		0.01	0.30					
95% queue length		0.03	1.26					
Control Delay		7.2	18.4					
LOS		A	C					
Approach Delay			18.4					
Approach LOS			C					

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: JW
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: AlaNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/ project
Project ID: Namahana 7661-01
East/West Street: Ala Wai Blvd
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume				19	1559	
Peak-Hour Factor, PHF				0.94	0.94	
Hourly Flow Rate, HFR				20	1658	
Percent Heavy Vehicles		--	--	2	--	--
Median Type/Storage	Undivided			/		
RT Channelized?						
Lanes				0	2	
Configuration					LT T	
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	124					
Peak Hour Factor, PHF	0.63					
Hourly Flow Rate, HFR	196					
Percent Heavy Vehicles	2					
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			/
Lanes	1					
Configuration	L					

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config		LT	L					
v (vph)		20	196					
C(m) (vph)		1623	405					
v/c		0.01	0.48					
95% queue length		0.04	2.74					
Control Delay		7.2	22.2					
LOS		A	C					
Approach Delay				22.2				
Approach LOS				C				

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst: JW
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: AM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/ project
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	43	577			84	62
Peak-Hour Factor, PHF	1.00	0.87			0.83	0.83
Hourly Flow Rate, HFR	43	663			101	74
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration	LT	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				54		7
Peak Hour Factor, PHF				0.71		0.71
Hourly Flow Rate, HFR				76		9
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	43						85	
C(m) (vph)	1399						473	
v/c	0.03						0.18	
95% queue length	0.10						0.66	
Control Delay	7.7						14.3	
LOS	A						B	
Approach Delay							14.3	
Approach LOS							B	

HCS+: Unsignalized Intersections Release 5.21

TWO-WAY STOP CONTROL SUMMARY

Analyst:
Agency/Co.: woc
Date Performed: 2/9/2007
Analysis Time Period: PM Peak
Intersection: KuhNam
Jurisdiction:
Units: U. S. Customary
Analysis Year: Year 2009 w/ project
Project ID: Namahana 7661-01
East/West Street: Kuhio Ave
North/South Street: Namahana St
Intersection Orientation: EW Study period (hrs): 1.00

Vehicle Volumes and Adjustments

Major Street: Approach	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	69	749			101	99
Peak-Hour Factor, PHF	0.87	0.87			0.89	0.89
Hourly Flow Rate, HFR	79	860			113	111
Percent Heavy Vehicles	2	--	--		--	--
Median Type/Storage	Undivided		/			
RT Channelized?						
Lanes	0	2			1	0
Configuration	LT	T				TR
Upstream Signal?		No			No	

Minor Street: Approach	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume				39		5
Peak Hour Factor, PHF				0.83		0.83
Hourly Flow Rate, HFR				46		6
Percent Heavy Vehicles				2		2
Percent Grade (%)		0			0	
Flared Approach: Exists?/Storage			/			No /
Lanes				0		0
Configuration					LR	

Delay, Queue Length, and Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Config	LT						LR	
v (vph)	79						52	
C(m) (vph)	1342						349	
v/c	0.06						0.15	
95% queue length	0.19						0.52	
Control Delay	7.9						17.1	
LOS	A						C	
Approach Delay							17.1	
Approach LOS							C	

WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 400 • HONOLULU, HAWAII, 96813
PHONE (808) 527-5749 • FAX (808) 527-5760 • INTERNET: http://www.honolulu.gov

MINUTES OF REGULAR MEETING
JULY 10, 2007
WAIKIKI COMMUNITY CENTER

CALL TO ORDER: Chair Finley called the meeting to order at 7:00 p.m.

ESTABLISH A QUORUM: A quorum was present.

MEMBERS PRESENT: Jo-Ann Adams, Les Among, Helen Carroll, Ray Gruntz, Jim Poole, Louis Erteschik, Bob Finley, Walt Flood, Mary Simpson, Bert Benevento, Jeff Merz, Richard Personius, Mike Peters, Mark Smith.

MEMBERS ABSENT: Jeff Apaka, David Chen.

MEMBERS' SEATS VACANT: None.

GUESTS: Lorna Johnston (Hobron Ena Road Organization for Safety), Mary Cowing, Pat Stetzel, Jenny Kaya (Representative Scott Nishimoto's Office), Emily Reed, Corey Dillman, Joan Nagawa (WCC), AnnaMarie Preston (Councilmember Charles Djou's Office), Daniel Chun (Governor's Office), Jan Bappe, Bill and Helen Sweatt, Ross Tanimoto (City Department of Environmental Services), Capt. Ron Iwami (HFD-Waikiki Station), Sgt. Hardinger and Sgt. LaMontagni (HPD-Waikiki Station), Tek Yoon, Teri Lam, Gary Omori, Gordon Wood (Durant Media Five), Chris Novak (Kuhio Village), Rick Egged (Waikiki Improvement Association), Bob Farrell (Makakiko,com), Benett Boled (Taisei Construction), Senator Gordon Trimble, Gerald Park (Gerald Park, Urban Planner), Representative Tom Brower, Keith Rollman (Mayor's Office), Bob Kirkham, Dean Chu (Neighborhood Commission Office staff).

TREASURER'S REPORT: Chair Finley reported the budget for the new fiscal year includes $1520 in the Operating Account, $2500 in the Publicity Account, and $120 in the Refreshment Account.

CHAIR ANNOUNCEMENTS:

1. Board members Apaka and Chen were unable to attend the meeting.

2. Duty Free Shoppers made donations to the Waikiki Community Center renovations, including art work for the meeting room.

CITY AGENCIES:

HONOLULU POLICE DEPARTMENT – Sgt. Hardinger reported statistics for June compared to May, included: 5/11 robberies, 36/48 burglaries, 213/209 thefts, 110/115 unauthorized entry into motor vehicles, 16/24 motor vehicle thefts, 110/74 liquor law violations, 234/209 nuisance complaints, 465/432 miscellaneous service calls, and 4,023/4,146 total calls.

Sgt. LaMontagni reported chronic complaints in June included: 14 prostitution arrests, 42 citations and 36 warnings for jaywalking, 79 citations and 2 arrests for illegal drinking on the beach, 87 citations and 6 arrests for drinking on the sidewalk, 208 citations for illegal camping (no permit) on the beach, 862 parking citations in the zoo parking lot, 21 citations for illegal skateboarding, and 1,829 other parking violations.

Questions, answers and comments followed:

1. The nuisance complaints for June included 11 citations for loud music and 2 citations for loud vehicle mufflers.

2. In response to Benevento, the illegal camping law includes blocking a sidewalk such that pedestrians cannot pass. Problems can be reported to police by calling 911 and telling the dispatcher that this is a non emergency call.

3. A resident reported homeless persons camped out on the beach and at bus stops, and that the problem is ongoing despite police enforcement efforts. Bus stops along Kuhio Avenue were noted as needing cleaning due to homeless persons occupying them and urinating, defecating at them. It was noted laws currently limit what enforcement can be done; laws would need to be changed.

4. A resident noted ongoing problem with noisy motorcycles.

5. Erteschik provided additional comments on the illegal camping problem and the need for it to be addressed.

Sgt. Hardinger and Sgt. LaMontagni were thanked for attending the meeting.

Gruntz arrived during the above portion of the meeting.

HONOLULU FIRE DEPARTMENT – Capt. Iwami reported the following:

1. Statistics for last month included: 5 structure, 1 brush, 7 rubbish, and 1 vehicle fire; 12 activated alarms, 128 medical emergencies, 1 search and rescue, and 2 miscellaneous calls involving fluid spills. The search and rescue involved a car that went into the Ala Wai Canal. One fluid spill involved a truck that lost its engine oil along a stretch of Kapahulu Avenue and clean up work was required.

2. The Safety Tip of the Month is: Take time to childproof your home, especially with keiki out of school for summer vacation. Check for potentially dangerous situations, i.e. electrical shock, accidental falls, or poisoning from medications, cleaning fluids, and houseplants. Keep matches and lighters in a safe place and out the reach of small children.

Questions, answers and comments followed:

1. Smith noted a recent newspaper article about the problem with drivers not yielding to emergency vehicles and what drivers should do in such situations, was useful.

2. In response to Flood, Capt. Iwami noted that they have been carrying defibrillators for some time now.

Adams arrived during the above portion of the meeting.

7:25 p.m.

BOARD OF WATER SUPPLY – Chair Finley noted a written report was received which indicated there were no main breaks in this area last month and a request to conserve water.

COMMUNITY CONCERNS:

BUS ROUTE MODIFICATION – A resident suggested modifying TheBus route no. 13 to reach the new Safeway store complex in Kapahulu, to serve Waikiki residents who would want to shop there. Keith Rollman, representing the Mayor's Office, will follow up.

WAIKIKI SURF BOARD RACKS - Tek Yoon expressed opposition to the new rules and rates for the surf board racks. The new rates are too high, especially for seniors. He suggested the rates be rolled back for seniors. He noted that the racks were originally installed so seniors would not have to carry their boards to the beach. Rollman noted the City Council set the new rates by ordinance.

HOBRON ENA ROAD ORGANIZATION FOR SAFETY – Lorna Johnston reported they met with City Department of Transportation Services (DTS) and Department of Planning and Permitting (DPP) officials on the organization's proposal for traffic improvements for the area bounded by Ala Wai Boulevard, Kalakaua Avenue, and Ala Moana Boulevard, to address traffic impacts by the Allure project. The Department of Transportation Services did not

support any of the proposals by the organization despite Johnston presenting a petition that included over 1,000 signatures. A letter on the meeting is to be sent by DTS, a copy will be provided to the Board.

Johnston noted that at a meeting with Allure project officials, they are working on traffic improvement plans on their project's property, including dedicated left and right turn lanes.

Carroll thanked Johnston for the organization's work.

Erteschik provided a brief background on this matter and noted DTS may have good reasons why the organization's proposals could not be implemented. However, since the Waikiki Neighborhood Board took a position on this matter, we should not take lightly that our vote was ignored. Therefore, the Board will monitor this matter.

Johnston was thanked for attending the meeting.

ELECTED OFFICIALS:

MAYOR'S OFFICE – Rollman, representing the Mayor's Office, reported the following:

1. He will follow up with the DTS on Johnston's meeting with DTS and DPP, as Johnton noted she was not satisfied with the tone of the meeting.

2. The micro-tunneling for the sewer project has been completed and the tunnels are now in service. The temporary pumps will remain on site, but are not being used.

Rollman reported on concerns from previous months' meeting as follows:

1. An informational presentation on sewage treatment and the EPA hearing on ending the City's waiver from secondary treatment, like the meetings held in the Ewa area in May, will be provided later in the meeting. The EPA is proposing to end the waiver, but the City's position is that repair existing sewer lines is the priority and secondary treatment is not needed.

2. Regarding a request for sidewalk repair in the 2100 to 2300 block of Kuhio Avenue, it has been determined that there is a problem with the slate pavers, and the Department of Design and Construction is working on a solution.

3. Regarding a request for sidewalk cleaning, the Department of Facility Maintenance reports that by ordinance, the cleaning of sidewalks is the responsibility of the abutting property owner, not the City.

4. In response to a question about the 'bus only' signs in the area of Kuamoo Street and Kuhio Avenue, the signs are over sized and placing them lower on the poles would create hazards, such as blocking lines of sight, or views of persons standing behind them.

5. Regarding the removal of bus stops, it was acknowledged there was a lack of notice to the community, and that stops are being removed island wide so stops are no closer than 600 feet apart, mid block stops and others are being removed for safety reasons, and to improve schedule reliability. It is not being done to save money.

6. Regarding a suggestion that the police department work with Dateline NBC on a Catch a Predator project, HPD reports that "The Honolulu Police Department is a member of the Internet Crimes Against Children (ICAC) Task Force headed by the state Department of the Attorney General. The U.S. Department of Justice's ICAC Task Force Program has strict standards and guidelines that the participating regional Task Force agencies must follow. The guidelines are designed to enhance child exploitation investigations and ensure the successful prosecution of sexual predators.

Working with nonlaw enforcement entities, such as Dateline or Perverted Justice, will pose numerous obstacles, i.e., in the personal safety of civilians, testimony, and evidence collection. It may also raise entrapment issues. "

It was noted that HPD has done sting operations, arrests have been made.

Questions, answers and comments followed:

1. A resident requested that the bus stop at Kuhio and Liliuokalani avenues be cleaned due to the homeless occupying them, and urinating and defecating at them. It was also noted that all the bus stops on Kuhio Avenue should be cleaned and that some cities clean their bus stops at night. Rollman will follow up.

2. B. Sweatt requested the status of the proposed park on Aloha Drive currently being used as a contractor's yard for the sewer improvement project. Rollman will follow up.

3. Carroll requested restoring bus stops that have been eliminated.

4. Gruntz noted a Catch A Predator case in Texas where the local district attorney did not prosecute a case was due to an offender's government position and that the offender later committed suicide.

5. Gruntz requested that the Board of Water Supply attend the Board's meeting, provide information on the pH factor of the water in writing, which is not on the web site as claimed, and is not in the Water Quality report for his building.

6. Merz supported the suggestion to extend TheBus route no. 13 to the new Safeway store in Kapahulu.

7. Merz noted that the color scheme of the former Jack in the Box restaurant has been changed to conform to the design standards, but still questions if the signage is legal.

8. Peters provided comments on the loss of the bus stop at Kuhio Avenue and Ohua Street.

9. Benevento questioned the legality and propriety of Council Chair Marshall hiring a Alex Santiago as a lobbiest. Among and Rollman noted this matter should be referred to Councilmember Djou.

10. Smith expressed thanks for the installation of the countdown type of pedestrian crossing signal lights. Rollman noted the City is considering various types of new technology to improve pedestrian safety.

11. Chair Finley requested DTS attend a Waikiki Neighborhood Board meeting to address the bus stop issue.

12. In response to Gruntz, Honolulu is the 13th largest municipality at 600 square miles.

Rollman was thanked for attending the meeting.

8:00 p.m.

COUNCILMEMBER CHARLES DJOU – AnnaMarie Preston, distributed the monthly report and highlighted/added the following:

1. The report includes an explanation of six reasons why Council Chair Marshall's hiring of a lobbyist is unnecessary.

2. The report also notes the budget for the new fiscal year is $2.4 billion, the largest ever. It represents an increase of 12 percent over last year and a 66 percent increase since Mayor Hannemann took office.

Questions, answers and comments followed:

In response to Benevento, additional comments on Councilmember Djou's opposition to the hiring of a lobbyist were provided.

Preston was thanked for attending the meeting.

GOVERNOR'S OFFICE – Chair Finley noted Governor's Office representative Marsha Weinert was unable to attend the meeting. The Governor's weekly report was distributed along with material from the State Department of Health on hand washing to prevent food-borne illnesses and the spread of cold and flu viruses.

SENATOR GORDON TRIMBLE – Senator Trimble reported that a special session of the legislature was held today to work on over riding the Governor's vetoes of bills. The Governor originally held 33 bills and vetoed 29 of the 33. Twelve bills were heard by the legislature, Senator Trimble supported overrides of several bills including: Senate Bill 1191 relating to pedestrian safety bill, House Bill 0708 relating to Kakaako including continuing the Keiki Fishing Conservancy at Keihi Lagoon, and Senate Bill 1922 relating to creative media requiring the UH to lease a specific property to a specific party. He noted there were insufficient votes to over ride a veto of most anti business bills.

Questions, answers and comments followed:

1. In response to a question from Gruntz, the Keiki Fishing Conservancy program is a catch and release program.

2. In response to Peters, the State provides funding to the counties for Meals on Wheels programs, no funding was withheld. Normally any grant money left over from other programs is funneled into Meals on Wheels; the funding shortage for Meals on Wheels came from this money – not the Governor's Office.

3. In response to Among, the pedestrian safety bill was initially supported by the Governor, but in conference committee the funding source was changed to come from a highway fund rather than the General Fund, causing a change in the Governor's position.

4. Senator Trimble suggested the holding of a three-day session to work on making other changes to see if compromise could be reached, but only a one-day session was held.

5. In response to a question from Gruntz, the State Department of Health reports that all necessary permits are in place for the Hilton Lagoon project, and work is being done within the limits of the permits. Gruntz suggested soil tests be made.

6. B. Sweatt requested an update on what action our Congressional delegation is doing on House Resolution 217 on the federal employee 25 percent COLA (cost of living adjustment). He wants a 25 percent COLA adjustment for social security payments. Follow up will be done.

7. Erteschik expressed thanks for Senator Trimble's support of the pedestrian safety bill.

8. In response to Carroll, Senate Bill 600, to exempt from taxation, 100 percent of capital gains realized during taxable years 2008 – 2012 from the sale of leased fee interest in condominium units to association of apartment owners or residential cooperatives, was signed into law. Carroll suggested an education program be conducted for condominium managers and residents.

Senator Trimble was thanked for attending the meeting.

REPRESENTATIVE TOM BROWER – Representative Brower reported during the special session, 12 bills were considered for an over ride vote, including continuing the Keiki Fishing Conservancy.

Questions, answers and comments followed:

1. In response to Merz, the veto of House Bill 1270 relating to State planning, including the 2050 Sustainability Plan, was overridden.

2. In response to B. Sweatt's requested update on what action our Congressional delegation is doing on House Resolution 217 on the federal employee COLA, Brower has met with Representative Abercrombie on other issues and will follow up on this issue.

3. Carroll asked what Representative Abercrombie is doing about the federal capital gains tax for lessors and suggested an education program be conduced for condominium managers and residents on the passage of Senate Bill 600. Brower responded that he will contact the resident manager of every leasehold building in this district and attempt to educate the landowners regarding Senate Bill 600.

Representative Brower was thanked for attending the meeting.

8:25 p.m.

REPRESENTATIVE SCOTT NISHIMOTO – Representative Nishimoto was unable attend the meeting. His monthly report was distributed.

WAIKIKI IMPROVEMENT ASSOCIATION (WIA) – Rick Egged, representing WIA, reported the following:

1. He will follow up with the Waikiki Business Improvement District about the cleaning of sidewalks, but noted that Kapahulu Avenue is not in the WIA. He also noted that the WIA cleans the sidewalks, but not bus stops. He suggested that he and Finley would work on the problem.

2. The WIA Mid-Year meeting is scheduled for July 26, Asia Pacific Center at Ft. DeRussy, 4:00 – 5:00 p.m., RSVP as soon as possible if you plan to attend.

3. The WIA is aware of the second-floor signage issues and wants to make some changes in the law for small businesses.

4. WIA made donations for renovations at the Waikiki Community Center, including work donated by DFS on the auditorium and the day care center. Sealmasters also made donations for renovations, including sealing damaged concrete.

Questions, answers and comments followed:

Flood questioned who is responsible for stars installed on Kalakaua Avenue sidewalk, between Royal Hawaiian Avenue and Seaside Avenue. Follow up will be done.

Egged was thanked for attending the meeting.

8:34 p.m.

PRESENTATIONS:

ALA WAI GARDEN PLAZA – Gerald Park, Benett Boled, and Gordon Wood were present and reported on plans to develop a 44-unit rental apartment building at Ala Wai Boulevard and Namahana Street. This project replaces a previously proposed 16-story project, with a six-story building. The building will include two floors of parking and spaces, and four floors with 11 one-bedroom units each. The top floor will have shallow lanais. Trees on the site will remain. Ala Wai Boulevard will be widened to keep it in line with the road Diamond Head of the project. The security fence will be moved close to the building except where it is required to surround the swimming pool. There will be a private park for the residents.

Questions, answers and comments followed:

1. In response to Merz, the building will have a standing seam aluminum pitched roof, sliding garage gate, an Environmental Assessment has been submitted to the City for review, and units will be for rent at market prices, and the contractor has done a construction impact vibration study.

2. In response to Among and Martin, the units will rent at market prices, there are no affordable rent units.

3. Benevento questioned what the rents would be considering the $26 million cost to develop the building.

Merz moved and Benevento seconded that the Board supports the concept of this project. Discussion followed:

1. The units will be approximately 613 sq. ft. in size with individual PTAC air conditioning units.

2. In response to Flood, units will have individual air conditioning rather than central air conditioning, and work is being done on possibly having solar panels on the roof if the aesthetic committee allows it.

3. Among suggested the Board defer action until informational materials received can be reviewed.

4. Erteschik noted this project is in the early phase.

5. In response to Erteschik who noted nothing in the land records precludes a conversion to condo in the future, Wood note the project is designed as a rental, not condominiums.

6. Benevento and Merz supported the project.

The motion carried, 13-2. Among and Carroll opposed the motion.

CITY WASTE WATER PROGRAM – Ross Tanimoto, from the Department of Environmental Services, provided a brief background on the City's waste water system which handles 70 percent of the island's sewage, with the remainder handled by means such as septic tank systems and cesspools. The waste water system includes some 2500 miles of pipes and eight treatment plants. He announced that on August 14, at 7:00 p.m., there will be another meeting on this subject at Ala Wai Elementary School. At the treatment plants solids are removed, the water treated, then, depending on location, dumped into Lake Wilson, the ocean, or pumped into injection wells.

The Environmental Protection Agency is proposing to end a waiver that allows the City to dispose of treated sewage without processing it to the secondary level. The City's position is that rather spend the money on unnecessarily treating sewage to the secondary level, the best use of funding is to improve the collection system by repairing old lines. This position is based on years of testing that shows secondary treatment is not necessary.

Questions, answers and comments followed:

1. In response to Erteschik, the Clean Water Act which requires secondary treatment, is to protect inland waterways, and the Act included the waiver that Honolulu and some other Mainland cities still have. The Neighbor Islands treat to the secondary level as their systems do not discharge as far out to sea and as deep as Honolulu's system.

2. In response to Among, upgrading the Honouliuli plant to the secondary level would cost approximately $400 million, and $800 million for the Sand Island plant. It is the City's position that treating to the secondary level is not necessary.

3. In response to Martin, sewage that is to be recycled such as for irrigation purposes is treated to the tertiary level, whereas the water being dumped in the ocean is only treated to the primary level. Even if the water was treated to the tertiary level, and the amount of treated sewage dumped as sea cannot be handled by our existing injection wells.

4. Gruntz opposed the dumping of treated sewage into the ocean then using desalinated ocean water for drinking purposes.

5. In response to Adams, one reason the EPA wants to deny the waiver is the level of pesticides. The pesticide contamination is from chemicals used for ground treatment of termites; that level found is below

State standards. Testing includes water and fish sampling, and bacteria levels at the discharge point. Testing samples meet State standards and no bacteria are found at the surface. It was noted that the waters at the discharge points are not used for recreational purposes as they are too deep for recreational diving.

6. In response to Merz, 43 other cities on the East Coast, in Alaska and California, have waivers from having to treat to the secondary level. It was noted that cases where secondary treatment was done, it made no difference in bacteria levels.

Tanimoto was thanked for attending the meeting.

9:17 p.m.

COMMITTEE REPORTS:

SECOND FLOOR SIGNAGE – Peters gave a brief review on the use of Permitted Interaction Groups which provides the Board greater flexibility than a traditional committee. **Peters moved and Gruntz seconded to add to the agenda, that the Board form a Permitted Interaction Group (PIG) to deal with the second floor signage issue. The motion carried unanimously.** Among was absent from the meeting room at this time.

FORMATION OF A PERMITTED INTERACTION GROUP TO DEAL WITH THE SECOND FLOOR SIGNAGE ISSUE – Merz moved and Gruntz seconded that the Board form a Permitted Interaction Group to deal with the second floor signage issue. The motion carried unanimously. Peters will serve as chair.

VOTE TO APPROVE A PERMITTED INTERACTION GROUP ON HOMELESS ISSUES – Benevento moved and Flood seconded that the Board form a Permitted Interaction Group on homeless issues. The motion carried unanimously. Benevento will serve as chair.

Among returned to the meeting room.

Erteschik provided additional comments on the use of a PIG, including a waiver from the requirement on setting agendas, but the PIG must report to the Board.

APPROVAL OF MINUTES FOR THE JUNE 12, 2007 REGULAR MEETING – The minutes were approved as distributed.

CHAIR'S REPORT: Chair Finley distributed a list of committees and committee chairs, including: Parks and Recreation – Peter, chair; Legislation – Erteschik, chair; Education – Poole, chair; Community Relations – Apaka, chair; Construction Projects – Merz, chair; Web Master – Personius, chair; Noise Issues – Smith, chair; Waikiki Citizens Patrol – Flood, chair; Homeless Issues – Benevento, chair; Second Floor Signage – Peters, chair.

ADJOURNMENT: The meeting was adjourned at 9:27 p.m.

Submitted by,

Dean Chu
Neighborhood Assistant

Hawaiian Telcom

received
8.15.07

August 13, 2007

Mr. Gerald Park
Gerald Park, Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

SUBJECT: ALA WAI GARDEN PLAZA – 2055 ALA WAI BOULEVARD

Thank you for the opportunity to review the above project. Currently, the area is being served from our Punahou Central Office. The service connection for this project is should be on Namahana St. The electrical consultant for the project should submit a complete drawing for our review and approval.

Hawaiian Telcom currently has telephone facilities on the above property. Prior to any demolition work, please notify us to remove our facilities.

If you have any questions or require assistance on this project, please call Noel Remigio at 546-4747.

Sincerely,

Lynette Yoshida
Manager – Network Engineering and Planning
Hawaiian Telcom

c: file (Waikiki)
Geri Ung, Department of Planning and Permitting
N. Remigio

1177 Bishop Street • Honolulu • 96813

GERALD PARK
Urban Planner

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96814

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Facsimile:
(808) 596-7485
e-mail:
gparkurbanplanner
@hawaiiantel.net

October 5, 2007

Lynette Yoshida, Section Manager
Network Engineering and Planning
Hawaiian Telcom
PO Box 2200
Honolulu, Hawaii 96841

Dear Ms. Yoshida:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. Responses to your comments are offered in the order they were presented.

The electrical engineering consultant will submit complete electrical drawings for the project to Hawaiian Telcom for review and approval.

Hawaiian Telcom also will be notified to remove their facilities prior to construction.

We thank Hawaiian Telcom for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

LINDA LINGLE
GOVERNOR OF HAWAII

LAURA H. THIELEN
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

received
8.15.07

August 10, 2007

Mr. Gearld Park, Urban Planner
1221 Kapiolani Boulevard Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Draft Environmental Assessment for Ala Wai Garden Plaza – Multi-Family Residential Rental Project, Honolulu, Oahu, Tax Map Key: (1) 2-6-16:56, 57, 58, 59, 60

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources has no comment to offer on the subject matter. Should you have any questions, please feel free to call our office at 587-0433. Thank you.

Sincerely,

Russell Y. Tsuji
Administrator

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

801 SOUTH BERETANIA STREET · HONOLULU, HAWAII 96813
TELEPHONE: (808) 529-3111 · INTERNET: www.honolulupd.org

MUFI HANNEMANN
MAYOR

BOISSE P. CORREA
CHIEF

PAUL D. PUTZULU
DEPUTY CHIEFS

OUR REFERENCE BS-DK

August 13, 2007

received
8.16.07

Mr. Gerald Park
Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

This is in response to a letter (dated August 7, 2007) from the city Department of Planning and Permitting requesting comments on a Draft Environmental Assessment for the Ala Wai Garden Plaza project.

This project should have no significant impact on the facilities or operations of the Honolulu Police Department.

If there are any questions, please call Major Marie McCauley of District 6 at 529-3361 or Mr. Brandon Stone of the Executive Office at 529-3644.

Sincerely,

BOISSE P. CORREA
Chief of Police

By
JOHN P. KERR
Assistant Chief of Police
Support Services Bureau

cc: Ms. Geri Ung, DPP

Serving and Protecting With Aloha

PHONE (808) 594-1888

FAX (808) 594-1865

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

received
8.22.07

HRD07/3164

August 16, 2007

Gerald Park
Gerald Park Urban Planner
1221 Kapi'olani Blvd.
Honolulu, HI 96814

RE: Draft Environmental Assessment for the Ala Wai Garden Plaza, TMK: (1) 2-6-016: 056 – 060, Waikīkī, O'ahu, Hawai'i

Dear Gerald Park,

The Office of Hawaiian Affairs (OHA) has been asked by the Department of Planning and Permitting, City and County of Honolulu for comments concerning the Draft Environmental Assessment (DEA) of the Ala Wai Garden Plaza and offers the following comments:

OHA has reviewed the Draft Environmental Assessment (DEA) of the Ala Wai Garden Plaza Project. We have concluded from our available records that it appears that no previously identified historic sites are contained within the project area. The Archaeological Inventory Survey (AIS) conducted by Cultural Surveys Hawaii, Inc also appears as an adequate effort to inventory surface and sub-surface archaeological sites in the project area. OHA concurs with the result of the AIS of "no historic properties affected." We recommend that a State Historic Preservation Office (SHPD) determination letter be included as part of the Final Environmental Assessment.

If the project moves forward, and if any significant cultural deposits or human skeletal remains are encountered, work shall stop in the immediate vicinity and the State Historic Preservation Division (SHPD/DLNR) shall be contacted. OHA would also like to be notified.

We request that a Cultural Impact Assessment (CIA) be conducted as part of the Environmental Assessment. According to the *Guidelines for Assessing Cultural Impacts* from the Office of Environmental Quality Control, Hawaii State Department of Health, a CIA includes "information relating to the practices and beliefs of a particular cultural or ethnic group or

groups." As part of the Chapter 343, Hawaii Revised Statues and the environmental assessment process, we recommend that a CIA be conducted on the proposed project area. We recommend the CIA be included as part of the text of the EA and also be included as an appendix to the report. A Waikiki Special District Permit (Major) permit is required as part of the necessary land entitlements needed for the proposed project. We notice that during this permitting process, public hearings will be conducted as part of the review process. During this time we look forward to review the permit and assess the cultural concerns of Native Hawaiians concerning this project.

Thank you for the opportunity to comment. If you have further questions or concerns, please contact Jason Jeremiah, Policy Advocate-Preservation, Native Rights, Land and Culture, at (808) 594-0239 or jasonj@oha.org.

Aloha,

Clyde W. Nāmu'o
Administrator

C: Henry Eng
Department of Planning & Permitting
Attn: Geri Ung
650 S. King Street, 7th Floor
Honolulu, HI 96813

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October 23, 2007

Clyde Nāmu'o, Administrator
Office of Hawaiian Affairs
711 Kapiolani Boulevard, Suite 500
Honolulu, Hawaii 96813

Dear Mr. Nāmu'o:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. We offer the following responses to your comments in the order they were presented.

1. A State Historic Preservation Division determination letter will be included as part of the Final Environmental Assessment if one is received before the document is finalized.

2. OHA will be notified if any significant cultural deposits or human skeletal remains are uncovered during site work.

3. Based on the literature search conducted for the project site as part of the archaeological inventory survey, a cultural assessment prepared for a project nearby, and the absence of surface and subsurface archaeological resources it was determined that the property is low in archaeological and cultural resource value. There are no known cultural resources presently associated with the property for the reasons cited in the environmental assessment.

We thank the Office of Hawaiian Affairs for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 523-4567
Web site: www.honolulu.gov

MUFI HANNEMANN
MAYOR

EUGENE C. LEE, P.E.
DIRECTOR

CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

August 23, 2007

received
8.23.07

Mr. Gerald Park, Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Chapter 343, Draft Environmental Assessment (DEA)
Ala Wai Garden Plaza

Thank you for giving us the opportunity to comment on the above Draft Environmental Assessment (EA).

The Department of Design and Construction has the following comments:

- The EA says that to comply with City policy, the project generated storm water that are above existing values will be directed to open space and landscaped areas where they can evaporate or percolate into the ground. What are the estimate values of runoff? The proposed layout does not show storm water containment/detention locations.

Should you have any questions, please contact Marvin Char, Chief of our Civil Division, at 768-8836.

Very truly yours,

Eugene C. Lee, P.E.
Director

ECL:lt (221554)

c: Department of Planning and Permitting - Geri Ung
DDC Civil Division

GERALD PARK
Urban Planner

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gparkurbanplanner
@hawaiiantel.net

October 5, 2007

Eugene C. Lee, P.E., Director
Department of Design and Construction
City and County of Honolulu
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Dear Mr. Lee:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii
ECL:lt (221554)

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. The following response is provided to your comment.

A preliminary estimate of the increase in storm runoff is 0.223 cubic feet per second. An on-site storm water retention system will be designed to keep runoff from leaving the site. Storm water containment/detention locations will be shown on plans submitted for building permit.

We thank the Department of Design and Construction for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

LINDA LINGLE
GOVERNOR

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

BARRY FUKUNAGA
DIRECTOR

Deputy Directors
MICHAEL D. FORMBY
FRANCIS PAUL KEENO
BRENNON T. MORIOKA
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2586

August 20, 2007

Mr. Gerald Park
Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Ala Wai Garden Plaza
Draft Environmental Assessment (DEA)
TMK: 2-6-16: 56, 57, 58, 59, and 60

This is in reply to your request for our review of the subject DEA. The proposed action will not have a significant impact on our State transportation facilities.

We appreciate the opportunity to provide comments.

Very truly yours,

BARRY FUKUNAGA
Director of Transportation

c: Henry Eng, Department of Planning and Permitting

BOARD OF WATER SUPPLY

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

August 24, 2007

Mr. Gerald Park
Gerald Park, Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

received
8. 27. 07

Dear Mr. Park:

Subject: Your Letter Dated August 7, 2007 Regarding the Draft Environmental Assessment for Ala Wai Garden Plaza

Thank you for the opportunity to comment on the proposed project.

The existing water system is presently adequate to accommodate the proposed development. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of your building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for 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.

The project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the building permit.

The on-site fire protection requirement should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The construction drawings should be submitted for our review and approval.

If you have any questions, please contact Robert Chun at 748-5440.

Very truly yours,

K. Shida

KEITH S. SHIDA
Principal Executive
Customer Care Division

cc: Ms. Geri Ung, Department of Planning & Permitting

Water for Life . . . Ka Wai Ola

GERALD PARK
Urban Planner

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Research
Environmental
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October 5, 2007

Keith S. Ishida
Principal Executive, Customer Care Division
Board of Water Supply
City and County of Honolulu
630 South Beretania Street
Honolulu, Hawaii 96843

Dear Mr. Ishida:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. Responses to your comments are offered in the order they were presented.

1. Thank you for confirming that the existing water system is adequate to service the proposed project. We understand that the final decision on the availability of water will be confirmed when the building permit and construction plans are submitted for approval.

2. SBI Hawaii Property One, Inc. will pay the Water System Facilities Charge.

3. We understand that the project is subject to Board of Water Supply Cross-Connection and Backflow Prevention requirements.

4. The on-site fire protection system will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We thank the Board of Water Supply for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

DEPARTMENT OF PARKS AND RECREATION
CITY AND COUNTY OF HONOLULU

KAPOLEI HALE • 1000 ULUOHIA STREET, SUITE 309 • KAPOLEI, HAWAII 96707
TELEPHONE: (808) 692-5561 • FAX: (808) 692-5131 • INTERNET: www.honolulu.gov

MUFI HANNEMANN
MAYOR

LESTER K.C. CHANG
DIRECTOR

DANA TAKAHARA-DIAS
DEPUTY DIRECTOR

August 20, 2007

received
8.28.07

TO: HENRY ENG, FAICP, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

FROM: LESTER K. C. CHANG, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT ALA WAI GARDEN PLAZA

Thank you for the opportunity to review and comment on the Draft Environmental Assessment relating to the Ala Wai Garden Multi-Family Residential Rental Property.

The Department of Parks and Recreation complements the developer's plans to dedicate nearly twice the land area required under the Park Dedication Ordinance for a private on-site park to serve the residents of this project.

It is not entirely clear from the drawings included in the Environmental Assessment, exactly what land area the developer intends to dedicate to the private park.

We request the developer provide us drawings identifying the precise areas proposed to be dedicated for park purposes, along with calculations confirming that the areas designated for park purposes are not areas otherwise required to be maintained as open space, pursuant to applicable Waikiki development design ordinances. If they prefer to discuss their plans in person, they are invited to call my secretary, Carolyn Ikehara at 768-3001 to schedule a presentation.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

LESTER K. C. CHANG
Director

LKCC:mk
(221544)

cc: Mr. Robert Sumitomo, Department of Planning and Permitting
Mr. Mario Siu-li, Department of Planning and Permitting
Mr. Gerald Park, Gerald Park Urban Planner

GERALD PARK
Urban Planner

Planning
Land Use
Research
Environmental
Studies

1221 Kapiolani Blvd.
Suite 211
Honolulu, Hawaii
96814

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(808) 596-7484

Facsimile:
(808) 596-7485

e-mail:
gparkurbanplanner
@hawaiiantel.net

October 23, 2007

Lester K.C. Chang, Director
Department of Parks and Recreation
City and County of Honolulu
1000 Uluohia Street, Suite 309
Kapolei, Hawaii 96707

Dear Mr. Chang:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project.

A drawing identifying the area proposed to be dedicated as a private park and supporting calculations are enclosed. The area to be set aside for a private park is less than what was stated in the Draft Environmental Assessment. The correction will be noted in the Final Environmental Assessment.

We thank the Department of Parks and Recreation for participating in the environmental assessment review process.

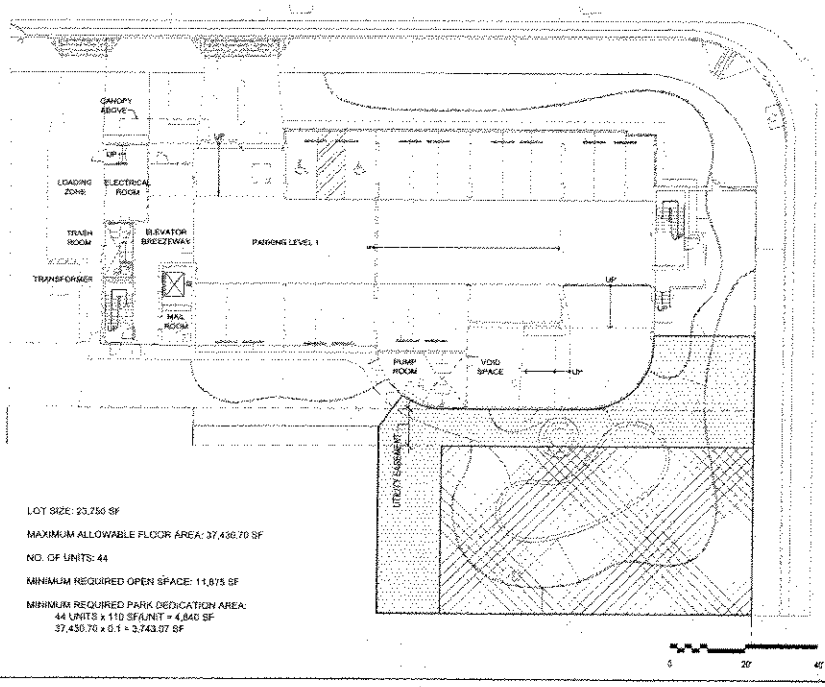
Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

Enclosure: Park Dedication Site Plan

c: K. Hirate, KHIGI



HATCH LEGEND

HATCH INDICATES ACTUAL PARK DEDICATION AREA (3,745 SF)

CONTIGUOUS AREA (2,370 SF)

LOT SIZE: 23,750 SF

MAXIMUM ALLOWABLE FLOOR AREA: 37,436.70 SF

NO. OF UNITS: 44

MINIMUM REQUIRED OPEN SPACE: 11,875 SF

MINIMUM REQUIRED PARK DEDICATION AREA:
44 UNITS x 110 SF/UNIT = 4,840 SF
37,436.70 x 0.1 = 3,743.67 SF

SCALE: 1"=20'-0"

ALA WAI GARDEN PLAZA

Oct 17, 2017

PARK DEDICATION SITE PLAN

Scale: 1" = 20'-0"

Durrant
Media Five

Geri

LINDA LINGLE
GOVERNOR OF HAWAII

RECEIVED

'07 AUG 16 P2:19

DEPT OF PLANNING AND PERMITTING
CITY & COUNTY OF HONOLULU

CHIYOME LEINAALA L. FUKINO, M.D.
DIRECTOR OF HEALTH

In reply, please refer to:
File: EHEB/NR/AQ

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

August 15, 2007

Mr. Henry Eng, FAICP
Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Eng:

Subject: **Comments to Chapter 343, HRS, Draft Environmental Assessment (DEA)**
Project Name: Ala Wai Garden Plaza – Multi-Family Residential Rental Project
Applicant: SBI Hawaii Property One, Inc.
Agent: Gerald Park
Location: 2055 Ala Wai Boulevard – Waikiki
Request: Waikiki Special District Permit (Major)
Proposal: Construct a New 6-Story Multi-Family Residential Rental Project
Tax Map Keys: 2-6-16: 56, 57, 58, 59, and 60

Our comments should be printed as follows:

"Project activities shall comply with the Administrative Rules of the Department of Health:

- Chapter 11-46 Community Noise Control.

Should there be any questions, please contact me at 586-4701.

Sincerely,

Russell S. Takata, Program Manager
Noise, Radiation and Indoor Air Quality Branch

REQUEST for COMMENTS

Date: 8/7/07

File No.: 2007/ED-8

Department of Planning and Permitting
Land Use Permits Division

To:
- ☐ Planning Division
  - ☐ Community Actions Plans
  - ☐ Dev.Plans/Zone Changes
  - ☐ Planning Research
  - ☐ Policy Planning
- ☐ Site Development Division
  - ☐ Civil Engineering
  - ☐ Subdivision
  - ☐ Traffic Review
  - ☐ Wastewater
- ☒ Land Use Permits Division
  - ☐ Urban Design
  - ☒ LUAB
- ☐ Customer Service Office
  - ☐ Code Compliance
- ☐ Building Division
  - ☐ Zoning Plans Review

PLANNER: Geri Hirata
PROJECT NAME: Ala Wai Garden Plaza DEA
STREET ADDRESS: 2055 Ala Wai Boulevard
TAX MAP KEY(S): 2-6-16: 56, 57, 58, 59 + 60
AGENT: Gerald Park
Attached for your review and comment is an application for:

Cluster:
☐ Agricultural
☐ Country
☐ Housing

Conditional Use Permit:
☐ Minor ☐ Major

☐ **Existing Use:** _____ (Indicate Type of Use)

☐ **Minor Shoreline Structures Permit**

☐ **Modify Approved Permit:** _____ (Indicate Reference File No.)

☐ **Park Dedication**

☐ **Plan Review Use**

Planned Development:
☐ Housing
☐ Commercial (WSD Only)
☐ Resort (WSD Only)

☐ **Shoreline Setback Variance**

Special District Permit:
☐ Minor ~~☐ Major~~ _____ (Indicate District)
☐ Downtown Height >350 Feet

Special Management Area Use Permit:
☐ Minor ☐ Major

☐ **Variance from LUO Sec.(s):** _____

☐ **Waiver from LUO Sec.(s):** _____

☐ **Zoning Adjustment, LUO Sec.(s):** _____

☐ **201G Project**

Additional Notes: Please provide comments by 9/24/07

Due to statutory time constraints, we require your reply by: _____
If you have any questions, or require clarification, please contact the planner listed above. *Mahalo.*

Return to Land Use Permits Division
Date: 9/24/07
To: UDB ✓
LUAB ____
ZRPB ____

	Initial	Date
(X) No comments		8/14/07
____ See attached response	____	____

Attachment(s)

reqcmnts.fam(5/01/01)

Date: 8/7/07

File No.: 2007/ED-8

REQUEST for COMMENTS

Department of Planning and Permitting
Land Use Permits Division

To:

- ☐ Planning Division
  - ☐ Community Actions Plans
  - ☐ Dev.Plans/Zone Changes
  - ☐ Planning Research
  - ☐ Policy Planning
- ☐ Land Use Permits Division
  - ☐ Urban Design
- ☐ Building Division
  - ☐ Zoning Plans Review
- ☑ Site Development Division
  - ☐ Civil Engineering
  - ☐ Subdivision
  - ☐ Traffic Review
  - ☑ Wastewater
- ☐ Customer Service Office
  - ☐ Code Compliance

PLANNER: Gen Ueno
PROJECT NAME: Ala Wai Garden Plaza DEA
STREET ADDRESS: 2055 Ala Wai Boulevard
TAX MAP KEY(S): 2-6-16: 56, 57, 58, 59 + 60
AGENT: Gerald Park
Attached for your review and comment is an application for:

Cluster:
☐ Agricultural
☐ Country
☐ Housing

Conditional Use Permit:
☐ Minor ☐ Major

☐ **Existing Use:** _____ (Indicate Type of Use)

☐ **Minor Shoreline Structures Permit**

☐ **Modify Approved Permit:** _____ (Indicate Reference File No.)

☐ **Park Dedication**

☐ **Plan Review Use**

Planned Development:
☐ Housing
☐ Commercial (WSD Only)
☐ Resort (WSD Only)

☐ **Shoreline Setback Variance**

Special District Permit:
☐ Minor ☒ Major
Waikiki Special District (Indicate District)
☐ Downtown Height >350 Feet

Special Management Area Use Permit:
☐ Minor ☐ Major

☐ **Variance from LUO Sec.(s):** _____

☐ **Waiver from LUO Sec.(s):** _____

☐ **Zoning Adjustment, LUO Sec.(s):** _____

☐ **201G Project**

Additional Notes: Please provide comment by 9/24/07

Due to statutory time constraints, we require your reply by: _____

If you have any questions, or require clarification, please contact the planner listed above. *Mahalo.*

approved 2007/SCA-0206 4/2/07

Return to Land Use Permits Division

Date: 9/24/07

To:		Initial	Date
UDB	✓		
LUAB			
ZRPB			
	No comments		
	X See attached response	TC	8/10/07

Attachment(s)

reqcmnts.fam(5/01/01)

Record agency comments
Job 026110329-002 (2007/ED-8)

WWB comments

Assigned To	Status	Outcome	Scheduled Start	Scheduled Completed	Actual Start	Actual Completed
TCHING	Complete	Recorded	Aug 10, 2007			Aug 10, 2007 09:57:41

Details

Agency: Wastewater Branch
Reviewed by: tching
Agency Comments: 2007/SCA-0206 was approved on April 2, 2007 for this project.
Comments:

Date: 8/7/07

File No.: 2007/ED-8

REQUEST for COMMENTS

Department of Planning and Permitting
Land Use Permits Division

To:

- ☐ Planning Division
  - ☐ Community Actions Plans
  - ☐ Dev.Plans/Zone Changes
  - ☐ Planning Research
  - ☐ Policy Planning
- ☐ Land Use Permits Division
  - ☐ Urban Design
- ☐ Building Division
  - ☐ Zoning Plans Review
- ☑ Site Development Division
  - ☑ Civil Engineering 8/7
  - ☐ Subdivision
  - ☐ Traffic Review
  - ☐ Wastewater
- ☐ Customer Service Office
  - ☐ Code Compliance

PLANNER: Glen Ueno
PROJECT NAME: Ala Wai Garden Plaza DEA
STREET ADDRESS: 2055 Ala Wai Boulevard
TAX MAP KEY(S): 2-6-16: 56, 57, 58, 59 + 60
AGENT: Gerald Park
Attached for your review and comment is an application for:

Cluster:
☐ Agricultural
☐ Country
☐ Housing

Conditional Use Permit:
☐ Minor ☐ Major

☐ **Existing Use:** _____ (Indicate Type of Use)

☐ **Minor Shoreline Structures Permit**

☐ **Modify Approved Permit:** _____ (Indicate Reference File No.)

☐ **Park Dedication**

☐ **Plan Review Use**

Planned Development:
☐ Housing
☐ Commercial (WSD Only)
☐ Resort (WSD Only)

☐ **Shoreline Setback Variance**

Special District Permit:
☐ Minor ☒ Major
_____ (Indicate District)
☐ Downtown Height >350 Feet

Special Management Area Use Permit:
☐ Minor ☐ Major

☐ **Variance from LUO Sec.(s):** _____

☐ **Waiver from LUO Sec.(s):** _____

☐ **Zoning Adjustment, LUO Sec.(s):** _____

☐ **201G Project**

Additional Notes: Please provide comments by 9/24/07

Due to statutory time constraints, we require your reply by: _____
If you have any questions, or require clarification, please contact the planner listed above. ***Mahalo.***

Return to Land Use Permits Division

			Initial	Date
Date: 9/24/07				
To: UDB ✓	☒ No comments		WT	8/10/07
LUAB ____	____ See attached response			
ZRPB ____				

Attachment(s)

reqcmnts.fam(5/01/01)

Date: 8/7/07

File No.: 2007/ED-8

REQUEST for COMMENTS

Department of Planning and Permitting
Land Use Permits Division

To: 9/4/10

- ☑ Planning Division
  - ☒ Community Actions Plans
  - ☐ Dev.Plans/Zone Changes
  - ☐ Planning Research
  - ☐ Policy Planning
- ☐ Land Use Permits Division
  - ☐ Urban Design
- ☐ Building Division
  - ☐ Zoning Plans Review
- ☐ Site Development Division
  - ☐ Civil Engineering
  - ☐ Subdivision
  - ☐ Traffic Review
  - ☐ Wastewater
- ☐ Customer Service Office
  - ☐ Code Compliance

PLANNER: Glen Ueno
PROJECT NAME: Ala Wai Garden Plaza DEA
STREET ADDRESS: 2055 Ala Wai Boulevard
TAX MAP KEY(S): 2-6-16: 56, 57, 58, 59 + 60
AGENT: Gerald Park
Attached for your review and comment is an application for:

Cluster:
☐ Agricultural
☐ Country
☐ Housing

Conditional Use Permit:
☐ Minor ☐ Major

☐ **Existing Use:** _____ (Indicate Type of Use)

☐ **Minor Shoreline Structures Permit**

☐ **Modify Approved Permit:** _____ (Indicate Reference File No.)

☐ **Park Dedication**

☐ **Plan Review Use**

Planned Development:
☐ Housing
☐ Commercial (WSD Only)
☐ Resort (WSD Only)

☐ **Shoreline Setback Variance**

Special District Permit:
☐ Minor ☒ Major
_____ (Indicate District)
☐ Downtown Height >350 Feet

Special Management Area Use Permit:
☐ Minor ☐ Major

☐ **Variance from LUO Sec.(s):** _____

☐ **Waiver from LUO Sec.(s):** _____

☐ **Zoning Adjustment, LUO Sec.(s):** _____

☐ **201G Project**

Additional Notes: Please provide comments by 9/24/07

Due to statutory time constraints, we require your reply by: _____
If you have any questions, or require clarification, please contact the planner listed above. ***Mahalo.***

Return to Land Use Permits Division

			Initial	Date
Date: 9/24/07				
To: UDB ✓	☒ No comments		J	8/10/07
LUAB ____	____ See attached response			
ZRPB ____				

Attachment(s)

reqcmnts.fam(5/01/01)

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD / CWB

08068PKP.07

August 27, 2007

received
8.29.07

Mr. Gerald Park
Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Chapter 343, HRS, Draft Environmental Assessment (DEA)
Ala Wai Garden Plaza - Multi-Family Residential Rental Project

The Department of Health, Clean Water Branch (CWB), has reviewed the subject document and offers these comments on your project. Please note that our review is based solely on the information provided in the subject document and its compliance with Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. They may be responsible for fulfilling additional requirements related to our program. We recommend that the applicant also read our standard comments on our website at http://www.hawaii.gov/health/environmental/env-planning/landuse/CWB-standardcomment.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. The applicant is required to obtain a National Pollutant Discharge Elimination System (NPDES) permit for discharges of wastewater, including storm water runoff, into State surface waters

(HAR, Chapter 11-55). For the following types of discharges into Class A or Class 2 State waters, you may apply for NPDES general permit coverage by submitting a Notice of Intent (NOI) form:

   a. Storm water associated with construction activities, including clearing, grading, and excavation, that result in the disturbance of equal to or greater than one (1) acre 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 sale. An NPDES permit is required before the start of the construction activities.

   b. Once through cooling water less than one (1) million gallons per day.

   c. Hydrotesting water.

   d. Construction dewatering effluent.

   The applicant must submit a separate NOI form for each type of discharge at least 30 calendar days prior to the start of the discharge activity, except when applying for coverage for discharges of storm water associated with construction activity. For this type of discharge, the NOI must be submitted 30 calendar days before to the start of construction activities. The NOI forms may be picked up at our office or downloaded from our website at: http://www.hawaii.gov/health/environmental/water/cleanwater/forms/genl-index.html.

3. The applicant must also submit a copy of the NOI to the State Department of Land and Natural Resources, State Historic Preservation Division (SHPD), or demonstrate to the satisfaction of the CWB that SHPD has or is in the process of evaluating your project. The applicant may submit a copy of their request for review by SHPD or SHPD's determination letter for the project along with their NOI or NPDES permit application, as applicable.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 Water Quality Certification are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

If you have any questions, please visit our website at http://www.hawaii.gov/health/environmental/water/cleanwater/index.html, or contact the Engineering Section, CWB, at 586-4309.

Sincerely,

for ALEC WONG, P.E., CHIEF
Clean Water Branch

KP:np

c: Ms. Geri Ung, Urban Design Branch, Department of Planning and Permitting, City and County of Honolulu

GERALD PARK
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@hawaiiantel.net

October 5, 2007

Alec Wong, P.E., CHIEF
Clean Water Branch
Department of Health
919 Ala Moana Boulevard, Room 312
Honolulu, Hawaii 96814-3378

Dear Mr. Wong:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. Responses to your comments are offered in the order they were presented.

1. The project is not anticipated to impact State waters.

2. The total disturbed area including the frontage is approximately 0.7 acres. Because this is less than 1.0 acre, it will not trigger the need for a Notice of Intent Form C.

   Dewatering and hydrotesting water will be contained within on-site trenches.

3. A response is not required.

4. Best Management Practices will be implemented to help maintain State water quality requirements and standards.

We thank the Clean Water Branch for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

August 31, 2007

received
7-14-07

Gerald Park Urban Planner
1221 Kapi'olani Boulevard Suite 221
Honolulu, HI 96814

SUBJECT : Ala Wai Gardens Plaza Draft Environmental Assessment

Mr. Park:
Thank you for including the Waikiki Neighborhood Board in the noticing and review process of the Draft Environmental Assessment for the above project. We would like to commend the developer on an appropriately-scaled project which increases rental housing options for Waikiki residents, and provides for development of an existing urban infill parcel.

The Waikiki Neighborhood Board voted to support the concept of the Ala Wai Gardens development, at its July 2007 meeting. At that time, concerns were expressed about ensuring that the pedestrian experience is enhanced from both Namahana Street and Ala Wai Boulevard. It was noted by the developer during the presentation that landscaping, recessed vehicular access and design articulation will provide a pleasant visual and functional pedestrian experience. We anticipate full implementation of the architectural embellishments such as the balconies, peaked roof, and the mauka wall design as shown in the draft EA architectural renderings. If this design is to change, we would request that the new design be sent back before the Waikiki Neighborhood Board for review.

We recommend that the following be incorporated as conditions to any Special District Major Permit issued for this project.

1. Extensive landscaping should be installed in front of the pedestal parking deck to ensure that the view of vehicles in the garage is buffered along Namahana Street.
2. The structure shall be painted as shown in the renderings and/or painted an appropriate color scheme consistent with the Waikiki Special District Design Guidelines.
3. The development should be consistent with all applicable provisions of the PUC Development Plan and the Waikiki Special District.
4. The developer should explore and exhaust all appropriate LEED-sanctioned design and operational possibilities for the site, to minimize energy use and ensure sustainability.

Again, we appreciate this opportunity to review and comment on this development.

Sincerely,

Jeff Merz, AICP
Waikiki Neighborhood Board - Development Review

GERALD PARK
Urban Planner

Planning
Land Use
Research
Environmental
Studies

1221 Kapiolani Blvd.
Suite 211
Honolulu, Hawaii
96814

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(808) 596-7464

Facsimile:
(808) 596-7485

e-mail:
gparkurbanplanner
@hawaiiantel.net

October 5, 2007

Jeff Merz
Waikiki Neighborhood Board No. 9
c/o Neighborhood Commission Office
Honolulu, Hale, Room 401
Honolulu, Hawaii 96813

Dear Mr. Merz:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project.

The recommendations you offered for incorporation as conditions to a Waikiki Special District Major Permit for this project will be passed on to the Department of Planning Permitting.

SBI Hawaii Property One and their design consultants are striving to create a development that is supportive and consistent with appropriate provisions of the Waikiki Special District with regards to building form and scale for the site, landscaping, and color schemes.

The Ala Wai Garden Plaza is not seeking LEED certification

We thank the Waikiki Neighborhood Board for supporting the Ala Wai Gardens apartment project and for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

MUFI HANNEMANN
MAYOR

KENNETH G. SILVA
FIRE CHIEF

ALVIN K. TOMITA
DEPUTY FIRE CHIEF

August 27, 2007

received
9.4.07

Mr. Gerald Park
Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Draft Environmental Assessment
Ala Wai Garden Plaza - Multifamily Residential Rental Project
2055 Ala Wai Boulevard
Tax Map Keys: 2-6-016: 056, 057, 058, 059, and 060

In response to a letter from the Department of Planning and Permitting dated August 7, 2007, regarding the above-mentioned project, the Honolulu Fire Department (HFD) reviewed the material provided and requires that the following be complied with:

1. Provide a fire apparatus access road for every facility, building, or portion of a building hereafter constructed or moved into or within the jurisdiction when any portion of the facility or any portion of an exterior wall of the first story of the building is located more than 150 feet (45 720 mm) from a fire apparatus access road as measured by an approved route around the exterior of the building or facility. (1997 Uniform Fire Code, Section 902.2.1.)

2. Provide a water supply, approved by the county, capable of supplying the required fire flow for fire protection to all premises upon which facilities or buildings, or portions thereof, are hereafter constructed or moved into or within the county.

   On-site fire hydrants and mains capable of supplying the required fire flow shall be provided when any portion of the facility or building is in excess of the 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building. (1997 Uniform Fire Code, Section 903.2, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have any questions, please call Battalion Chief Lloyd Rogers of our Fire Prevention Bureau at 723-7151.

Sincerely,

KENNETH G. SILVA
Fire Chief

KGS/SK:bh

cc: Ms. Geri Ung, Department of Planning and Permitting

GERALD PARK
Urban Planner

Planning
Land Use
Research
Environmental
Studies

1221 Kapiolani Blvd
Suite 211
Honolulu, Hawaii
96814

Telephone:
(808) 596-7484
Facsimile
(808) 596-7485
e-mail:
gpackurbanplanner
@hawaiiantel.net

October 5, 2007

Kenneth G. Silva, Fire Chief
Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813-5007

Dear Chief Silva:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. Responses to your comments are offered in the order they were presented.

1. The loading zone driveway from Namahana Street is wide enough (12 feet) to accommodate a fire apparatus.

2. Water for fire protection is available from fire hydrants on Namahana Street and Ala Wai Boulevard. Three fire hydrants are within 150 lineal feet of the proposed building.

   The building will be equipped with a fire sprinkler system for fire protection.

3. Civil drawings will be submitted to the HFD for review and approval.

We thank the Honolulu Fire Department for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

LINDA LINGLE
GOVERNOR

PATRICIA HAMAMOTO
SUPERINTENDENT

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

received
7.18.07

OFFICE OF THE SUPERINTENDENT

September 18, 2007

Mr. Gerald Park, Urban Planner
1221 Kapiolani Boulevard
Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Draft Environmental Assessment for the Ala Wai Gardens Plaza,
TMK: 2-6-016: 56 to 60

The Department of Education (DOE) has reviewed the Draft Environmental Assessment (DEA) for a 44-unit residential condominium in Waikiki.

The 2007 Legislature passed a bill establishing school impact fees. The bill became Act 245 and is in the process of being implemented. Under this new law, it is possible the project will be required to pay an impact fee. That will depend on whether Waikiki is included in the boundaries of a School Impact Fee District. We currently do not know the amount of the fee per residential unit but we would have a better idea by the summer of 2008.

Thank you for the opportunity to review and comment on this DEA. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 733-4862.

Very truly yours,

Patricia Hamamoto
Superintendent

PH:ly

c: Randolph G. Moore, Assistant Superintendent, OBS
Duane Kashiwai, Public Works Administrator, FDB
Estelle Wong, Kaimuki/Kalani Complex Area Superintendent
Geri Ung, Department of Planning and Permitting

AN AFFIRMATIVE ACTION AND EQUAL OPPORTUNITY EMPLOYER

GERALD PARK
Urban Planner

Planning
Land Use
Research
Environmental
Studies

1221 Kapiolani Blvd
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Honolulu, Hawaii
96814

Telephone:
(808) 596-7484
Facsimile:
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gparkurbanplanner
@hawaiiantel.net

October 5, 2007

Randolph G. Moore, OBS
Assistant Superintendent
Department of Education
State of Hawaii
PO. Box 2380
Honolulu, Hawaii 96804

Dear Mr. Moore:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project and for the information concerning school impact fees. Please keep us apprised of further developments on this matter.

We appreciate the participation of the Department of Education in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

DEPARTMENT OF FACILITY MAINTENANCE
CITY AND COUNTY OF HONOLULU
1000 Uluohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

MUFI HANNEMANN
MAYOR

LAVERNE HIGA, P.E.
DIRECTOR AND CHIEF ENGINEER

GEORGE "KEOKI" MIYAMOTO
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM-826

received
7.24.07

September 20, 2007

Mr. Gerald Park
Gerald Park Urban Planner
1221 Kapolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Dear Mr. Park:

Subject: Draft Environmental Assessment (DEA)
Ala Wai Garden Plaza

Thank you for the opportunity to review and comment on the DEA dated June 2007 for the proposed Ala Wai Gardens Plaza Multi-Family Residential Project located on the mauka-ewa corner of the intersection of Ala Wai Boulevard with Namahana Street.

We have no comments to offer as the 6-story multi-family building proposed in the DEA is within privately-owned properties and will have negligible impact on our facilities and operations. It is our understanding that any off-site improvements within City-owned roadway right of ways will be constructed in accordance to City and County of Honolulu standards.

Should you have any questions, please call Charles Pignataro of the Division of Road Maintenance, at 768-3697.

Sincerely,

Laverne Higa

Laverne, P.E.
Director and Chief Engineer

c: Department of Planning and Permitting

LINDA LINGLE
GOVERNOR OF HAWAII

CHIYOME L. FUKINO, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EPO-07-169

September 20, 2007

received
7.27.07

Mr. Gerald Park
Gerald Park Urban Planner
1221 Kapiolani Boulevard, Suite 211
Honolulu, Hawaii 96814

Mr. Park:

SUBJECT: Draft Environmental Assessment for Ala Wai Garden Plaza-Multi-Family Residential Rental Project
Waikiki, Honolulu, Oahu, Hawaii
TMK: (1) 2-6-016: 056, 057, 058 and 060

Thank you for allowing us to review and comment on the subject application. The document was routed to the various branches of the Department of Health (DOH) Environmental Health Administration. We have the following Clean Air Branch and General comments.

Clean Air Branch

Control of Fugitive Dust

Fugitive dust emissions occur during all phases of construction and operations. Activities close to existing residences, businesses, public areas or thoroughfares can cause dust problems. For cases involving mixed land use, we strongly recommend that buffer zones be established, wherever possible, in order to alleviate potential nuisance problems. We recommend that the contractors operate under a dust control management plan. The plan does not require the Department of Health approval, however it will help with identifying and minimizing the dust problems from the proposed project.

Examples of measures that can be included in the dust control plan are:

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 potential dust-generating equipment in areas of the least impact;
b) Providing an adequate water resource at the site prior to start-up of construction activities;
c) Landscaping and providing rapid covering of bare areas, including slopes, starting from the initial grading phase;

d) Minimizing 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 dust from debris being hauled away from the project site.

All activities must comply with the provisions of Hawaii Administrative Rules, §11-60.1-33 on Fugitive Dust. If you have any questions, please contact the Clean Air Branch at 586-4200.

General

We strongly recommend that you review all of the Standard Comments on our website: www.state.hi.us/health/environmental/env-planning/landuse/landuse.html. Any comments specifically applicable to this project should be adhered to.

If there are any questions about these comments please contact Jiacai Liu with the Environmental Planning Office at 586-4346.

Sincerely,

KELVIN H. SUNADA, MANAGER
Environmental Planning Office

c: EPO
CAB
Mr. Geri Ung, City and County of Honolulu Department of Planning and Permitting

GERALD PARK
Urban Planner

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October 5, 2007

Kelvin Sunada, Manager
Environmental Planning Office
Department of Health
919 Ala Moana Boulevard, Room 312
Honolulu, Hawaii 96814-3378

Dear Mr. Sunada:

Subject: Ala Wai Garden Plaza
TMK: 2-6-016: 056-060
Waikiki, Honolulu, Hawaii

Thank you for reviewing the Draft Environmental Assessment prepared for the subject project. The suggestions for dust control will be passed on to the site work contractor. Construction and operations activities will comply with the provisions of Hawaii Administrative Rules §11-60.1-33 concerning fugitive dust.

We thank the Clean Air Branch for participating in the environmental assessment review process.

Sincerely,

GERALD PARK URBAN PLANNER

Gerald Park

c: K. Hirate, KHIGI

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 527-6743
INTERNET: www.honolulu.gov • DEPT. WEB SITE: www.honoluludpp.org

MUFI HANNEMANN
MAYOR

HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2007/ELOG-1795
2007/ED-8 (GU)

September 24, 2007

received
9-25-07

Mr. Gerald Park
Urban Planner
1221 Kapiolani Boulevard
Suite 211
Honolulu, Hawaii 96813

Dear Mr. Park:

Subject: Draft Environmental Assessment
Ala Wai Garden Plaza
2055 Ala Wai Boulevard - Waikiki
Tax Map Key 2-6-16: 56, 58, 59 and 60

The Department of Planning and Permitting (DPP) has the following comments on the above Draft Environmental Assessment (DEA; dated June 2007):

1. Plans:

   a. Elevations (Figures 5.a. - 5.d.) - Label each elevation with the appropriate street names for ease of review in the FEA.

   b. Plan Levels (Figures 6.a - 6.d.) - We note there are two (2) north arrows on these plans, which are confusing. The FEA should include a note explaining the need for both arrows; e.g., on the plans.

   The DEA contains other directional inconsistencies. See Item 9 below.

2. Technical Concepts (Page 1) - The DEA references a Conditional Use Permit approved in 1993 for joint development of the subject five (5) parcels.

   The FEA should provide the specific permit reference number.

3. Amenities (Page 3) - The DEA notes that planned security measures will include "keys for gates."

   The FEA should briefly describe the location and number of gates to the project site; the gates should also be identified on the project plans.

4. Figure 6.d. - An elevator machine room was previously shown on the project's Level 7 plan in the earlier (April 2007) DEA. That room has been eliminated from the plan in the current June 2007 DEA.

   If the location of the elevator machine room has remained the same, it should be included on the appropriate plan in the FEA.

5. Existing Use and Improvements (Page 17) - The DEA states that there is an abandoned swimming pool on the property. According to the DPP's database, a Notice of Violation (2006/NOV-12-201) was issued on December 27, 2006, for the existence of a swimming pool without a principal use. The NOV was subsequently closed on July 5, 2007, after the pool was demolished.

   The FEA should be updated to recognize the demolition of the pool.

6. Flood Hazard (Page 20) - The DEA states "The project site lies within several flood hazard zones" as depicted on the enclosed FIRM map (Figure 9).

   However, this information isn't readily discernible on Figure 9, and the FEA should specify the flood hazard zones the project site falls within.

7. Flora (Page 20) - The DEA states "Plumeria (*Plumeria* sp.) is the only tree specie observed" on-site. However, the last sentence of the same paragraph states "A shower tree (*Cassia* sp.) grows on the property outside the perimeter fence."

   The FEA should clarify this discrepancy.

8. Noise (Page 24) - There is reference to "Normally Unacceptable" noise exposure for the site along Ala Wai Boulevard, which appears excerpted from the project's acoustical study.

   It would be helpful for reviewers of the FEA to include a brief definition of the term in this section to eliminate the need to cross-reference with the study.

9. Circulation of Traffic (Page 25) - The DEA states that Namahana Street "connects Ala Wai Boulevard on the east and Kuhio Avenue on the west." However, the next paragraph states "Namahana intersects Ala Wai Boulevard at the northwest end of the project site. Ala Wai Boulevard is the major westbound thoroughfare in Waikiki."

   Inconsistencies in directional descriptions such as this appear throughout the DEA, including the plans and elevations. Additionally, the use of the term "mauka" in describing the units on Page 39 under Noise is also confusing. These should be reconciled in the FEA.