

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

Appendix 5

Tree Assessment Report



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September 29, 2011

Mr. Ron Loch
Taubman
200 East Long Lake Road, Suite # 300
Bloomfield Hills, MI 48304

Re: International Marketplace

Dear Mr. Loch:

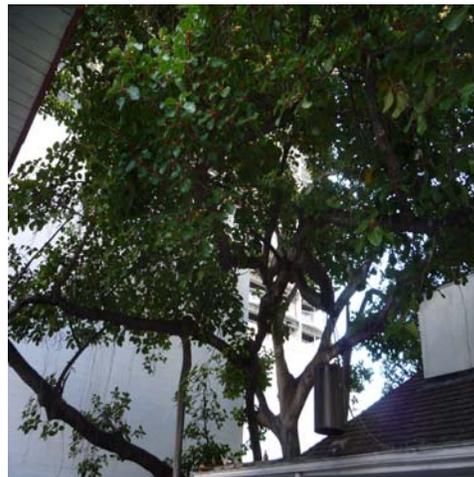
The following tree assessment addresses all the trees and palms located at the International Marketplace (IMP) in Waikiki.

The trees and palms are identified on the numbered site map # 1 and correspond to the spreadsheet # 1 providing species, size, condition rating and comments.

Six (6) significant trees noted on site maps # 1 and # 3 include one (1) *Ficus benghalensis* trees (# 1), which is on the Exceptional Tree Registry of Honolulu and require special permitting prior to any pruning (crown or root).



Ficus Tree # 1



Ficus Tree # 2

An additional site map # 2 identifies the location of the aerial roots generated from Ficus trees # 1 and # 2. A separate spreadsheet # 2 corresponds to the site map # 2. Select aerial roots 1D, 1E, 1L, 1P and 2A could be removed if necessary in combination with weight reduction of the limbs. Aerial roots 1M, 1N and 1O have jointly separated from the original tree and could be considered a separate tree. **Removal of any of the aerial roots generated from Ficus tree # 1 will require approval by the City and County, Division of Urban Forestry who reviews Exceptional Tree pruning permits.**

One (1) Ficus microcarpa tree # 3 is located adjacent to the food court (Photo).
One (1) Monkeypod tree # 4 is located on the Kuhio Street side of the property (Photo).



Ficus Tree # 3



Monkeypod Tree # 4

Two (2) additional specimen trees, Ficus microcarpa # 5 and Monkeypod tree # 6 are within the revised building footprint and will have to be removed.



Ficus Tree # 5



Monkeypod Tree # 6

Three (3) additional Monkeypod trees # 20, # 37 and # 39 are good candidates for relocation on the site. Landscape design could strategically place the trees to compliment the structural design.



Monkeypod # 20



Monkeypod # 37



Monkeypod # 39

Coordinating design, tree preservation and construction are critical to preserving the health and structural integrity of the nine (9) described above trees.

The remaining trees and palms are discussed in the spreadsheet. Several trees have been identified as candidates for relocation on-site or off-site to a new location.

The trees identified as marginal/transplant are not the most desirable trees for transplant due to the species, health and structural condition, but could be relocated to a suitable location.

If you have any questions, please contact my office at 808-734-5963.

Respectfully yours,

Steve Nimz,
ASCA Consulting Arborist

ISA Certified Arborist # WE- 0314AM
ISA PNW Certified Tree Risk Assessor # 419

Attachments: Site Maps # 1. # 2 and # 3
 Spreadsheet # 1 and # 2
 Aerial Root Photo Layout
 Trees and Palms Photo Layout

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Appendix 6

Avifaunal and Feral Mammal Field Survey of the
IMP in Waikiki-Proposed Redevelopment

**AVIFAUNAL AND FERAL MAMMAL FIELD SURVEY OF THE
INTERNATIONAL MARKET PLACE IN WAIKIKI – PROPOSED
REDEVELOPMENT TMK:2-6-022:38 and 43**

Prepared for:

Kusao & Kurahashi, Inc.

Prepared By:

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Environmental Consultant
Faunal (Bird and Mammal) Surveys
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5 July 2004

INTRODUCTION

This report presents the findings of a one day (2 July 2004) field survey of birds and mammals at TMK: 2-6-022:38 and 43 (International Market Place in Waikiki, Oahu. References to pertinent published and unpublished sources are also included to provide a broader perspective of birds and mammals known from the urban Honolulu area. The goals of the field survey were to:

- 1- Document the species of birds and mammals presently found on or near the property.
- 2- Determine the present number of White Tens (a native seabird that is listed as threatened by the State of Hawaii) and how many pairs may be nesting in the trees at the International Market Place, Waikiki.

GENERAL SITE DESCRIPTION

This property is surrounded by urban development. Despite this fact the International Market Place, Waikiki has a number of large trees that provide an oasis of “forest-like” habitat in the midst of urban Waikiki. These trees provide nesting and resting sites as well as foraging opportunities for birds in this area.

METHODS OF THE FIELD SURVEY

The property was surveyed by walking through the entire site and searching the trees with the aid of binoculars. The survey was conducted both early and late in the day when birds are most active and detectable. All species of birds and mammals seen on the survey were recorded. The focus of the effort was directed toward searching for the native White Tern (*Gygis alba*).

RESULTS OF THE FIELD SURVEY

Native Land Birds:

No native land birds were recorded nor would any be expected in this area due to its location and elevation (Pratt et al. 1987, Hawaii Audubon Society 1997).

Native Waterbirds:

No native waterbirds were found on the survey. The absence of wetland habitat at this site precludes the occurrence. Black-crowned Night Heron (*Nycticorax nycticorax*) can be seen foraging along the Ala Wai Canal located mauka of this property (Bruner 1997).

Seabirds:

Four nesting pairs and three single White Terns (*Gygis alba*) were observed in the trees on this property during the survey. The White Tern is listed by the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) as threatened on Oahu. This listing only refers to the Oahu population of this species. It is not federally listed as threatened or endangered. White Terns on Oahu have received extensive study (VanderWerf 2003). VanderWerf (pers. comm.) reported that seven to eight pairs were nesting in the trees on the International Market Place during 2002 when he last surveyed the site for terns. The nesting season at this site is generally January through June but some pairs will nest at any month of the year (VanderWerf pers. comm.). Hawaii Audubon Society (1997) notes that “most adults arrive in February and depart by September, but some pairs remain on O’ahu year round and nest two or three times”.

No other species of seabirds were observed on the survey nor would any be expected at this location (Pratt et al. 1987, Hawaii Audubon Society 1997).

Migratory Shorebirds:

No migratory shorebirds were tallied on this survey. This was not unexpected since no appropriate habitat for these birds exists on the site. In addition, at this time of year shorebirds are on their breeding grounds in the arctic.

Alien (introduced) Birds:

A total of ten alien species of birds were tallied on the survey. Table One gives the names of these birds. None are listed as threatened or endangered. The array of species found on the survey was typical of what might be expected at this location (Hawaii Audubon Society 1997).

Mammals:

Two Roof Rats (*Rattus rattus*) were seen in the trees during the survey. This alien and ubiquitous rodent has caused damage not only to agricultural crops but is a significant nest predator (Tomich 19986). No mice (*Mus musculus*) were observed but likely occurs on this site. In addition, the Norway Rat (*Rattus norvegicus*) can be found in Waikiki and may frequent the property. Feral cats (*Felis catus*) occur in Waikiki and may frequent the property, although none were observed on the survey.

CONCLUSIONS

The typical array of alien birds found in this region of Oahu were observed on the survey. No unexpected species were noted. The presence of the threatened White Tern was also expected given the extensive documentation of the range of this species on

Oahu. The absence of native land birds, waterbirds, and migratory shorebirds was expected due to an absence of appropriate habitat for these species. Feral mammal observations were limited to the Roof Rat but other alien mammals likely occur from time to time on the property. The value of this property for birds is the presence of large trees for nesting, roosting and foraging. Removal or significant trimming of these large trees will affect the relative abundance of birds at this location.

RECOMMENDATION

The White Tern is not federally listed as either threatened or endangered. VanderWerf of USFWS Honolulu (pers. comm..) suggested that because the White Tern is not federally listed any concerns about the impact of proposed development on this species be directed to David Smith, Oahu Biologist with DLNR DOFAW (808) 973-9787. He further suggested that trimming of the trees be done outside of the major breeding season for White Terns. This would generally mean in the months of October and November.

TABLE ONE

Alien (introduced) birds recorded on a field survey of TMK:2-6-022:38 and 43 International Market Place, Waikiki, Oahu on 2 July 2004.

COMMON NAME	SCIENTIFIC NAME
Rock Dove	<i>Columba livia</i>
Spotted Dove	<i>Streptopelia chinensis</i>
Zebra Dove	<i>Geopelia striata</i>
Red-vented Bulbul	<i>Pycnonotus cafer</i>
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>
Japanese White-eye	<i>Zosterops japonicus</i>
Common Myna	<i>Acridotheres tristis</i>
Red-crested Cardinal	<i>Paroaria coronata</i>
House Finch	<i>Carpodacus mexicanus</i>
House Sparrow	<i>Passer domesticus</i>

SOURCES CITED

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- Honacki, J.H., K.E. Kinman and J.W. Koepl eds. 1982. Mammal species of the World: A taxonomic and geographic reference. Allen Press, Inc. and the Association of Systematic Collections. Lawrence, Kansas. 694pp.
- Pratt, H.D., P.L. Bruner and D.G. Berrett. 1987. A field guide to the birds of Hawaii and the tropical Pacific. Princeton University Press. Princeton, New Jersey. 409pp.
- Pyle, R.L. 2002. Checklist of the birds of Hawaii – 2002. 'Elepaio 62(6):137-148.
- Tomich, P.Q. 1986. Mammals in Hawaii. Bishop Museum Press. Honolulu. 375pp.
- VanderWerf, E.A. 2003. Distribution, abundance and breeding biology of White Terns on Oahu, Hawaii. Wilson Bull. 115:258-262.
- VanderWerf, E.A. (Ecological Services USFWS Honolulu)

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

Appendix 7

Preliminary Engineering Report

Preliminary Engineering Report

*International Market Place and Miramar
Redevelopment*



Prepared for:
The Taubman Company

Prepared by:
Wilson Okamoto Corporation

October 2011

**PRELIMINARY ENGINEERING REPORT
International Market Place Revitalization
Project**

**Waikiki, Oahu, Hawaii
Tax Map Key 2-6-22: 36, 37, 38, 39, and 43**

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Prepared By:

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1907 South Beretania Street, Suite 400
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WOC Job No. 8156-01

October 2011

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EXECUTIVE SUMMARY

This Preliminary Engineering Report for the International Market Place Revitalization Project (which includes the IMP, Waikiki Town Center, and the Miramar at Waikiki Hotel) was conducted to review the existing site infrastructure and utilities systems, determine proposed project demands, and describe improvements to storm drainage, sanitary sewer, and potable water proposed as part of the project.

Site Grading, Flooding, and Storm Drainage System: In general, the project site is relatively flat with elevations along the Kuhio Avenue property boundary ranging from about 4.75 to 5.50 feet. The elevations along Kalakaua Avenue and Duke's Lane are approximately 7.0 and 5.5 feet respectively. Elevations within the interior areas of the market place are slightly higher.

The Flood Insurance Rate Map (FIRM) indicates the project site is located in two zones with the majority of the project site within Zone AE with base flood elevations determined to be elevation 5.8 feet. A small portion of the Kalakaua Avenue frontage is located within Zone XS with 1% chance of flood with average depths of less than 1 foot or with drainage areas less than 1 square mile.

At a minimum, the proposed finished floor elevations of the new buildings should be set above the base flood elevation of 5.8 feet. However, since the existing elevations along Kalakaua Avenue are approximately 7.0 feet, a higher finished floor elevation above 7.0 feet should be considered during the design phase to ensure positive drainage flow away from the building entrances.

The municipal drainage system fronting the project site consists of an 18- and 24-inch drainline along Kuhio Avenue and an 18-inch drainline along Kalakaua Avenue. Both the Kuhio and Kalakaua Avenue drainage systems convey flows in the westerly direction to Seaside Avenue where the system continues along Ala Wai Boulevard and discharges to the Ala Wai Canal near the intersection of Kanekapolei Place and Ala Wai Boulevard through an 18-inch reinforced concrete pipe.

Sanitary Sewer System: The municipal sanitary sewer system is operated by the City and County of Honolulu's Department of Environmental Services. The sewer mains in the vicinity of the project site consist of two 18- and one 16-inch sewer mains along Kuhio Avenue and a 12- and 8-inch sewer main along Kalakaua Avenue. Although portions of the City's collection system downstream of the project site is currently at or near capacity, we do not anticipate any off-site sewer improvements since the wastewater flow generated under the proposed project is less than what is presently generated. A new Sewer Connection Application will be submitted to confirm adequacy of the City's sewer collection system to support the revitalization project.

Water System: Potable water service is provided and operated by the City & County of Honolulu's Board of Water Supply (BWS). Potable water service is currently adequate to support the proposed redevelopment. A water availability letter was received from BWS stating the existing water system is currently adequate to accommodate the revitalization project. In the vicinity of the project site, there is an 8-inch water main extending along Kalakaua Avenue and a 24- and 16-inch water main located along Kuhio Avenue. Currently, 6 domestic water meters of various sizes serve the project site.

1. INTRODUCTION

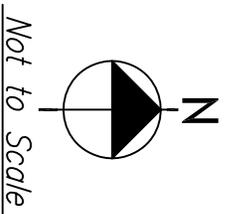
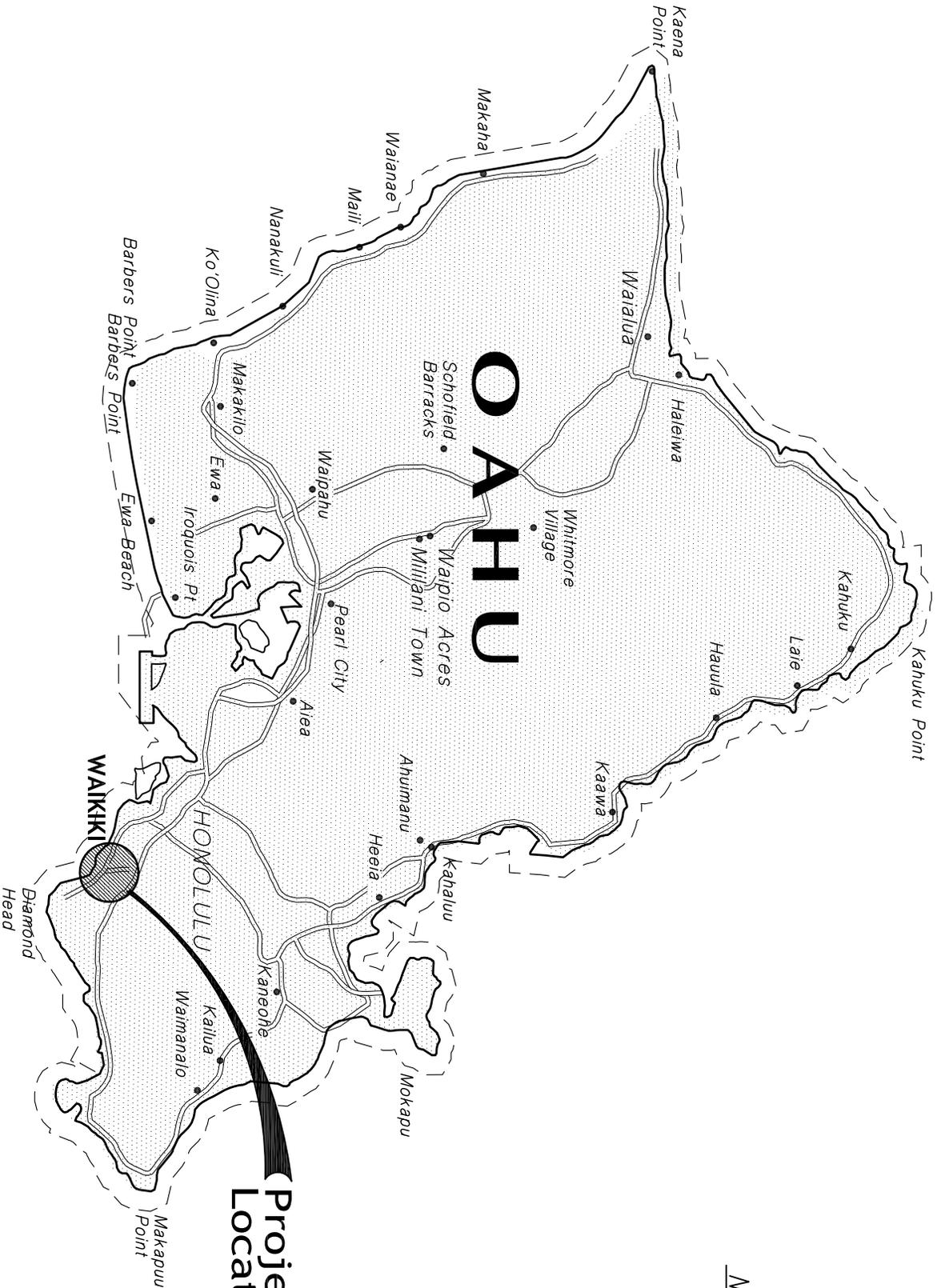
Based on the concept plans prepared for TRG, IMP LLC by BKBC Architects Inc. dated April 25, 2011, this Preliminary Engineering Report presents the preliminary engineering assessment of the project's infrastructure and utility systems. The objective of the report is to review existing infrastructure systems, determine project demands, identify possible constraints based on the projected demands, and describe proposed improvements relative to storm drainage, sanitary sewer, and potable water. The proposed improvements are subject to change based on refinement of plans and availability of more detailed information.

1.1 PROJECT LOCATION AND PROPERTY DATA

The International Market Place Revitalization Project (which includes the IMP, Waikiki Town Center, and the Miramar Hotel at Waikiki) is located in the Waikiki resort area on the island of Oahu (see Figure 1). The project site is bordered by Kalakaua Avenue to the southwest, Kuhio Avenue to the northeast, the Waikiki Beachcomber Hotel, and Aqua Waikiki Wave Hotel to the west, and the Princess Kaiulani Hotel to the southeast, (see Figure 2). The site, identified by Tax Map Keys (TMKs) 2-6-22: 36, 37, 38, 39, and 43 (see Figure 3), encompasses a total of 5.98 acres or 260,591 square feet (SF) with the following easements as indicated on the tax map.

- A 5-ft water pipeline easement and a 20-ft walkway easement on the Diamond Head side of the International Market Place parcel.
- A footpath easement and Road Easement on the Diamond Head and Ewa sides of the Miramar Hotel parcel.
- A 20-ft wide easement which appears to be part of an access/roadway easement on the Ewa side of the International Market Place property designated by TMK 2-6-22:38.
- A 10-ft wide sewerline easement bisecting the northern corner of the parcel designated by TMK 2-6-22:43 or the Waikiki Town Center parcel.
- Other utility easements along the Kalakaua Avenue and Kuhio Avenue frontages of the properties.

Any of these easements that impact the new redevelopment plans, may be relocated, replaced, or extinguished with permissions from their 'benefactors' and proper procedures.



**Project
Location**

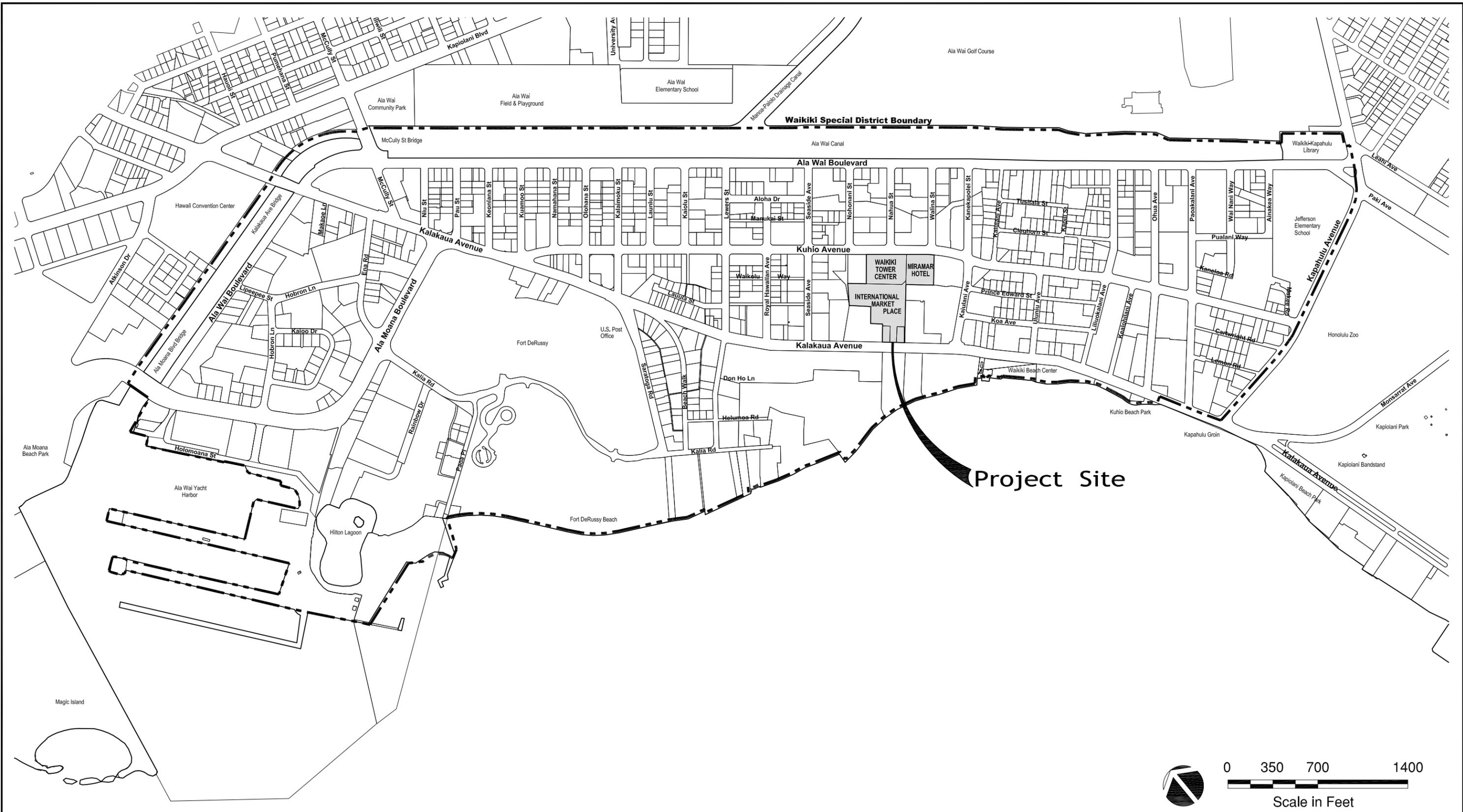
**INTERNATIONAL MARKET PLACE AND
MIRAMAR HOTEL REDEVELOPMENT**

VICINITY MAP



FIGURE

1



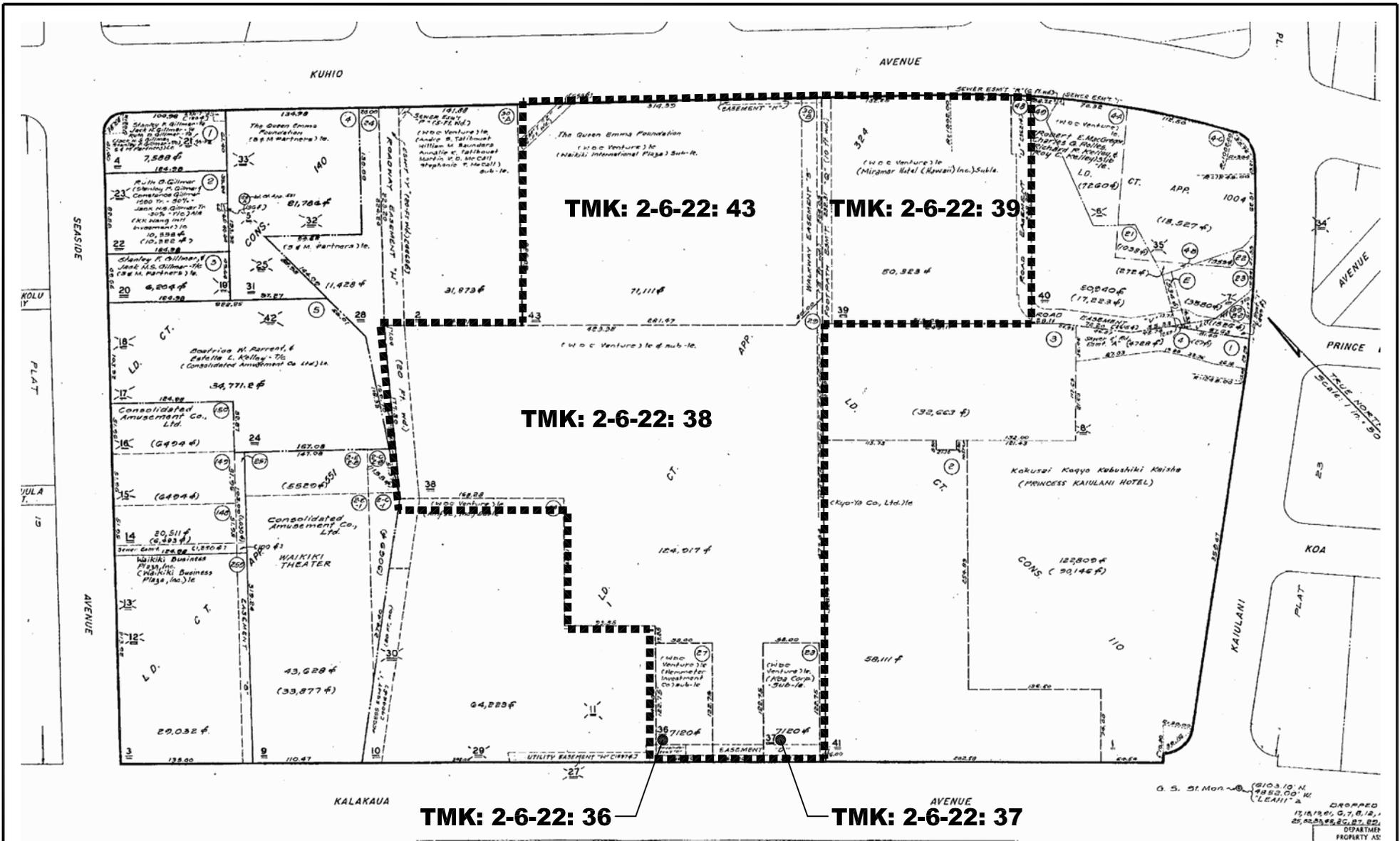
INTERNATIONAL MARKET PLACE AND
MIRAMAR HOTEL REDEVELOPMENT

PROJECT LOCATION MAP

FIGURE

2





INTERNATIONAL MARKET PLACE AND
MIRAMAR HOTEL REDEVELOPMENT

TMK: 2-6-22: 36, 37, 38, 39, and 43

FIGURE
3



DEPOSED
17, 18, 19, 20, 21, 22, 23,
24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100
DEPARTMENT
PROPERTY AS

1.2 PROJECT DESCRIPTION

Based on information provided to date, it is our understanding that the proposed redevelopment consists of the demolition of the existing Miramar Hotel, Waikiki Town Center, and International Market Place. The demolition will remove 357 existing hotel units, 172,259 gross square feet of existing commercial and retail space, and 40,762 gross square feet of existing restaurant space. The proposed improvements include construction of 300,000 square feet of commercial and retail gross leasable area and 55,000 square feet of restaurant gross leasable area. Other improvements include landscaped gardens, water features, a new parking structure and other supporting facilities.

2. SITE CONDITION

2.1 SITE ELEVATIONS

The existing site is relatively flat with elevations along Kalakaua Avenue at approximately 7.0 feet. Elevations along the Kuhio Avenue boundary ranges from about 4.75 to 5.50 feet. Elevations within the interior areas of the market place are slightly higher.

At a minimum, the proposed finished floor elevations of the new buildings should be set above the base flood elevation of 5.8 feet. However, since the existing elevations along Kalakaua Avenue are approximately 7.0 feet, a higher finished floor elevation above 7.0 feet should be considered during the design phase to ensure positive drainage flow away from the building entrances.

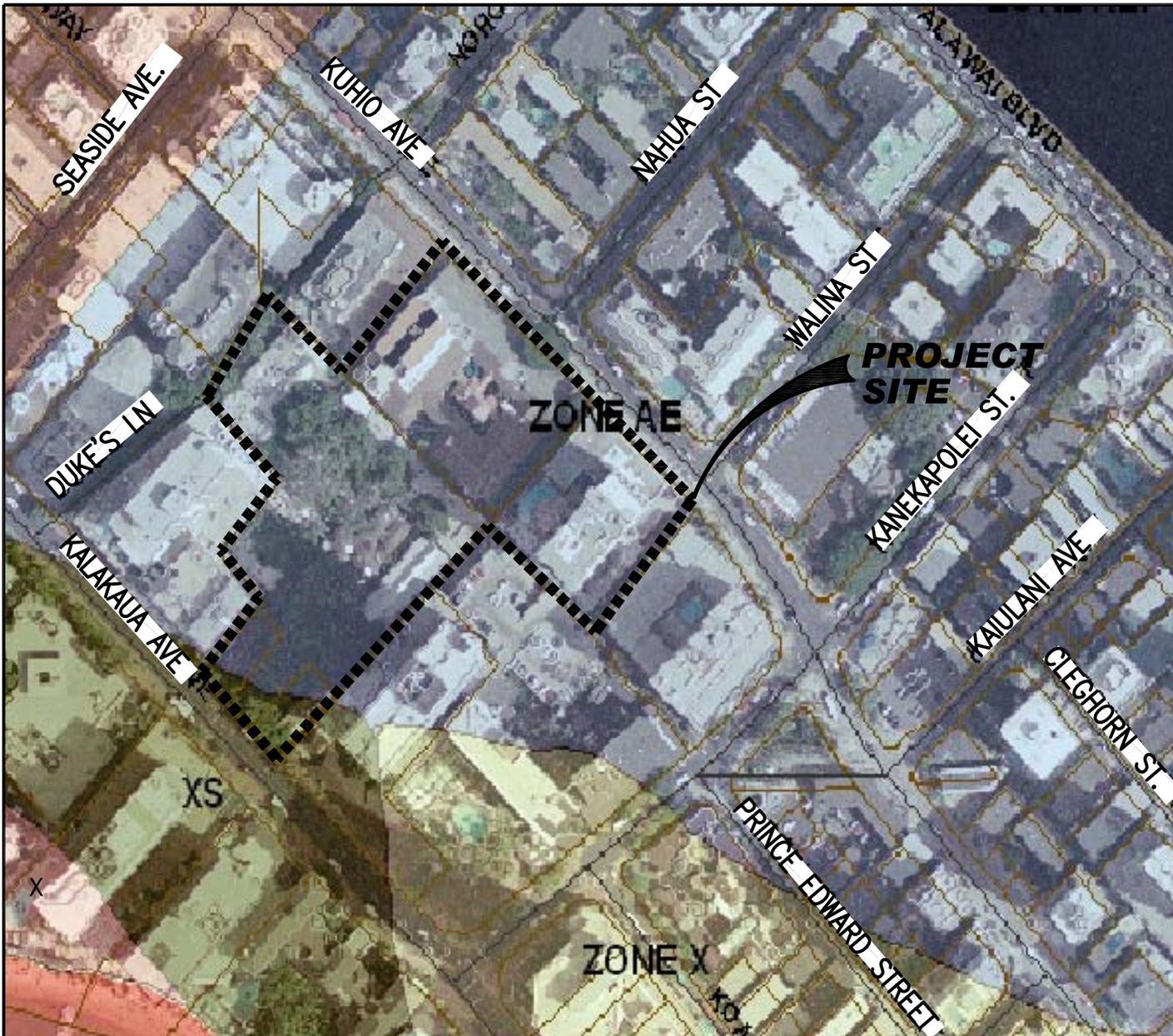
2.2 ROADWAYS AND ACCESS

The existing International Market Place is located between two major roadways, Kalakaua Avenue and Kuhio Avenue in Waikiki. Kalakaua Avenue is a 4-lane, one-way eastbound roadway while Kuhio Avenue is a 4-lane roadway with 2-way traffic in the Diamond-Head and Ewa direction. The market place is located about mid-block on Kalakaua Avenue between Seaside Avenue and Kaiulani Avenue.

2.3 FLOOD HAZARD

The Flood Insurance Rate Map (FIRM), Community Panel Number 15003C03686, indicates the majority of the project site to be within Zone AE with base flood elevations determined at 5.8 feet (see Figures 4 and 5). A portion of the Kalakaua

Avenue frontage is located within Zone XS with 1% chance of flood with average depths of less than 1 foot or with drainage areas less than 1 square mile. Zone XS is not regulated by FEMA and the City and County of Honolulu.



ZONE LEGEND:

- AE Corresponds to the 100-year floodplains that are determined in the FIS by detailed methods. In most instances, whole-foot base flood elevations derived from the detailed hydraulic analyses are shown at selected intervals within this zone.
- XS Area within the 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood. No base flood elevations or depths are shown within this zones.
- X Area determined to be outside of the 0.2% annual chance floodplain. No base flood elevations or depths are shown within this zones.

Reference:

Hawaii - National Flood Insurance Program Flood Assessment Tool
 Website: gis.hawaiiifip.org



INTERNATIONAL MARKET PLACE AND
 MIRAMAR HOTEL REDEVELOPMENT

FLOOD ZONE MAP

FIGURE

4

Table 2. Floodway Data

FLOODING SOURCE		FLOODWAY			BASE FLOOD ELEVATION			
<u>Cross Section</u>	<u>Distance</u>	<u>Width (Feet)</u>	<u>Section Area (Square Feet)</u>	<u>Mean Velocity (Feet per Second)</u>	<u>Regulatory (Feet)</u>	<u>Without Floodway (Feet)</u>	<u>With Floodway (Feet)</u>	<u>Increase (Feet)</u>
Manoa Stream (Cont'd)								
Y	16,490 ¹	160	717	12.0	185.5	185.5	185.5	0.0
Z	17,290 ¹	82	564	15.0	195.0	195.0	195.0	0.0
AA	18,690 ¹	57	405	16.8	214.7	214.7	214.7	0.0
AB	19,290 ¹	47	364	18.7	222.0	222.9	222.9	0.0
AC	20,690 ¹	69	446	14.6	253.7	253.7	253.7	0.0
AD	21,290 ¹	43	303	21.5	261.2	261.2	261.2	0.0
Palolo Stream								
A	-320 ²	50	315	16.8	52.8	52.8	52.8	0.0
B	80 ²	53	387	13.6	76.6	76.6	76.6	0.0
C	740 ²	57	376	14.0	84.9	84.9	84.9	0.0
D	1,410 ²	34	306	17.3	95.5	95.5	95.5	0.0
Ala Wai Canal								
A	6,700 ³	265	6,797	0.6	5.8	5.8	5.8	0.0
B	7,200 ³	265	6,322	0.5	5.8	5.8	5.8	0.0
C	7,700 ³	265	4,088	0.7	5.8	5.8	5.8	0.0
D	8,200 ³	265	4,261	0.7	5.8	5.8	5.8	0.0
E	8,670 ³	225	5,247	0.8	5.8	5.8	5.8	0.0
F	9,170 ³	190	4,002	0.9	5.8	5.8	5.8	0.0
G	9,350 ³	225	2,321	1.2	5.8	5.8	5.8	0.0

¹Feet Above Confluence With Ala Wai Canal
³Feet Above Mouth

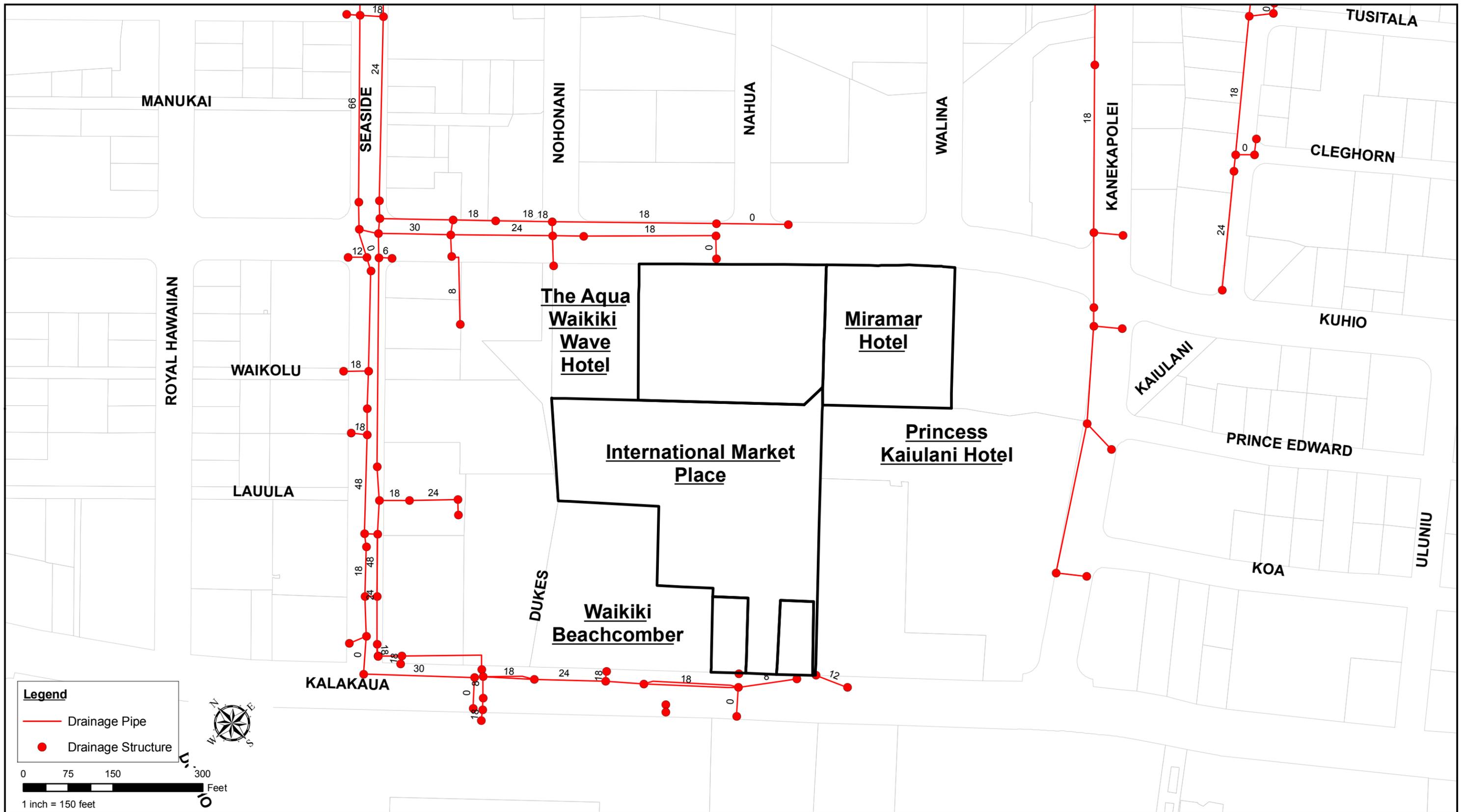
²Feet From St. Louis High School Access Road



INTERNATIONAL MARKET PLACE AND
 MIRAMAR HOTEL REDEVELOPMENT

FLOOD ELEVATION TABLE

FIGURE
 5



Legend
 — Drainage Pipe
 ● Drainage Structure



0 75 150 300
 Feet
 1 inch = 150 feet



**INTERNATIONAL MARKET PLACE AND
 MIRAMAR HOTEL REDEVELOPMENT
 CITY AND COUNTY OF HONOLULU DRAINAGE SYSTEM**

**FIGURE
 6**

2.4 STORM DRAINAGE SYSTEM

The existing storm drainage system fronting the project site consists of an 18- and 24-inch drainline along Kuhio Avenue and an 18-inch drainline along Kalakaua Avenue (see Figure 6). Both of the Kuhio and Kalakaua Avenue drainage systems collect runoff and convey flows in the westerly direction to Seaside Avenue where the system continues along Ala Wai Boulevard and discharges into The Ala Wai Canal near the intersection of Seaside Avenue and Ala Wai Boulevard through a 66-inch reinforced concrete pipe. A private system consisting of a 12-, 15-, and 18-drainline is located within Duke's Lane and connects to the City's system at the intersection of Kuhio Avenue and Nohonani Street.

The City's existing storm drainage system appears to be functioning well and adequate for the collection of rainfall runoff and delivery of flow towards the Seaside Avenue system before discharging into the Ala Wai Canal.

The existing site is in an urbanized, fully-developed, and built-up district. Based on the review of the existing topographic survey map for the International Market Place, it appears that the portion of the project site fronting Kalakaua Avenue or approximately 1/3 of the project site drains to the Kalakaua Avenue system, the middle 1/3 of the project site drains to the Duke's Lane system, and the remaining 1/3 of the project site adjacent to Kuhio Avenue drains to the Kuhio Avenue system. Although the topographic survey map does not cover the Miramar Hotel property, it is assumed that all of the storm drainage flows generated by the hotel drains to the Kuhio Avenue system.

2.5 PROJECTED STORM WATER CALCULATION

During the design phase of the project, a Storm Drainage Report will be required to confirm the pre and post storm drainage flows generated by the site including a detailed breakdown of the distribution of the flows to the City's system. As noted above, since the existing site is an urbanized, fully-developed, and built-up district, we do not expect any increase in the storm water quantity generated by the proposed project. The proposed storm drainage flow pattern will follow existing conditions to avoid redistribution of the project storm water flow to the City's offsite drainage system.

2.6 PROPOSED IMPROVEMENTS

The proposed on-site storm drainage system is likely to consist of a combination of drain inlets, storm drain manholes, and underground piping. Line sizes and inlet locations will be determined during the design phase of the project.

The City also requires all developments to include a site-specific Water Quality Management Plan, which will incorporate Best Management Practices (BMPs) for both the construction and operational phases of the development.

For commercial developments greater than 5 acres in area, the BMP measures to address the storm water quality requirements will need to incorporate one of the following structural measures:

- A detention based water quality control designed to accommodate the entire runoff volume that would occur from the area contributing to the detention facility by a 1-inch rain storm. For project sites less than or equal to 20 acres of drainage area, the total draw-down time for the basin is a minimum 36 hours, with the lower half of the detention volume draw-down time of 24 hours.
- Flow-through water quality control designed to accommodate the runoff that would be produced from a rainfall intensity of 0.4 inches per hour. This rate must be maintainable for a minimum of three hours.
- Combination of a short-term detention and flow-through quality control system.

Since the project site is anticipated to be fully developed, space for a detention based system will be limited. It is likely that a pre-manufactured storm drainage filter will be required at each storm drain connection to the City's system. The pre-manufactured system will need to be accompanied by a certification from a licensed civil engineer that the filter/device will remove a minimum of 80 percent of the total suspended solids from the design flow rate.

3. SANITARY SEWER SYSTEM

3.1 EXISTING SYSTEM

Sanitary sewer system servicing the Waikiki area and the project site is owned by the City and County of Honolulu, and maintained by its Department of Environmental Services (ENV). The project site is located within the Sand Island collection system where wastewater flow is discharged into the Beach Walk Wastewater Pump Station (WWPS) and then conveyed to the City's Sand Island Wastewater Treatment Plant (WWTP) which serves the Honolulu area from Kuliouou to Moanalua.

Based on the information obtained from the City, sewerlines in Kuhio Avenue and Kalakaua Avenue collect wastewater from the project area and other parcels in the vicinity, then convey flows in the Ewa direction to the Beach Walk WWPS, which is located on Kuhio Avenue in a lot south of Kaiolu Street (See Figure 7). The Beach Walk WWPS receives wastewater flows throughout most of Waikiki, then pumps those flows to a gravity system near the Waikiki Yacht Club at Ala Moana Beach Boulevard, and ultimately to the Sand Island WWTP.

Existing sewerlines in the vicinity of the project site include:

- Kalakaua Avenue - 12-inch sewerline on the makai side of Kalakaua Avenue and 8-inch sewerline on the mauka side along Kalakaua Avenue.
- Kuhio Avenue - two 18-inch and one 16-inch sewerline along Kuhio Avenue.

Currently, flows from the International Market Place are connected to both the City's Kuhio and Kalakaua Avenue systems. It appears that majority of the flow is connected to the sewerlines along Kuhio Avenue.

Existing sewer laterals servicing the International Market Place and the Miramar Hotel include:

- A private 15-inch sewerline within Duke's Lane appears to provide connection for both the Waikiki Beachcomber and the International Market Place to the 16-inch sewerline in Kuhio Avenue.
- A 10-inch and a 6-inch lateral from the Miramar Hotel are connected to the 16-inch sewerline in Kuhio Avenue.

- Other 6-inch and 8-inch sewer laterals provide connection to the Kuhio Avenue and Kalakaua Avenue systems.
- A 6-inch lateral from the Aqua Waikiki Wave Hotel located within a sewer easement appears to cross under the northern corner of the Waikiki Town Center building.

3.2 PROJECTED WASTEWATER QUANTITY

Sanitary sewer volumes for the redevelopment project were derived using the project's program requirements provided for TRG IMP LLC by BKBC Architects Inc. and generalized simulation of projected demands for similar developments. Line sizes will be determined during the design phase of the project.

An average sanitary sewer flow of 187,500 gpd is projected for the redevelopment project based on City and County guidelines for wastewater contribution. This projected sewer flow is approximately 13 percent lower than the existing flow of 216,506 gpd. (See Appendix A).

3.4 PROPOSED IMPROVEMENTS

Although it has not been re-confirmed by the City, the Sewer Connection Application approved under the previous development plans in 2005, required all of the wastewater generated from the project site be conveyed to the City's Kuhio Avenue system. Therefore, it is anticipated that removal of wastewater from the project site will be via an existing or new connection(s) to the City's existing 16-inch or 18-inch gravity sewer mains located along Kuhio Avenue. The existing private 15-inch sewerline located in Duke's Lane is also available for connection since it appears that a good portion of the existing International Market Place is currently served by it. The proposed connection(s) will likely consist of a new lateral connection to an existing sewer manhole or constructing a new sewer manhole over an existing line. Final connection point(s) is dependent upon the plan and layout of the on-site improvements and the underground sewer collection system. Other site improvements may consist of underground gravity sewerlines, sewer manholes, and clean outs to grade. If portions of the proposed project cannot be connected by a gravity sewerline, a sewage lift station will be required.

Although portions of the City's collection system downstream of the project site is currently at or near capacity, we do not anticipate any off-site sewer improvements since the wastewater flow generated under the proposed project is less than what is presently generated. A new Sewer Connection Application will be submitted to confirm adequacy of the City's sewer collection system to support the redevelopment project.

4. WATER SYSTEM

4.1 EXISTING CONDITION

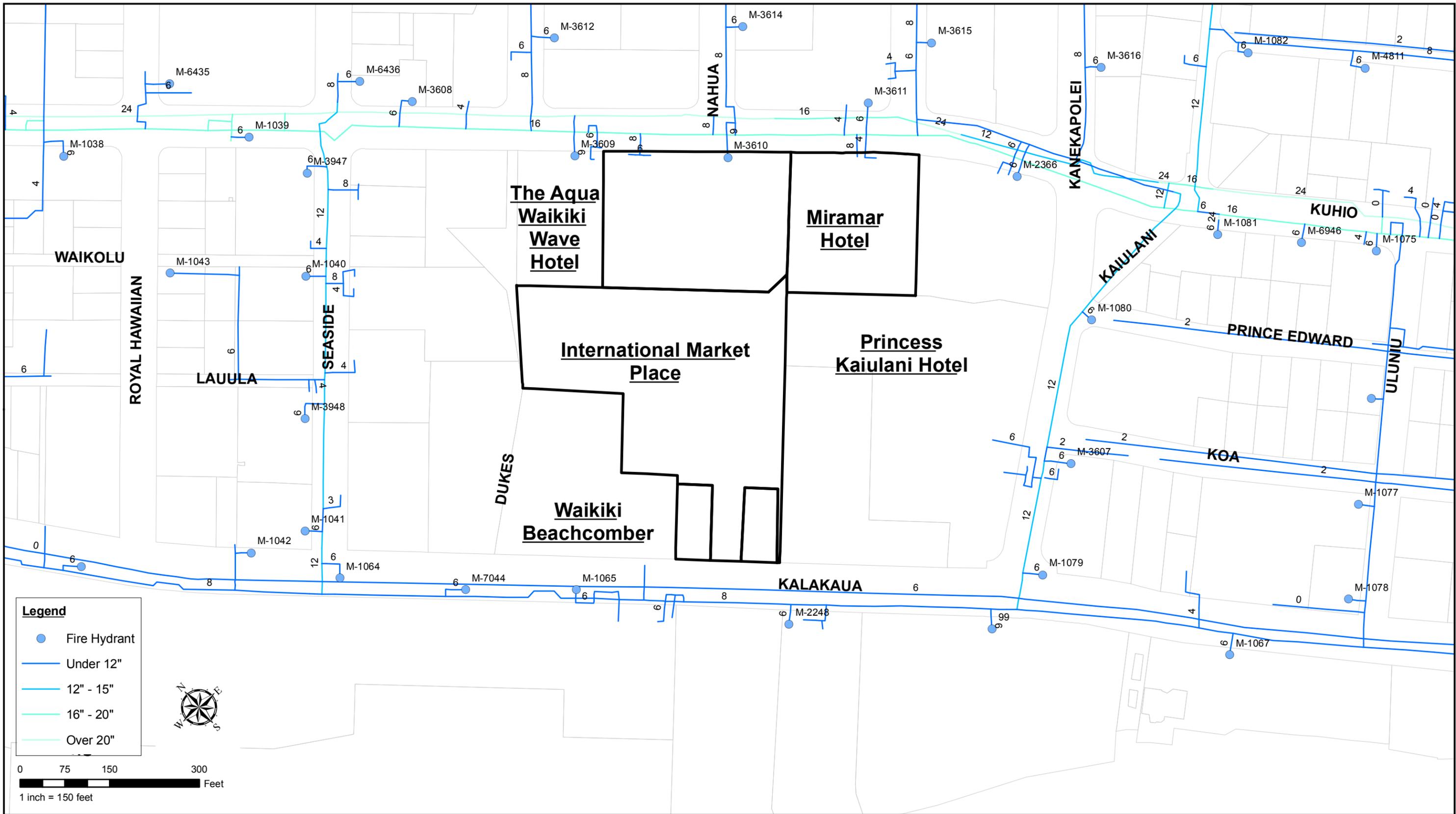
Water supply for the project is provided by the Board of Water Supply, (BWS) City and County of Honolulu. The BWS water system consists of transmission mains, distribution lines, service laterals, water meters and fire hydrants in the vicinity of the project site in Kuhio Avenue and Kalakaua Avenue. Existing 16-inch and 24-inch water mains run along Kuhio Avenue, and 6-inch and 8-inch water lines along Kalakaua Avenue (see Figure 8). An existing 8-inch private waterline is located within the project site in an easement parallel to Kuhio Avenue fronting a portion of the Waikiki Town Center building. The 8-inch private waterline and easement continues between the Waikiki Town Center and Miramar Hotel and extends along the property line where it continues into the Sheraton Princess Kaiulani Hotel. It is our understanding that waterline is privately owned and services the Sheraton Princess Kaiulani, Moana Surfrider, Royal Hawaiian, and Sheraton Waikiki Hotels.

Water service to the existing buildings within the International Market Place is provided by existing water lateral and meter connections off a 6-inch and/or 8-inch main running along Kalakaua Avenue and a 16-inch main along Kuhio Avenue. Water service for the Miramar Hotel is provided by existing water lateral and meter connections off the 16-inch main along Kuhio Avenue.

Based on available BWS records and field reconnaissance, there are six (6) domestic water meters servicing the International Market Place and the Miramar Hotel project site. Information on the meters are tabulated as follows:

Table 1 Water Meter Information

Business	Premise ID	Size/Type	TMK
Queen Emma Land Company	1060886	¾-inch (Domestic)	2-6-22:37
Queen Emma Land Company	1060887	3-inch (Compound)	2-6-22:38
Miramar Hotel Inc.	1086893	1-1/2-inch (Domestic)	2-6-22:39
Miramar Hotel Inc.	1086895	4-inch (Compound)	2-6-22:39
Denny's Restaurant	1086894	1-1/2-inch (Domestic)	2-6-22:39
Waikiki Town Center	1086890	2-inch (Domestic)	2-6-22:43



Legend

- Fire Hydrant
- Under 12"
- 12" - 15"
- 16" - 20"
- Over 20"



0 75 150 300
 Feet
 1 inch = 150 feet



**INTERNATIONAL MARKET PLACE AND
 MIRAMAR HOTEL REDEVELOPMENT**

CITY AND COUNTY OF HONOLULU POTABLE WATER SYSTEM

**FIGURE
 8**

There are seven existing fire hydrants located in the vicinity of the project site. Three existing hydrants are located in front of the market place or on the opposite side across Kalakaua Avenue. Four existing hydrants are located in front of the Waikiki Town Center or on the opposite side across Kuhio Avenue.

4.2 PROJECTED DEMANDS

Potable water demands for the project site were derived using the project's program requirements provided for TRG IMP LLC by BKBC Architects Inc. and generalized simulation of projected demands for similar developments. Line sizes will be determined during the design phase of the project.

Based on City and County Board of Water Supply demand factors, an average daily demand of 92,500 gpd was determined for potable water for the revitalization project. This average daily demand represents a 38.0 percent decrease compared to the existing demand of 150,093 gpd. (See Appendix B)

An availability letter was received from BWS on January 24, 2011 stating the existing water system is presently adequate to accommodate the proposed development (see Appendix 3). Hydrants along Kalakaua Avenue have a calculated static pressure, residual pressure, and flow of 76 pounds per square inch (psi), 20 psi, and 4,000 gallons per minute (gpm) respectively. Hydrants along Kuhio Avenue have a calculated static pressure, residual pressure, and flow of 76 psi, 55 psi, and 4,000 gpm respectively. (See Appendix C)

4.3 PROPOSED IMPROVEMENTS

The potable water supply for the International Market Place Revitalization Project is anticipated to be via connection to the existing 16-inch water main located along Kuhio Avenue. Standard improvements will consist of a connection to the 16-inch water main, water meter vault, reduced pressure backflow preventer, and necessary distribution waterline piping to the various site structures.

Fire protection will consist of a detector check meter and waterlines extending to the project site. Existing fire hydrants along Kalakaua and Kuhio Avenue will be utilized to provide the required project fire flow demand. During the design process, the Honolulu Fire Department will be consulted to determine the need for additional fire hydrants due to the layout of the proposed buildings and location of the required access locations.

APPENDICES

Appendix A Sanitary Sewer Calculations

Assumptions:

Average Daily per capita Flow:

- Hotel and Timeshare = 80 gallons per day
- Commercial = 25 gallons per day
- Restaurant = 25 gallons per seat per day

Density:

- Hotel = 2.0 capita per hotel unit (with twin-bed)
- Hotel = 2.8 capita per hotel unit (with 3 or more beds)
- Commercial = 1.0 capita per 150 sq. ft.
- Retail Cart = 1.0 capita per Cart
- Restaurant = 1.0 seat per 30 sf, 3 seats per day

**2011 Sewer Flow Calculations
International Market Place and Miramar Hotel Redevelopment**

EXISTING													
Name	Hotel			Office	Restaurant		Retail				Ave. Sewer Demand Flow (Gallons Per Day)	Cumulative Ave. Sewer Daily Flow (Gallons Per Day)	
	Number of Units	Capita Per Unit	Total Capita	No. of Employees	Seats/Day	Restaurant Area (Sq. Ft.)	Number of Carts	Capita Per Cart	Retail Area (Sq. Ft.)	Capita Per 150 Sq. Ft.			Total Capita
International Market Place Commercial							87	1	74,081	1	581	14,522	14,522
International Market Place Restaurant & Waikiki Town Center Restaurant					4,000							100,000	114,522
Waikiki Town Center Commercial							5	1	51,503	1	348	8,709	123,231
Miramar Commercial									21,505	1	143	3,584	126,815
Miramar Restaurant					1,203							30,075	156,890
Miramar Hotel (2 beds)	318	2	636									50,880	207,770
Miramar Hotel (3 beds)	39	2.8	109.2									8,736	216,506
TOTAL													216,506

PROPOSED													
Name	Hotel			Office	Restaurant		Retail				Ave. Sewer Demand Flow (Gallons Per Day)	Cumulative Ave. Sewer Daily Flow (Gallons Per Day)	
	Number of Units	Capita Per Unit	Total Capita	No. of Employees	Seats/Day	Restaurant Area (Sq. Ft.)	Number of Carts	Capita Per Cart	Retail Area (Sq. Ft.)	Capita Per 150 Sq. Ft.			Total Capita
International Market Place Commercial									300,000	1	2,000	50,000	50,000
International Market Place Restaurant					5,500	55,000						137,500	187,500
TOTAL													187,500

DIFFERENCE (MGD)													-29,006
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Retail Flow based on 25 gal/capita/day

Restaurant Flow based on 25 gal/seat/day

Proposed IMP Restaurant Seats/Day based on 30 sf/seat. Total seats x 3 for total seats per day. 55,000 sf / 30sf/seat x 3 = 5,500 seats per day

Appendix B Potable Water Calculation

Average daily potable water demand volumes based on the BWS "Water System Standards" (2002), are as follows:

- Resort = 350 gallons per unit
- Existing Commercial = 100 gallons per 1,000 sq. ft.
- Proposed Commercial = 200 gallons per 1,000 sq. ft.
(may include non-restaurant type food service such as ice cream store, yogurt store, coffee shop, etc...)
- Restaurant = 500 gallons per 1,000 sq. ft.

Estimated irrigation and water feature average daily demand of 5,000 gallon per day.

**2011 Potable Water Calculation
International Market Place and Miramar Hotel Redevelopment**

Name	Hotel			Commercial/Restaurant			Total Gallons	Cummulative Ave. Daily Demand (Gallons)
	Number of Units	Gallons/ Unit-Day	Total Hotel Gallons	Area (Sq. Ft.)	Gallons/ 1000 sq. ft.-Day	Total Retail Gallons		
EXISTING								
International Market Place								
Commercial				74,081	100	7,408	7,408	7,408
Restaurant				13,178	500	6,589	6,589	13,997
Waikiki Town Center								
Commercial				51,503	100	5,150	5,150	19,147
Restaurant				11,992	500	5,996	5,996	25,143
Miramar Hotel	357	350	124,950				124,950	150,093
PROPOSED								
International Market Place Restaurant				55,000	500	27,500	27,500	27,500
International Market Place Retail				300,000	200	60,000	60,000	87,500
Irrigation							5,000	92,500
There will be a proposed decrease of	-57,593	Gallons						

Appendix C BWS Availability Letter

WH

BOARD OF WATER SUPPLY

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



January 24, 2011

PETER B. CARLISLE, MAYOR

RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
THERESIA C. McMURDO
ADAM C. WONG

GEORGE "KEOKI" MIYAMOTO, Ex-Officio
GLENN M. OKIMOTO, Ex-Officio

WAYNE M. HASHIRO, P.E.
Manager and Chief Engineer

DEAN A. NAKANO
Deputy Manager

Mr. Wayne Higa
Wilson Okamoto Corporation
1907 South Beretania Street
Honolulu, Hawaii 96826

RECEIVED
JAN 28 2011
WILSON OKAMOTO CORPORATION

Dear Mr. Higa:

Subject: Your Letter Dated January 6, 2011 Requesting Water Availability, Flow and Pressure Data for the International Marketplace Renovation Project, TMK:2-6-22: 36-39 & 43

Thank you for your letter on the proposed International Marketplace Renovation Project.

The existing water system is presently adequate to accommodate the proposed development. 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.

We have suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for the following fire hydrants on Kalakaua and Kuhio Avenues:

<u>Fire Hydrant Number</u>	<u>Location</u>	<u>Static Pressure (psi)</u>	<u>Residual Pressure (psi)</u>	<u>Flow (gpm)</u>
M-7044	Kalakaua Ave	76	20	4000
M-2248	Kalakaua Ave	76	20	4000
M-1065	Kalakaua Ave	76	20	4000
M-3609	Kuhio Ave	76	55	4000
M-3610	Kuhio Ave	76	55	4000
M-3611	Kuhio Ave	76	55	4000
M-2366	Kuhio Ave	76	55	4000

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

Appendix 8

EISPN/Agency Comment Letters

W4

BOARD OF WATER SUPPLY

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



January 24, 2011

PETER B. CARLISLE, MAYOR

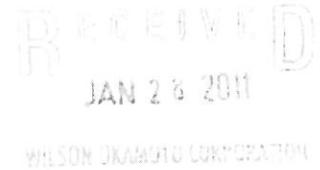
RANDALL Y. S. CHUNG, Chairman
ANTHONY R. GUERRERO, JR.
WILLIAM K. MAHOE
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GEORGE "KEOKI" MIYAMOTO, Ex-Officio
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Manager and Chief Engineer

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Deputy Manager

Mr. Wayne Higa
Wilson Okamoto Corporation
1907 South Beretania Street
Honolulu, Hawaii 96826



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M-3609	Kuhio Ave	76	55	4000
M-3610	Kuhio Ave	76	55	4000
M-3611	Kuhio Ave	76	55	4000
M-2366	Kuhio Ave	76	55	4000

Mr. Wayne Higa
January 24, 2011
Page 2

The data is based on the existing water system, and the static pressure represents the theoretical pressure at the point of calculation with the reservoir full and no demands on the water system. The static pressure is not indicative of the actual pressure in the field. Therefore, in order to determine the flows that are available to the site, you will have to determine the actual field pressure by taking on-site pressure readings at various times of the day and correlating that field data with the above hydraulic design data.

Attached is a map showing the location of the fire hydrants.

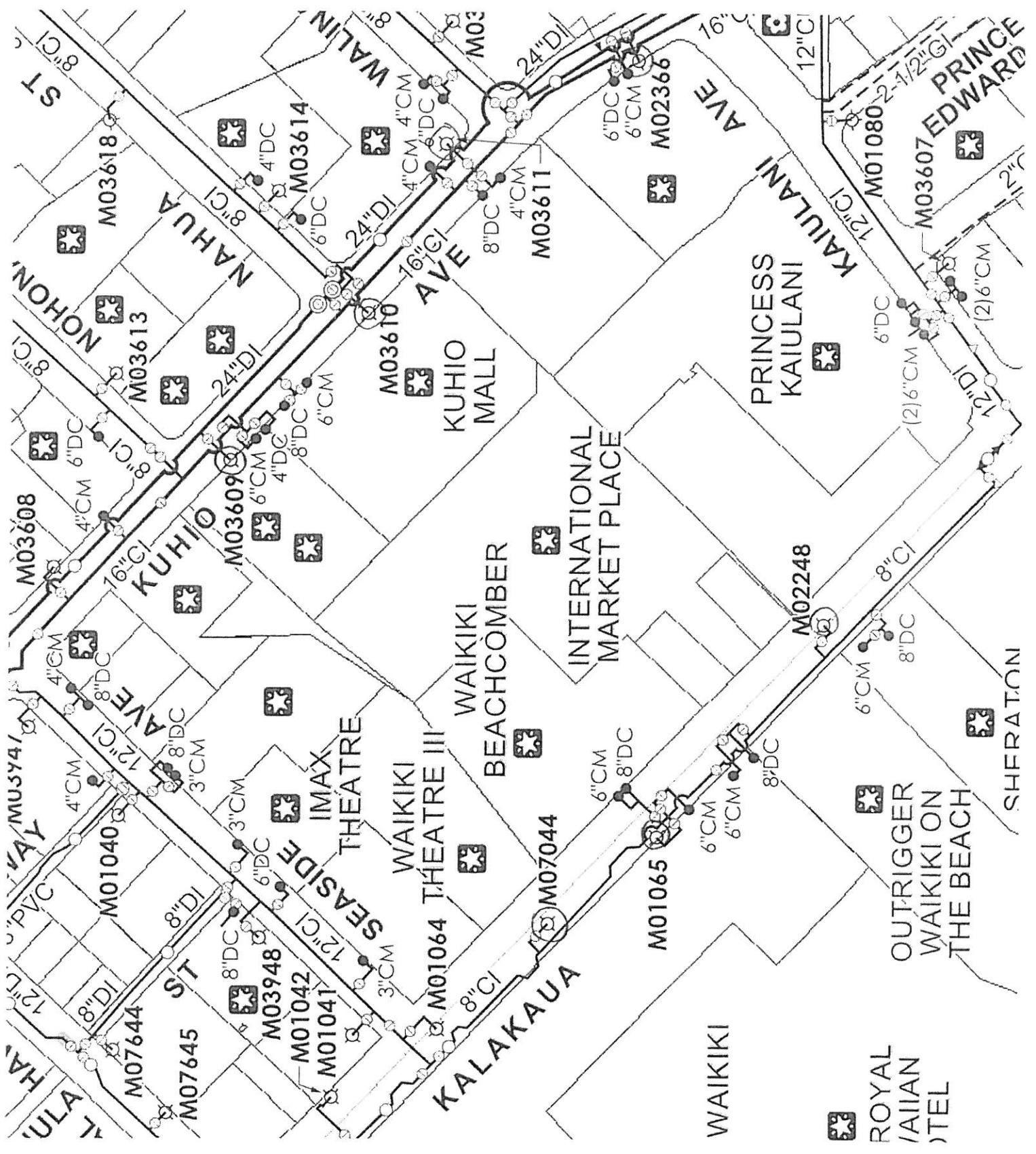
If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,



PAUL S. KIKUCHI
Chief Financial Officer
Customer Care Division

Attachment



ROYAL
/AIAN
)TEL

WAIKIKI

OUTRIGGER
WAIKIKI ON
THE BEACH

SHERATON

INTERNATIONAL
MARKET PLACE

WAIKIKI
BEACHCOMBER

WAIKIKI
THEATRE III

IMAX
THEATRE

KALAKAUA

PRINCESS
KAUAIANI

KUHIO
MALL

NAHUA

PRINCE
EDWARD

KAUAIANI
AVE

WALIN

ST

NEIL ABERCROMBIE
GOVERNOR OF HAWAII



WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

GUY KAULUKUKUI
FIRST DEPUTY

WILLIAM M. TAM
DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
BUREAU OF CONVEYANCES
COMMISSION ON WATER RESOURCE MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
ENGINEERING
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
KAHOOLAWE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

June 22, 2011

Dr. Hallett H. Hammatt
Cultural Surveys Hawaii
P.O. Box 1114
Kailua, Hawaii 96734

LOG NO: 2010.1654
DOC NO: 1106MV09
Archaeology

Dear Dr. Hammatt:

**SUBJECT: Chapter 6E-42 Historic Preservation Review –
Revised Archaeological Inventory Survey Plan for the
International Market Place Re-Development Project
Waikiki Ahupua‘a, Kona District, Island of O‘ahu
TMK: (1)-2-6-022:036, :037 through :038 & :043**

Thank you for the opportunity to review this revised draft plan titled: *Archaeological Inventory Survey Plan for the International Market Place Re-Development Project Waikiki Ahupua‘a, Kona District, Island of O‘ahu* TMK: (1)-2-6-022:036, :037 through :038 & :043 (C. O‘Hare, D. Shideler, and H. Hammatt June 2011). This draft was received on June 8, 2010. The AISP was prepared to support the redevelopment of the International Market Place in Waikiki. The International Market Place campus has had very little intrusive excavation over the years. Therefore, the subsurface material likely remains relatively undisturbed within this project area. This AISP contains a wealth of background information on the Waikiki area. This information indicates that this project has a tremendous potential to encounter archaeological sites including human burials.

This revision is based on comments generated through a previous SHPD review (SHPD Log No 2010.3950, Doc. No. 1105MV26). The revisions that were made to this document adequately address SHPD’s concerns. We believe that the burial that was previously removed from the international marketplace in the 1960’s has been adequately addressed. We agree that additional testing may be required depending on the results of the initial testing. We also agree that separating the AIS work for the international marketplace parcels and the Miramar Hotel parcels is a justified alternative if the work cannot be completed together. Finally, we agree that a Preservation Plan is the appropriate outlet for discussing preservation during demolition if significant historic resources are identified. **The report is accepted as final pursuant to Hawai‘i Administrative Rule 13§13-284.** Please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library. Please contact Mike Vitousek at (808) 692-8029 or Michael.Vitousek@Hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,

A handwritten signature in cursive script that reads "Mike Vitousek".

Michael Vitousek,
Acting Lead Oahu Island Archaeologist
State Historic Preservation Division

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE
INTERNATIONAL MARKET PLACE REVITALIZATION PROJECT

Appendix 9

Cultural Impact Assessment

Draft for Review

**Cultural Impact Assessment for the International Market
Place Revitalization Project, Waikīkī Ahupua‘a, Honolulu
(Kona) District, O‘ahu Island**

TMK: [1] 2-6-022: 036, 037, 038, 039 & 043

**Prepared for
The Queen Emma Land Company
and
The Taubman Company**

**Prepared by
Joseph H. Genz, Ph.D.
and
Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.
Kailua, Hawai‘i
(Job Code: WAIKIKI 62)**

October 2011

**O‘ahu Office
P.O. Box 1114
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Fax: (808) 262-4950**

www.culturalsurveys.com

**Maui Office
1860 Main St.
Wailuku, Hawai‘i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994**

Prefatory Remarks on Language and Style

A Note about Hawaiian and other non-English Words:

Cultural Surveys Hawai'i (CSH) recognizes that the Hawaiian language is an official language of the State of Hawai'i, it is important to daily life, and using it is essential to conveying a sense of place and identity. In this report, CSH uses italics to identify and highlight all foreign (i.e., non-English and non-Hawaiian) words. Italics are only used for Hawaiian words when citing from a previous document that italicized them. CSH parenthetically translates or defines in the text the non-English words at first mention, and the commonly-used non-English words and their translations are also listed in the *Glossary* (Appendix A) for reference.

A Note about Plant and Animal Names:

When community participants mention specific plants and animals by Hawaiian, other non-English or common names, CSH provides their possible scientific names (Genus and species) in the *Common and Scientific Names of Plants and Animals Mentioned by Community Participants* (Appendix B). CSH derives these possible names from authoritative sources, but since the community participants only name the organisms and do not taxonomically identify them, CSH cannot positively ascertain their scientific identifications. CSH does not attempt in this report to verify the possible scientific names of plants and animals in previously published documents; however, citations of previously published works that include both common and scientific names of plants and animals appear as in the original texts.

Abbreviations

AIS	Archaeological Inventory Survey
AMS	Army Mapping Service
APE	Area of Potential Effect
BPBM	Bernice Pauahi Bishop Museum
Land Commission	Board of Commissioners to Quiet Land Titles
CIA	Cultural Impact Assessment
CSH	Cultural Surveys Hawai'i
DNLR	Department of Land and Natural Resources
DUF	Division of Forestry
EIS	Environmental Impact Statement
HAR	Hawai'i Administrative Rules
HECO	Hawaiian Electric Company
HRS	Hawai'i Revised Statutes
LCA	Land Commission Award
NAGPRA	Native American Graves Protection and Repatriation Act
OEQC	Office of Environmental Quality Control
OHA	Office of Hawaiian Affairs
OIBC	O'ahu Island Burial Council
SHPD	State Historic Preservation Division
SIHP	State Inventory of Historic Properties
TCP	Traditional Cultural Property
TMK	Tax Map Key
UHCOH	University of Hawai'i Center for Oral History
USDA	U.S. Department of Agriculture
USGS	United States Geological Survey

Management Summary

Reference	Cultural Impact Assessment for the International Market Place Revitalization Project, Waikīkī Ahupua'a, Honolulu (Kona) District, O'ahu Island (TMK: [1] 2-6-022:036, 037, 038, 039 & 043 (Genz and Hammatt 2011)
Date	October 2011
Project Number	Cultural Surveys Hawai'i (CSH) Job Code: WAIKIKI 62
Agencies	State of Hawai'i Department of Health/Office of Environmental Quality Control (DOH/OEQC)
Project Location	The Project site is bounded and accessed by Kalākaua Avenue to the southwest in the makai (seaward) direction, Kūhiō Avenue to the northeast in the mauka (toward the ocean) direction, Princess Ka'iulani Hotel and the 'Ohana East Hotel to the southeast, and the Waikīkī Beachcomber, the Aqua Waikīkī Wave Hotel, and Duke's Lane to the northwest.
Land Jurisdiction	Queen Emma Land Company
Project Description	The Project includes the replacement of the existing buildings and structures of the International Market Place, the Waikīkī Town Center, and the Miramar Hotel with a new three level retail center that features the following: landscape and building elements that will convey a Hawaiian sense of place incorporating historical, cultural, and educational features and opportunities; improved streetscape along Kalākaua and Kūhiō Avenues to enhance the pedestrian experience; Significant open space throughout the Market Place to maintain and enhance the inviting, park-like setting; enhanced landscaped courtyards surrounding canopy trees and accommodating cultural programming; retention and enhancement of the "exceptional" Banyan Tree near Kalākaua Avenue; Revitalized and redeveloped retail space to better serve the community; and associated utility, parking, and infrastructure improvements.
Project Acreage	Approximately 5.98 acres.

<p>Area of Potential Effect (APE) and Survey Acreage</p>	<p>For the purposes of this Cultural Impact Assessment (CIA), the APE is defined as the approximately 5.98-acre Project area. While this investigation focused on the Project APE, the study area included the entire modern ahupua‘a (land division usually extending from the uplands to the sea) of Waikīkī Kai.</p>
<p>Document Purpose</p>	<p>The Project requires compliance with the State of Hawai‘i environmental review process (Hawai‘i Revised Statutes [HRS] Chapter 343), which requires consideration of a proposed project’s effect on cultural practices and resources. Kennedy/Jenks Consultants, Inc. requested CSH conduct this CIA. Through document research and ongoing cultural consultation efforts, this report provides information pertinent to the assessment of the proposed Project’s impacts to cultural practices and resources (per the <i>Office of Environmental Quality Control’s Guidelines for Assessing Cultural Impacts</i>) which may include Traditional Cultural Properties of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places, in accordance with Hawai‘i State Historic Preservation Statute (Chapter 6E) guidelines for significance criteria according to Hawai‘i Administrative Rules (HAR) §13-284 under Criterion E. The document is intended to support the Project’s environmental review and may also serve to support the Project’s historic preservation review under HRS Chapter 6E and Hawai‘i Administrative Rules (HAR) Chapter 13–284.</p>
<p>Consultation Effort</p>	<p>Hawaiian organizations, agencies and community members were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the Project area and the vicinity. The organizations consulted included the State Historic Preservation Division, the Office of Hawaiian Affairs, the O‘ahu Island Burial Council, Hui Mālama I Nā Kūpuna O Hawai‘i Nei, and community members of Waikīkī.</p>
<p>Results of Background Research</p>	<p>Background research for this Project yielded the following results (presented in approximate chronological order):</p> <ol style="list-style-type: none"> 1. A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately A.D. 1400. This, in combination with coconut groves and fishponds along the shoreline, enabled the growth of a sizeable population, including the coastal village of Waikīkī, which most likely centered around the mouth of ‘Āpuakēhau Stream in the vicinity of the Project area. 2. Cultural layers excavated throughout Waikīkī Kai and

	<p>radiocarbon dated to approximately A.D. 1400 to 1800 provide evidence of this habitation, cultivation and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes (see Figure 6, Table 2). In close proximity to the Project area are cultural layers indicative of habitation at the Princess Ka'iulani Hotel (State Inventory of Historic Places [SIHP] 50-80-14-7066, Runyon et al. 2010), Moana Hotel (SIHP 50-80-14-1974, Simons et al. 1991; SIHP 50-80-14-7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP 50-80-14-5796, Yucha et al. 2009).</p> <ol style="list-style-type: none"> 3. At least seven heiau (places of worship) and other religious sites were located in Waikīkī Kai, including Helumoa Heiau (also called 'Āpuakēhau Heiau) (Thrum 1907a:44) and Nā Pōhaku 'Ola Kapaemahu a Kapuni (commonly called the Wizard Stones) (Paglinawan 1997; Thrum 1907b:139–141) in the vicinity of the Project area. These sites are connected through mo'olelo (oral traditions) to 'Āpuakēhau Stream, which once flowed through the southeast portion of the Project area. 4. Four of these heiau were associated with human sacrifice, including Helumoa Heiau (Thrum 1907a:44). Sacrificial drownings of kauwā (outcast caste) also took place in Waikīkī (<i>Ka Loea Kālai 'āina</i> 1899, translation in Sterling and Summers 1978:33). In addition, excavations and surveys have documented a high density of burials within the Jaucas sand deposits of Waikīkī, including 24 burials at the Moana Hotel (SIHP 50-80-14-1974, Simons et al. 1991). Within the Project area, human remains representing one individual buried with a funerary object (shell) were uncovered in 1967 by Lloyd J. Soehren during construction of the "Tahiti By Six" bar (Bernice Pauahi Bishop Museum [BPBM] Oa-A5-16, Bishop Museum Native American Graves Protection and Repatriation Act [NAGPRA] Inventory O'ahu Federal Register 1998). In addition, the following burials (single or small concentrations) have been uncovered along or near Kalākaua Avenue in close proximity to the Project area (within 400 feet): SIHP 50-80-14-5856-A; SIHP 50-80-14-5856-B (Winieski et al. 2002); SIHP 50-80-14-5856-C; SIHP 50-80-14-5864-C; 50-80-14-5860-U and -V (Bush et al. 2002); SIHP 50-80-14-3745 (Griffin 1987), SIHP 50-80-14-6703 (O'Leary et al. 2005); SIHP 50-80-14-5863 (Winieski et al. 2001); SIHP 50-80-14-7067 (Runyon et
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	<p>al. 2010); and SIHP 50-80-14-7065, Runyon et al. 2010).</p> <ol style="list-style-type: none"> 5. Waikīkī Kai was a place of royal residence, starting with Mā'ilikūkahi in approximately A.D. 1490 (Kamakau n.d., cited in McAllister 1933:74) and extending through Kamehameha (‘Ī‘Ī 1959:17). The ‘ili of Kaluaokau, in which the Project area is located, was one such place of royal residence. At the Māhele (division of Hawaiian lands), the ‘ili of Kaluaokau was granted to William Lunalilo (LCA 8599, ‘Āpana 31), and bequeathed to Queen Emma. A map by C.J. Lyons in 1855–1877 shows the location of Lunalilo’s cottage just outside the Project area to the southwest. 6. The Moana Hotel was built in 1901, with auxiliary cottages in the Project area (1914 Sanborn Fire Insurance map). Other cottages were built in the 1920s at the Moana Hotel Annex and ‘Āinahau Court, located to the east of the Project area (the current Princess Ka’iulani Hotel). The International Market Place was built in 1957 (Queen Emma Foundation n.d) and the Miramar Hotel was constructed in 1962 (Young 2010). 7. Oral histories indicate early twentieth century gathering practices of several varieties of limu (seaweed) and wana (sea urchin) along the Waikīkī coast, and catching of manini (reef surgeonfish) in the near-shore waters and moi (threadfish), shrimp, ‘oama (young weke, or goatfish), mullet, ‘a’awa (wrasse), āholehole (young stage of āhole, or Hawaiian flagtail), pāpio (young stage of ulua, or crevalle, jack or pompano), and ‘o’opu (goby) in ‘Āpuakēhau Stream (University of Hawai‘i Center for Oral History 1985).
<p>Results of Community Consultation</p>	<p>CSH attempted to contact 126 cultural descendents of Waikīkī, other community members, and government agency and community organization representatives. Of the ten people that responded, six cultural descendents, kūpuna (elders) or kama‘āina (Native-born) participated in formal interviews for more in-depth contributions to the CIA; one interview is still pending approval. This community consultation indicates:</p> <ol style="list-style-type: none"> 1. Waikīkī was once a place for fishing and cultivation of kalo lo‘i of the chiefs, followed as a place for former royalty to relax and entertain, according to Coochie Cayan of SHPD. Cy Harris also notes that several heiau were located in Waikīkī, with the most famous heiau of O‘ahu, Papa‘ena‘ena Heiau, located on the slope of Lē‘ahi (Diamond Head). 2. A history of music and entertainment in Waikīkī, and the

	<p>International Market Place in particular, continues to have a strong sense of attachment for community participants. Van Horn Diamond recalls listening in his youth to the Hawaiian musicians who played at the International Market Place, including Don Ho. He has fond memories of the group, “Hawaii Calls,” which broadcast its radio show from the banyan tree inside the International Market Place. For Mr. Diamond, this music scene was, and continues to be, an integral part of the International Market Place. In addition, Sylvia Krewson-Reck remembers the Hawaiian music entertainers at Kūhiō Beach, and Anna Ka’olelo Machado Cazimero performed the ‘ukulele, guitar and the stand-up bass, as well sand, with the Kodak Hula Show at Sans Souci Beach.</p> <ol style="list-style-type: none"> 3. The coastal waters of Waikīkī provided resources for community participants. In their youth, Mrs. Cazimero gathered limu līpe‘epe‘e, wana, and hā‘uke‘uke (urchin) for food and medicine, and caught ‘upāpalu (cardinal fish), and Cy Harris gathered limu kohu (seaweed) and wāwae‘iole (a moss). 4. The ocean waters of Waikīkī were also a place of relaxation for community participants. Ms. Krewson-Reck was an avid surfer, and she and other participants enjoyed the beaches with their families. 5. Most community participants and respondents support the Project. Clyde Nāmu‘o of OHA suggests that native plant species traditionally found in the Project area should be considered in the landscaping design to encourage practical traditional plant uses and, if drought resistant, to reduce demands on irrigation water. 6. The main concern expressed by four community participants is the high likelihood of inadvertent discovery of burials or burial sites in the Project area. Mr. Harris. suggests that epidemics resulted in mass burials along the coastal regions. Mr. Clarence Medeiros, Jr., stresses the customary practice of burying family members within their pā hale (yard). Mr. Diamond indicates that burials have been uncovered to the east of the Project area at the former Moana Hotel cottages (current site of the Princess Ka’iulani Hotel) and along Kalākaua Avenue in close proximity to the International Market Place. Ms. Coochie Cayan of SHPD indicates human remains in adjacent parcels. <p>Should any burials be uncovered within the International Market Place, Mr. Diamond asserts that as much information of the remains and context must be understood as possible. He</p>
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	<p>recommends legally extricating the remains to a proximate location in order to address them, and to ascertain the significance of the site of the remains. Depending on the findings, the human remains could be preserved in a memorial for “all past generations” within Waikīkī.</p>
<p>Impacts and Recommendations</p>	<p>Based on the information gathered for the cultural and historic background and community consultation detailed in this CIA report, the proposed Project may potentially impact Native Hawaiian burials. CSH identifies this potential impact and makes the following recommendations:</p> <ol style="list-style-type: none"> 1. The International Market Place is located on Jaucas sand deposits, a preferred location for interment; one burial with a funerary object was uncovered in 1967 within the Project area (BPBM Oa-A5-16, Bishop Museum NAGPRA Inventory O’ahu Federal Register 1998), and several burials and burial concentrations have been uncovered in close proximity to the Project area. In addition, cultural layers in close proximity to the Project area indicate evidence of former habitation and cultivation. <p>Land-disturbing activities during construction may uncover presently undetected burials or other cultural finds. Personnel involved in the construction activities of the Project should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials (or other cultural finds) be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies notified pursuant to applicable law.</p> <ol style="list-style-type: none"> 2. The Queen Emma Land Company and The Taubman Company should consult with community members to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts be uncovered during construction or long-term maintenance for the Project.

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Section 1 Introduction

1.1 Project Background

At the request of the Queen Emma Land Company and The Taubman Company, Cultural Surveys Hawai'i, Inc. (CSH) conducted a Cultural Impact Assessment (CIA) for the International Market Place Revitalization Project, Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu, TMK [1] 2-6-022: 036, 037, 038, 039 & 043. The Project area is depicted on an aerial image (Figure 1), a U.S. Geological Survey (USGS) quadrangle (Figure 2), and a Tax Map Key (TMK) map (Figure 3).

The Project includes the replacement of the existing buildings and structures of the International Market Place, the Waikīkī Town Center, and the Miramar Hotel with a new three level retail center that features the following: Landscape and building elements that will convey a Hawaiian sense of place incorporating historical, cultural, and educational features and opportunities; Improved streetscape along Kalākaua and Kūhiō Avenues to enhance the pedestrian experience; Significant open space throughout the Market Place to maintain and enhance the inviting, park-like setting; Enhanced landscaped courtyards surrounding canopy trees and accommodating cultural programming; Retention and enhancement of the "exceptional" Banyan Tree near Kalākaua Avenue; Revitalized and redeveloped retail space to better serve the community; and Associated utility, parking, and infrastructure improvements.



Figure 1. Aerial photograph showing the location of Project area, including the International Market Place (lower), the Waikīkī Town Center (upper left) and the Miramar Hotel (upper right) (Google Earth 2008)

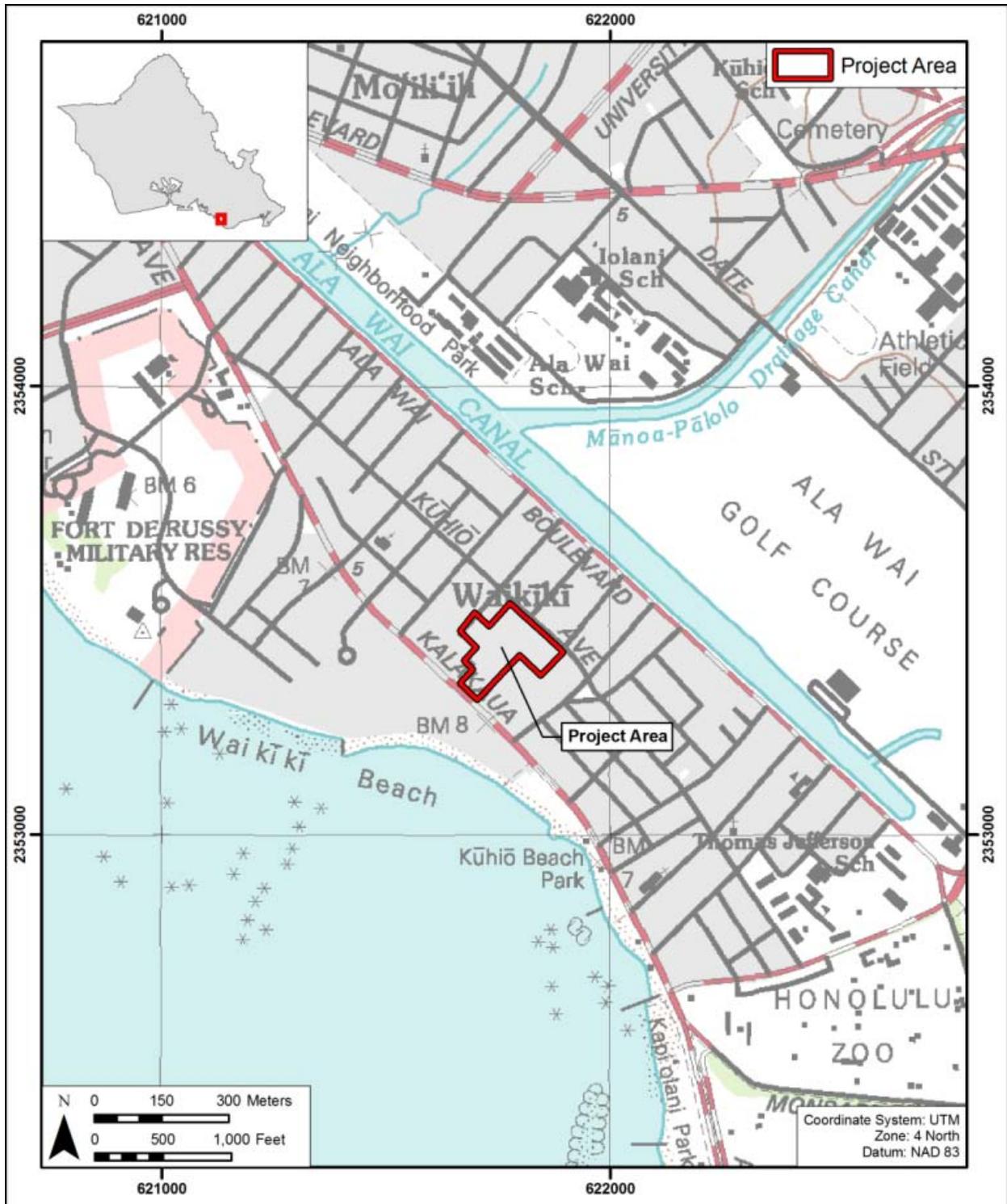


Figure 2. Portion of the 1998 United States Geological Survey (USGS) 7.5-minute series topographic map, Honolulu Quadrangle, showing the Project area

1.2 Document Purpose

The Project requires compliance with the State of Hawai'i environmental review process (Hawai'i Revised Statutes [HRS] Chapter 343), which requires consideration of a proposed project's effect on cultural practices. CSH conducted this CIA at the request of the Queen Emma Land Company and The Taubman Company. Through document research and ongoing cultural consultation efforts, this report provides information pertinent to the assessment of the proposed Project's impacts to cultural practices and resources (per the *Office of Environmental Quality Control's Guidelines for Assessing Cultural Impacts*), which may include Traditional Cultural Properties (TCPs) of ongoing cultural significance that may be eligible for inclusion on the State Register of Historic Places, in accordance with Hawai'i State Historic Preservation Statute (Chapter 6E) guidelines for significance criteria in Hawai'i Administrative Rules (HAR) §13-284 under Criterion E, which states that to be significant an historic property shall:

Have an important value to the Native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity.

The document is intended to support the Project's environmental review and may also serve to support the Project's historic preservation review under HRS Chapter 6E and HAR Chapter 13-284.

1.3 Scope of Work

The scope of work for this CIA includes:

1. Examination of cultural and historical resources, including Land Commission documents, historic maps, and previous research reports, with the specific purpose of identifying traditional Hawaiian activities including gathering of plant, animal, and other resources or agricultural pursuits as may be indicated in the historic record.
2. Review of previous archaeological work at and near the subject parcel that may be relevant to reconstructions of traditional land use activities; and to the identification and description of cultural resources, practices, and beliefs associated with the parcel.
3. Consultation and interviews with knowledgeable parties regarding cultural and natural resources and practices at or near the parcel; present and past uses of the parcel; and/or other practices, uses, or traditions associated with the parcel and environs.
4. Preparation of a report that summarizes the results of these research activities and provides recommendations based on findings.

1.4 Environmental Setting

1.4.1 Natural Setting, Geology, and Topography

The coastal area of Waikīkī was backed by a large marshland about three miles long and one mile wide, enclosing approximately 2,000 acres. This marshland extended from the volcanic craters of Lē‘ahi (Diamond Head) and the Kaimukī dome (where the present day Kaimukī fire station is built) in the east toward Kapahulu Park, along the foot of Mānoa Valley into the districts of Kamō‘ili‘ili and Makiki toward the junction of Wilder and Pi‘ikoi Streets, and finally turning again to the sea (Kanahale 1986:5–6). The plain of Waikīkī, including the Project area, is relatively level with an elevation of approximately ten feet above mean sea level. ‘Āpuakēhau Stream flowed through the southeastern corner of the Project area.

1.4.2 Rainfall, Soils, and Vegetation

Waikīkī receives approximately 23 inches (600 millimeters) of rainfall per year (Giambelluca et al. 1986). According to U.S. Department of Agriculture (USDA) soil survey data (Foote et al. 1972), the Project area has been graded and filled (Filled Land), but the natural soil deposit is Jaucas sand (JaC), which is an excessively drained soil that forms narrow strips on coastal plains, developed through wind and water deposition of coral and seashell sand (Foote et al. 1972) (Figure 4). Vegetation in the general area includes introduced exotics, such as MacArthur palm, coconut, and a variety of grasses.

1.4.3 Built Environment

The International Market Place is a complex of mostly shops and restaurants located within urban Waikīkī in the central portion of the Waikīkī resort area. The Miramar at Waikiki Hotel is located in the northeast corner of the Queen Emma lands. Kalākaua Avenue, the main thoroughfare for coastal Waikīkī, bounds the International Market Place to the southwest, separating the International Market Place from Kūhiō Beach.

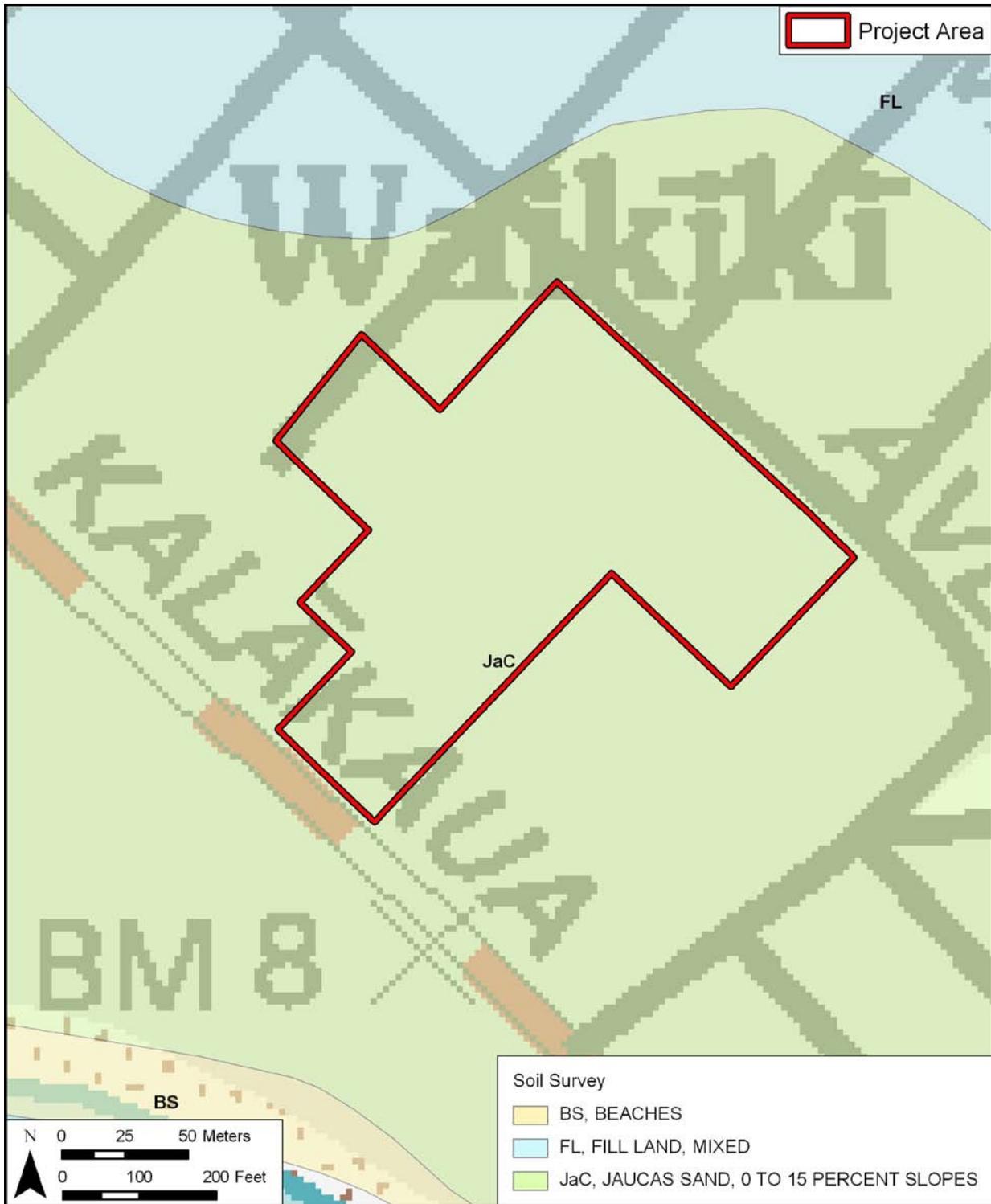


Figure 4. Portion of the 1998 USGS 7.5-minute series topographic map, Honolulu Quadrangle, showing the Project area with soil overlay (Foote et al. 1972)

Section 2 Methods

2.1 Archival Research

Historical documents, maps and existing archaeological information pertaining to Waikīkī Ahupua‘a were researched at the CSH library and other archives including the University of Hawai‘i at Mānoa’s Hamilton Library, the State Historic Preservation Division (SHPD) library, the Hawai‘i State Archives, the State Land Survey Division, and the archives of the Bishop Museum. Previous archaeological reports for the area were reviewed, as were historic maps and photographs and primary and secondary historical sources. Information on Land Commission Awards (LCAs) was accessed through Waihona ‘Aina Corporation’s Māhele data base as well as a selection of CSH library references. Research for the Cultural and Historical Background section centered on the following cultural and historic resources, practices, and beliefs: religious and ceremonial knowledge and practices; traditional subsistence land use and settlement patterns; gathering practices and agricultural pursuits; wahi pana (storied places) and associated mo‘olelo (stories, oral traditions), mele (songs), oli (chants), and ‘ōlelo no‘eau (proverbs); and historic land transformation, development, and population changes (see Scope of Work above).

2.2 Community Consultation

2.2.1 Sampling and Recruitment

A combination of qualitative methods, including purposive, snowball, and expert (or judgment) sampling, were used to identify and invite potential participants to the study. These methods are used for intensive case studies, such as CIAs, to recruit people that are hard to identify, or are members of elite groups (Bernard 2006:190). Our purpose is not to establish a representative or random sample. It is to “identify specific groups of people who either possess characteristics or live in circumstances relevant to the social phenomenon being studied....This approach to sampling allows the researcher deliberately to include a wide range of types of informants and also to select key informants with access to important sources of knowledge” (Mays and Pope 1995:110).

We began with purposive sampling informed by referrals from known specialists and relevant agencies. For example, we contacted the SHPD, Office of Hawaiian Affairs (OHA), O‘ahu Island Burial Council (OIBC), and community and cultural organizations in Waikīkī Ahupua‘a for their brief response/review of the Project and to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the Project area and vicinity, cultural and lineal descendants, and other appropriate community representatives and members. Based on their in-depth knowledge and experiences, these key respondents then referred CSH to additional potential participants who were added to the pool of invited participants. This is snowball sampling, a chain referral method that entails asking a few key individuals (including agency and organization representatives) to provide their comments and referrals to other locally recognized experts or stakeholders who would be likely candidates for the study (Bernard 2006:192). CSH also employs expert or judgment sampling which involves assembling a group of people with recognized experience and expertise in a specific area (Bernard 2006:189–191). CSH maintains a database that draws on over two decades of established relationships with community

consultants: cultural practitioners and specialists, community representatives and cultural and lineal descendants. The names of new potential contacts were also provided by colleagues at CSH and from the researchers' familiarity with people who live in or around the study area. Researchers often attend public forums (e.g., Neighborhood Board, Burial Council and Civic Club meetings) in (or near) the study area to scope for participants. Please refer to Table 6, Section 4, for a complete list of individuals and organizations contacted for this CIA.

CSH focuses on obtaining in-depth information with a high level of validity from a targeted group of relevant stakeholders and local experts. Our qualitative methods do not aim to survey an entire population or subgroup. A depth of understanding about complex issues cannot be gained through comprehensive surveying. Our qualitative methodologies do not include quantitative (statistical) analyses, yet they are recognized as rigorous and thorough. Bernard (2006:25) describes the qualitative methods as "a kind of measurement, an integral part of the complex whole that comprises scientific research." Depending on the size and complexity of the project, CSH reports include in-depth contributions from about one-third of all participating respondents. Typically this means three to twelve interviews.

2.2.2 Informed Consent Protocol

An informed consent process was conducted as follows: (1) before beginning the interview the CSH researcher explained to the participant how the consent process works, the Project purpose, the intent of the study and how his/her information will be used; (2) the researcher gave him/her a copy of the Authorization and Release Form to read and sign (Appendix C); (3) if the person agreed to participate by way of signing the consent form or providing oral consent, the researcher started the interview; (4) the interviewee received a copy of the Authorization and Release Form for his/her records, while the original is stored at CSH; (5) after the interview was summarized at CSH (and possibly transcribed in full), the study participant was afforded an opportunity to review the interview notes (or transcription) and summary and to make any corrections, deletions or additions to the substance of their testimony/oral history interview; this was accomplished either via phone, post or email or through a follow-up visit with the participant; (6) the participant received the final approved interview and any photographs taken for the study for record. If the participant was interested in receiving a copy of the full transcript of the interview (if there is one as not all interviews are audio-recorded and transcribed), a copy was provided. Participants were also given information on how to view the report on the OEQC website and offered a hardcopy of the report once the report is a public document.

2.2.3 Interview Techniques

To assist in discussion of natural and cultural resources and cultural practices specific to the study area, CSH initiated semi-structured interviews (as described by Bernard 2006) asking questions from the following broad categories: cultivation, gathering practices and mauka (toward the ocean) and makai (seaward) resources, burials, trails, historic properties, and wahi pana. The interview protocol is tailored to the specific natural and cultural features of the landscape in the study area identified through archival research and community consultation. For example, for this study, burials and recreation were emphasized over other categories less salient to Project participants. These interviews and oral histories supplement and provide depth to consultations from government agencies and community organizations that may provide brief

responses, reviews and/or referrals gathered via phone, email and occasionally face-to-face commentary.

2.2.3.1 In-depth Interviews and Oral Histories

Interviews are conducted with individuals or in focus groups comprised of kūpuna (elder) and kama'āina (Native-born) who have a similar experience or background (e.g., the members of an area club, elders, fishermen, hula dancers). Interviews are conducted initially at a place of the study participant's choosing (usually at the participant's home or at a public meeting place) and/or—whenever feasible—during site visits to the Project area. Generally, CSH's preference is to interview a participant individually or in small groups (two–four); occasionally participants are interviewed in focus groups (six–eight). Following the consent protocol outlined above, interviews may be recorded on tape and in handwritten notes, and the participant photographed. The interview typically lasts one to four hours, and records the—who, what, when and where of the interview. In addition to questions outlined above, the interviewee is asked to provide biographical information (e.g., connection to the study area, genealogy, professional and volunteer affiliations, etc.).

2.3 Compensation and Contributions to Community

Many individuals and communities have generously worked with CSH over the years to identify and document the rich natural and cultural resources of these islands for cultural impact, ethno-historical and, more recently, TCP studies. CSH makes every effort to provide some form of compensation to individuals and communities who contribute to cultural studies. This is done in a variety of ways: individual interview participants are compensated for their time in the form of a small honorarium and/or other makana (gift); community organization representatives (who may not be allowed to receive a gift) are asked if they would like a donation to a Hawaiian charter school or nonprofit of their choice to be made anonymously or in the name of the individual or organization participating in the study; contributors are provided their transcripts, interview summaries, photographs and—when possible—a copy of the CIA report; CSH is working to identify a public repository for all cultural studies that will allow easy access to current and past reports; CSH staff do volunteer work for community initiatives that serve to preserve and protect historic and cultural resources. Generally our goal is to provide educational opportunities to students through internships, share our knowledge of historic preservation and cultural resources and the State and Federal laws that guide the historic preservation process, and through involvement in an ongoing working group of public and private stakeholders collaborating to improve and strengthen the Chapter 343 environmental review process.

Section 3 Cultural and Historical Background

This section draws from archaeology and ethnography, histories, mo'olelo written by Native Hawaiians, and an archive of historic documents and images to present a portrait of Hawaiian culture and history as it relates to the specific Project area. It first explores Hawaiian cosmogonic and genealogical origins (Section 3.1). Focusing in on geographic and temporal scales, this section then traces the exploration of the Pacific Ocean and the subsequent discovery, settlement, and expansion of the Hawaiian archipelago (Section 3.2). This broad overview of Hawaiian history introduces key concepts and terms used throughout the report and leads to a general history of the moku (district) of Kona (Honolulu) (Section 3.3). The focus then narrows to the ahupua'a (land division usually running from the mountains to the sea) of Waikīkī (Section 3.4) regarding the earliest known settlement and subsistence patterns, a compilation of wahi pana and associated mo'olelo, successions of chiefly rule, the introduction of private property, shifting land uses, and previously recorded oral histories, and finally a summary of the Project area.

3.1 Cosmogonic and Genealogical Origins

Cosmogonic narratives and origin genealogies are indigenous forms of knowledge that account for the creation of the world and the first Hawaiians. Complementing this is an anthropological perspective informed primarily by archaeology (and genetics and linguistics) that traces the path of ancestral voyagers across the Pacific through their material remains (and genes and languages) (see Section 3.2). These two ways of understanding the past are often contrasted as “indigenous knowledge” and “Western scientific knowledge,” respectively. Recent studies, however, emphasize a plurality of knowledges that are epistemologically equivalent (Agrawal 1995; Meyer 2001). Following recent studies that blend oral traditions and archaeology to better understand Hawaiian history (Kirch 2010; Kirch and Sahlins 1992), accounting for the origins of Hawaiians is a quest that requires attention to both the stories of Hawaiian procreation and the anthropology of voyaging.

There are several founding narratives of the origin of the Hawaiian world, including the *Kumulipo*. This cosmogonic, genealogical prayer chant, which is over two thousand lines in length, was used to trace the divine origins of ali'i through ruling chiefs, deified ancestors, and gods backwards in time through the animals, plants, and elements to the beginning of the universe. The *Kumulipo* is one of a class of such cosmological chants, but no others of such length are preserved (Silva 2004:103). This chant, titled *He Pule Ho'ola'a Ali'i* (A prayer to consecrate [an] ali'i) (Silva 2004:98), was composed for the Hawai'i Island ali'i Ka'īmamao, also known as Lonoikamakahiki, when several kapu (sacred) rituals were performed that elevated him to the status of a god (Beckwith 1970:311), or divine king, in approximately A.D. 1600 (Kirch 2010:83). The text of the *Kumulipo* was first recorded by David Kalākaua in 1889 and translated by Queen Lili'uokalani (1897), which was not available when folklorist Martha Beckwith completed her own translation and detailed study (1951).

Starting from, “*O ke kumu o ka lipo*” (At the beginning of the deep darkness), the *Kumulipo* divides the genesis of the world into 16 wā (epochs, time periods) (Beckwith 1951). These 16 wā are categorized into two periods, pō (darkness, the realm of the gods) and ao (light). During the first period of pō there was a continuous birthing of the lower life forms to sea life, plants, and

eventually mammals. During the second period of ao came the opening of light and the appearance of the first woman and man, La'ila'i and Ki'i, respectively, and the coming of the gods, including Kāne and Kanaloa, which resulted in over a thousand genealogical pairs (Beckwith 1970: 310–11). Significantly, Hawaiian identity today is derived from origin genealogies such as the Kumulipo: "...every aspect of the Hawaiian conception of the world is related by birth, and as such, all parts of the Hawaiian world are one indivisible lineage" (Kame'eleihewa 1992:2).

3.2 Discovery, Settlement, and Expansion of the Hawaiian Islands

Complementing the cosmogic and genealogical origins of Hawaiians detailed in the *Kumulipo* is an anthropological perspective on ancient patterns of voyaging. Archaeological studies have shown that by 10,000 years ago, humans had migrated to occupy nearly all the habitable land on the planet. Aside from crossing a series of short water gaps to reach Australia and New Guinea, they had reached it all by walking. The remaining unexplored region was the vast Pacific Ocean. Approximately 4,500 years ago, coastal dwellers of southeast China began a wave of migration through the closely-spaced, inter-visible islands of Southeast Asia. Advances in sailing strategies, canoe technology, and navigation techniques enabled their descendents to sail past the familiar insular waters a millennium later. These precocious seafarers systematically explored the remote, uninhabited regions of the Pacific Ocean to the east, as well as the Indian Ocean to the west. This led to the eventual discovery and colonization of virtually every habitable island in the Pacific Ocean, as well as coastal trading along the Indian sub-continent and settlement as far west as Madagascar (Howe 2007; Irwin 2007).

The ancient wayfinders most likely employed an expansionary strategy of first staging a series of exploratory probes to find likely islands, followed by returns to the homeland, and then launching colonizing expeditions (Irwin 1992). To do so, they sailed their double-hulled voyaging canoes eastward against the direction of the dominant trade winds by waiting for westerly wind shifts. After mentally mapping the positions of newly discovered islands in terms of celestial referents, they returned to their homelands to share the sailing directions for future voyages of colonization (Finney 1996). As most of the Pacific Islands are volcanic in origin, the exploratory seafarers, also horticulturalists, necessarily transported a living landscape. They brought with them taro, yams, breadfruit, bananas, and coconuts, as well as domesticated pigs, dogs, and chickens, and, possibly with intention, rats (Irwin 2007; Kirch 2000).

Later voyagers discovered and settled the distant archipelagoes of western Polynesia (e.g., Samoa, Tonga, and Fiji), the northwestern archipelagoes of Micronesia (e.g., Marshall Islands and Caroline Islands), and eastern Polynesia (e.g. Tahiti and Marquesas), and from there settled the widely-separated archipelagoes of Hawai'i and Aotearoa as well as the solitary island of Rapa Nui (Irwin 2007; Kirch 2000). Anthropologist Ben Finney suggests that a waxing and waning rhythm of voyaging characterized the large, high-island archipelagoes of eastern Polynesia: "a flurry of back and forth sailings as the islands are being discovered, settled and supplied; then some continued long-range travel for personal, religious or other reasons; and then by a contraction of voyaging as populations grew and rival chiefdoms fought over land and power" (Finney 2007:145).

Archeological excavations, linguistic reconstructions, and genetic studies suggest that the initial settlement of Hawai'i came from eastern Polynesia (Kirch 2000) around A.D. 700–800 (Athens et al. 2002). Mo'olelo link Hawai'i to Kahiki—the generic word for the ancestral homeland of Hawaiians, not a specific island—through accounts of the discovery of certain Hawaiian islands and subsequent inter-archipelago return trips (Beckwith 1970). The first settlers of Hawai'i from within the region of Kahiki were probably from the Marquesas Islands (Kirch 2000:291). The archaeological record suggests that early Hawaiians formed settlements of hamlets along the coasts, interred the dead, ate domesticated pigs, dogs, and chickens, and began to clear tracts of forest between A.D. 600–1100 (Kirch 2000:293).

The early settlers of the Hawaiian archipelago would have been especially attracted to windward O'ahu with its coral reefs, bays, and sheltered inlets for fishing, dense basalt dikes for the production of stone adzes and other tools, and amphitheatre-headed valleys and broad alluvial floodplains that contained fertile soils, numerous permanently flowing streams, and abundant rainfall for the cultivation of crops (Kirch 1985:69). Excavation data from the coastal region of Waimānalo provide a glimpse into the life of the settlers' descendants. The Bellows Beach sand dune occupation site (O18) reveals a particularly rich cultural stratigraphy that has recently been radiocarbon dated after 40 years of dispute (e.g., Dye 2000; Kirch 1985:71; Pearson et al. 1971; Tuggle and Spriggs 2001) to A.D. 1040–1219 (Dye and Pantaleo 2010), several centuries after the current estimates of first settlement. Archaeological excavation data from this site indicate that the settlers' descendants, like their east Polynesian ancestors, lived in pole-and-thatch dwellings, interred the dead beneath these structures, cooked in small hearths, and manufactured stone tools as well as bone and shell fishhooks, and supported themselves by cultivating inland crops, raising domesticated animals, hunting seabirds on offshore islets, fishing, and gathering shellfish (Kirch 1985:71–74). As they adapted to local conditions, they invented distinctive Hawaiian artifacts, including two-piece fishhooks and the lei niho palaoa (lei of rock oyster shell, or sperm whale tooth), which, in addition to other ornaments interred with individuals, suggests a degree of social stratification (Kirch 1985:71–74). Hawaiians also cared for the dead with a variety of *ilina* (burials, graves) depending on the social status of the deceased, including cremation burials, burial caves, burials in the sand and earth, burials directly underneath house floors, burials in the platforms of *heiau* (place of worship, temples), and burials marked on the surface by stone terraces, mounds, platforms, and other monuments (Kirch 1985:238–242).

New fishhook styles discovered in Hawaiian archaeological sites and Tahitian words entering into the Hawaiian language suggest contact with Tahiti around A.D. 1200 (Kirch 2000:291). In addition, numerous mo'olelo chronicle the era of two-way voyaging between the archipelagos of Tahiti and Hawai'i by detailing the feats of specific navigators (Cachola-Abad 1993). The Hawai'i-Tahiti voyaging corridor eventually ceased as Hawaiians and Tahitians began to focus more on local initiatives, such as building, maintaining, and deploying fleets of war canoes rather than guiding them on overseas adventures (Finney 2007:145). According to Abraham Fornander's synthesis of mo'olelo, the ali'i La'amaikahiki closed the era of voyaging between Tahiti and Hawai'i when he returned to his ancestral homeland 21 generations before the 1870s (Fornander 1878:168-169). With an average of 20 years between generations, that places the cessation of Hawaiian long-distance voyaging at about A.D. 1450 (Fornander 1878:168–169).

The archaeological record suggests that Hawaiians experienced exponential population growth, intensification of production, and increased social stratification around A.D. 1100–1650. Hawaiians converted valley floors and hillsides to lo'i (terraced fields) with 'auwai (canals and ditches) that diverted stream water to irrigate kalo and other crops in flooded pond fields, developed dryland field systems for the cultivation of 'uala (sweet potato) and other crops, and constructed stone-walled loko i'a (fishponds) on shallow reef flats to grow and harvest fish (Kirch 2000:293–295). By A.D. 1600, the population, which had burgeoned to at least several hundred thousand people, expanded from the fertile windward regions into the most arid and marginal regions of the archipelago—the leeward valleys and coasts (Kirch 2007). This agricultural and aquacultural intensification supported emerging classes of ali'i and maka'āinana (commoners), whose labor created enduring heiau and other monumental architecture that survive in the archaeological record (Kirch 2000:295–296).

The original settlers and their descendents had likely organized themselves into kin-based social groups. The necessity of defining territorial boundaries increased as the population rapidly grew, the amount of available land diminished, voyaging spheres contracted, and the society became more differentiated, hierarchical, and competitive (Kirch 1985:306). The original lineage territories and associated chiefdoms were most likely moku'āina (districts) (or moku) that were sequentially divided (Ladefoged and Graves 2006). Between A.D. 1400–1500, Hawaiians developed a hierarchically nested system of land tenure that centered on the ahupua'a, a territorial unit that typically extended from the peaks of the mountains down to the sea, encompassing the entire ecology of an island and incorporating its main resource zones, including interior uplands and mountains, coastal lowlands, and fringing reefs (Kirch 2000:296). The maka'āinana remained on the land they cultivated, but ali'i governed this ahupua'a pattern of territorial units. These ahupua'a territories changed through time; the regions in a moku with greater predictability of resources were most likely settled first and defined according to topographic features, and later divided into separate communities if increases in production could support larger populations (Ladefoged and Graves 2006). Based on the distribution of sites in the most arid and marginal lands, virtually all of O'ahu was territorially claimed and possibly occupied by A.D. 1650 (Kirch 1992:15). Then, on the eve of European contact (1778), critical transformations in the social structure took place that shifted Hawai'i from a chiefdom to an emerging state-level society, especially the rise of divine kingship legitimated in a new religious ideology (the state cults of the gods Kū and Lono) with a formal priesthood (including human sacrifice) and maintained by a monopoly of force (Kirch 2010).

3.3 Kona Moku

In approximately A.D. 1310 (a time estimate based on an average length of generational intervals in chiefly genealogies), Māweke partitioned O'ahu into three districts: the Kona region, the 'Ewa, Wai'anae, and Waialua region, and the windward Ko'olau region. Then, in approximately A.D. 1490, the 'aha ali'i (council of chiefs) chose Mā'ilikūkahī, an ali'i kapu (sacred chief) who was born at the sacred site of Kūkaniloko in the uplands of Waialua to be the new ali'i nui (paramount chief) of O'ahu. After his paramountship was installed at the heiau of Kapukapuākea in central Waialua, Mā'ilikūkahī instituted an explicit land division and administration structure: O'ahu was divided into six moku—Kona, 'Ewa, Wai'anae, Waialua, Ko'olauloa, and Ko'olaupoko—that were further divided into 86 ahupua'a and smaller territorial

units, such as 'ili (subdivisions of ahupua'a) (Kirch 2010:84–90). Upon his ascent to ali'i nui, Mā'ilikūhahi shifted his residence from Waialua to Waikīkī, which may have initiated the pattern of royal residence at Waikīkī (Kamakau n.d., cited in McAllister 1933:74).

3.4 Waikīkī Ahupua'a

3.4.1 Land Divisions

The ahupua'a of southeastern O'ahu within the traditional moku of Kona once extended from the Ko'olau mountain range on the mauka side to the shoreline on the makai side. The ancient ahupua'a of Waikīkī once extended from the land called Kou (Honolulu) to Maunalua (Hawai'i-kai) (Hawaiian Studies Institute 1987), which was originally an 'ili kūpono (a nearly independent 'ili land division within an ahupua'a, paying tribute to the ruling chief and not to the chief of the ahupua'a) of Waimānalo that was integrated into Honolulu District in 1859 as an ahupua'a (King 1935:223). On modern maps, the ancient ahupua'a of Waikīkī is bounded in the west by Pi'ikoi and Sheridan Streets and to the east by Maunalua, and mauka (toward the mountains) by the Ko'olau mountain range and makai by the ocean.

Due to the growth of the settlements of Honolulu and Waikīkī following European contact in 1778, the seaward sections of many ahupua'a were cut off from the sea. The government later subdivided sections of Honolulu and Waikīkī into neighborhoods or districts. In modern times, the area identified as Waikīkī is generally bounded on the west by Kalākaua Avenue and on the east by Diamond Head, and mauka by King Street/Wai'alaie Avenue and makai by the ocean. A distinction is sometimes made between Waikīkī Kai, the coastal area on the makai side of the Ala Wai Canal, and Waikīkī Waena (middle), the mauka lands between King Street/Wai'alaie Avenue and Ala Wai Boulevard.

Considering the vast scale of the ancient ahupua'a of Waikīkī, which includes the modern ahupua'a designations of Mānoa, Pālolo, Wai'alaie Nui, Wai'alaie Iki, Wailupe, Niu, and Kuli'ou'ou, and the size of the marshland of Waikīkī (which was four times the size of Waikīkī today; Kanahale 1995:6), this report focuses on the coastal strip of Waikīkī—the modern ahupua'a boundary of Waikīkī, or Waikīkī Kai. This area includes the Waikīkī Plain, which encompasses Kapi'olani Park and the Project area.

3.4.2 Settlement Patterns

While the surface archaeological record of Waikīkī has been extensively disturbed, obscured, and, in some cases, destroyed over the past two centuries, pioneering efforts in the early twentieth century to document sites based on the recollections of Hawaiian residents (McAllister 1933), recent archaeological research and cultural resource management work, combined with mo'olelo, offer a window into the ancient past. Importantly, there is a close spatial association between major heiau and intensive agriculture for the entire island of O'ahu, and residential sites are usually distributed around the margins of irrigation systems and up into lower valleys (Kirch 1992:16–17). Thus, fragments of information about residential sites, cultivation and irrigation, trails, burials, and monumental structures and other cultural sites derived from archaeology, ethnography, and historical records illuminate ancient settlement patterns, part of the overall cultural landscape.

Reconstructing patterns of ancient settlement draws heavily from wahi pana, a term not easily defined or described. A Hawaiian wahi pana “physically and poetically describes an area while revealing its historical or legendary significance” (Landgraf 1994:v). Wahi pana are sacred places that include such cultural properties as heiau, loko i‘a, ala hele (trails), ilina and iwi kūpuna (ancestral bone remains), individual garden plots, ‘auwai, house sites, intangible phenomena such as meteorological and atmospheric effects, land divisions, and natural geographic locations (place names), such as pūnāwai (fresh-water springs), streams, peaks, pōhaku (rocks), rock formations, ridges, offshore islands and reefs, and seas that are associated with culturally significant beliefs or events. A wahi pana leaves an imprint on the landscape even if its tangible properties no longer exist, as the mana of previous people and events associated with this space continues to manifest itself. For example, the stereotypical heiau is composed of terraces, enclosures, walls, mounds, or upright stones, but heiau can also be sacred places on a landscape that lack built structures, natural landscape features such as rock outcroppings, and earthworks where mana is concentrated and transferred between the deities and worshippers (Becket and Singer 1999:xix-xx). Further, previously documented and ongoing mo‘olelo of wahi pana that no longer have material traces are precisely the evidence of their enduring significance (Sahlins 1992:22).

For clarity, wahi pana are bolded in the text, their meanings are cited from Pukui et al. (1974) unless otherwise noted, and spelling and use of diacriticals follow Pukui et al. (1974). In addition, the cultural sites in Waikīkī Kai are mapped and organized in table format as place names (Figure 5, Table 1), archaeological sites (Figure 6, Table 2), and burials (Figure 7, Table 3).

Wahi pana are but one class of numerous cultural properties that create a cultural attachment to the landscape for Hawaiians. Kepā Maly explains the concept of “cultural attachment” from a Hawaiian cultural worldview:

(Cultural attachment)...embodies the tangible and intangible values of a culture. It is how a people identify with and personify the environment (both natural and manmade) around them. Cultural attachment is demonstrated in the intimate relationship (developed over generations of experiences) that people of a particular culture share with their landscape—for example, the geographic features, natural phenomena and resources, and traditional sites etc., that make up their surroundings. This attachment to environment bears direct relationship to beliefs, practices, cultural evolution, and identity of a people. In Hawai‘i, cultural attachment is manifest in the very core of Hawaiian spirituality and attachment to landscape, the creative forces of nature which gave birth to the islands (e.g., Hawai‘i), mountains (e.g., Mauna Kea) and all forms of nature, also gave birth to *na kanaka* (the people), thus in Hawaiian tradition, island and mankind share the same genealogy. (Maly 1999:27)

In a Hawaiian cultural worldview, a sense of place relies on keeping the integrity of the cultural landscape (Maly 2001). Maly succinctly articulates this connection between a sense of place and the cultural landscape:

The integrity of the land- and ocean-scapes [landscape], and their sense of place depends upon the well-being of the whole entity, not only a part of it. Thus, what we do on one part of the landscape has an affect on the rest of it. (Maly 2001:2)

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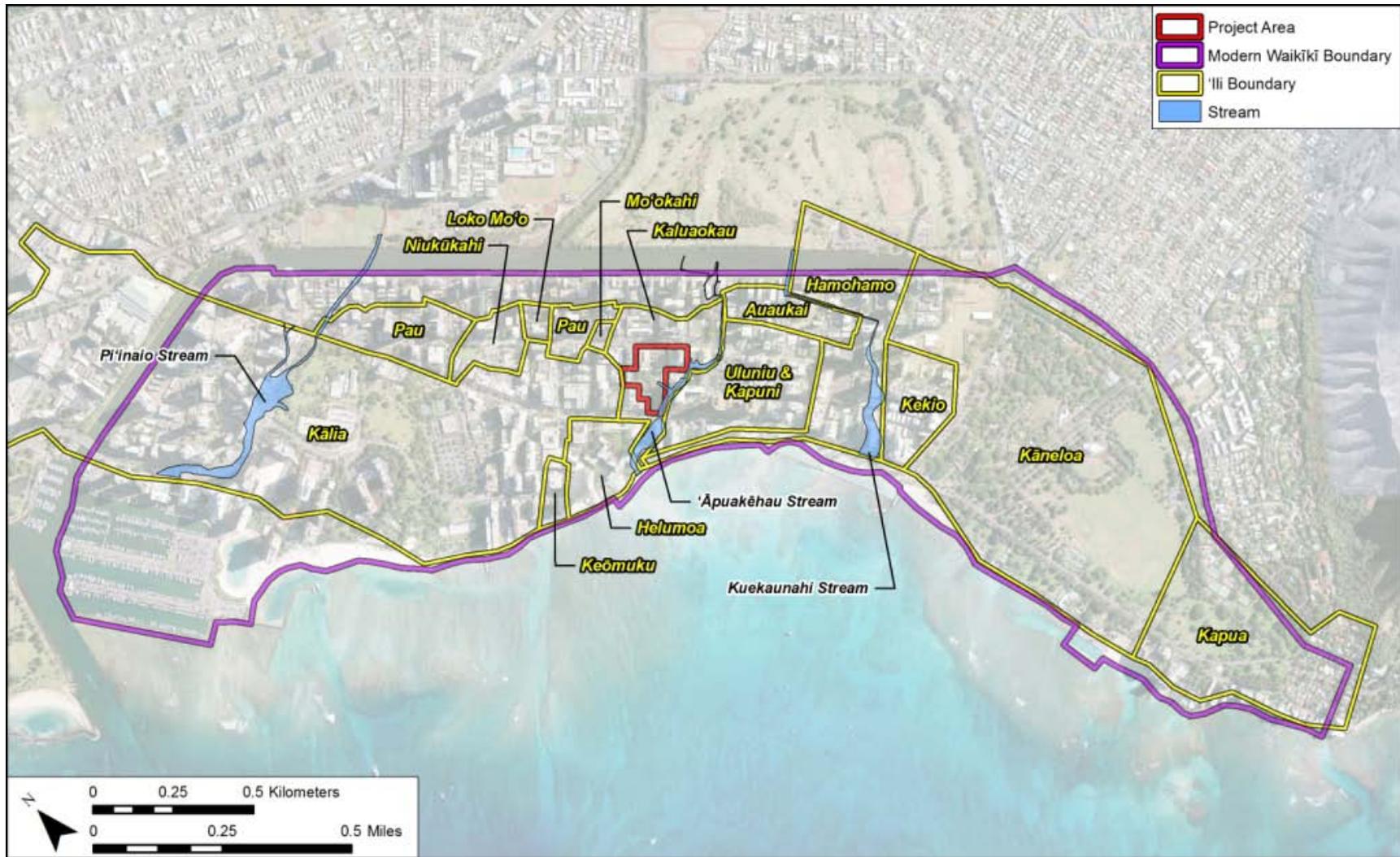


Figure 5. Place names of Waikiki (Waikiki Kai) (base map, Google Earth 2008)

Table 1. Place names of Waikīkī (Waikīkī Kai)

Place Name	Meaning	Description	Source
‘Āpuakēhau Stream	Basket [of] dew	Stream entered the ocean at Helumoa (between the Royal Hawaiian and Moana Hotels), probably named for a rain; also called Ulukou	Kanahele 1995:7; Pukui et al. 1974
Auaukai	(undocumented)	‘Ili	Bishop 1881
Hamohamo	Rub gently [as the sea on the beach]	‘Ili where Kālia and Pāhoa Streams joined and then divided to form Kuekaunahi, ‘Āpuakēhau, and Pi‘inaio Streams	Kanahele 1995:7
Helumoa	Chicken scratch	‘Ili and site of a heiau where Kahanana was sacrificed, named in reference to mo‘olelo about the bodies of sacrificial victims pecked over for maggots	Pukui et al. 1974
Kālia	Waited for	‘Ili; a stream in the Waikīkī Plain that came from Mānoa	Kanahele 1995:7
Kalehuawehe	The removed lehua lei	An ancient surfing area, now called Castle’s	Finney and Houston 1966:38
Kaluahole	The āhole fish cavern	‘Ili; coast between Waikīkī and Black Point	‘Ī‘ī 1959:92; Pukui et al. 1974
Kaluaokau	(undocumented)	‘Ili	Bishop 1881
Kāneloa	Tall Kāne	‘Ili	Bishop 1881
Kapua	The flower	‘Ili, in which is located the Project area; ancient surfing area, now filled in and part of Kapi‘olani Park	Finney and Houston 1966:28; Lyons 1876
Kapuni	The surrounding	‘Ili; ancient surfing area	Finney and Houston 1966:28

Place Name	Meaning	Description	Source
Kawehewehe	The removal	Name of the mouth of 'Āpuakēhau Stream and also the name of the reef entrance and channel at what is known today as Grey's Beach; the water had healing powers for removing sickness	Pukui et al. 1974:99
Kekio	(undocumented)	'Ili	Bishop 1881
Keōmuku	The shortened sand	'Ili	Bishop 1881
Kuekaunahi Stream	(undocumented)	Stream entered the ocean at Hamohamo (near intersection 'Olua and Kalākaua)	Kanahele 1995:7
Loko Mo'ō	(undocumented)	'Ili	Bishop 1881
Mo'okahi	(undocumented)	'Ili	Bishop 1881
Niukūkahi	Coconut standing alone	'Ili; ancient surfing area	Finney and Houston 1996:28
Pae-ki'i	(undocumented)	Stones marking a site where strangers suspected of initiating war or searching for human sacrifices were drowned, a type of death called kai he'e kai	Beckwith 1970:89)
Pāhoa Stream	(undocumented)	Stream in the Waikīkī Plain that came from Pālolo	Kanahele 1995:7
Pau	Finished	'Ili	Bishop 1881
Pi'inaio Stream	(undocumented)	Stream entered the ocean at Kālia, becoming a large delta	Kanahele 1995:8
Ulukou	Kou tree grove	'Ili; another name for 'Āpuakēhau	Bishop 1881; Pukui et al. 1974
Uluniu	Coconut grove	'Ili	Bishop 1881

Place Name	Meaning	Description	Source
Waikīkī	Water spurting from many sources	Ahupua'a	Pukui et al. 1974
Waikolu	Three waters	The land between Kuekaunahi, 'Āpuakēhau, and Pi'inaio Streams	Kanahele 1995:

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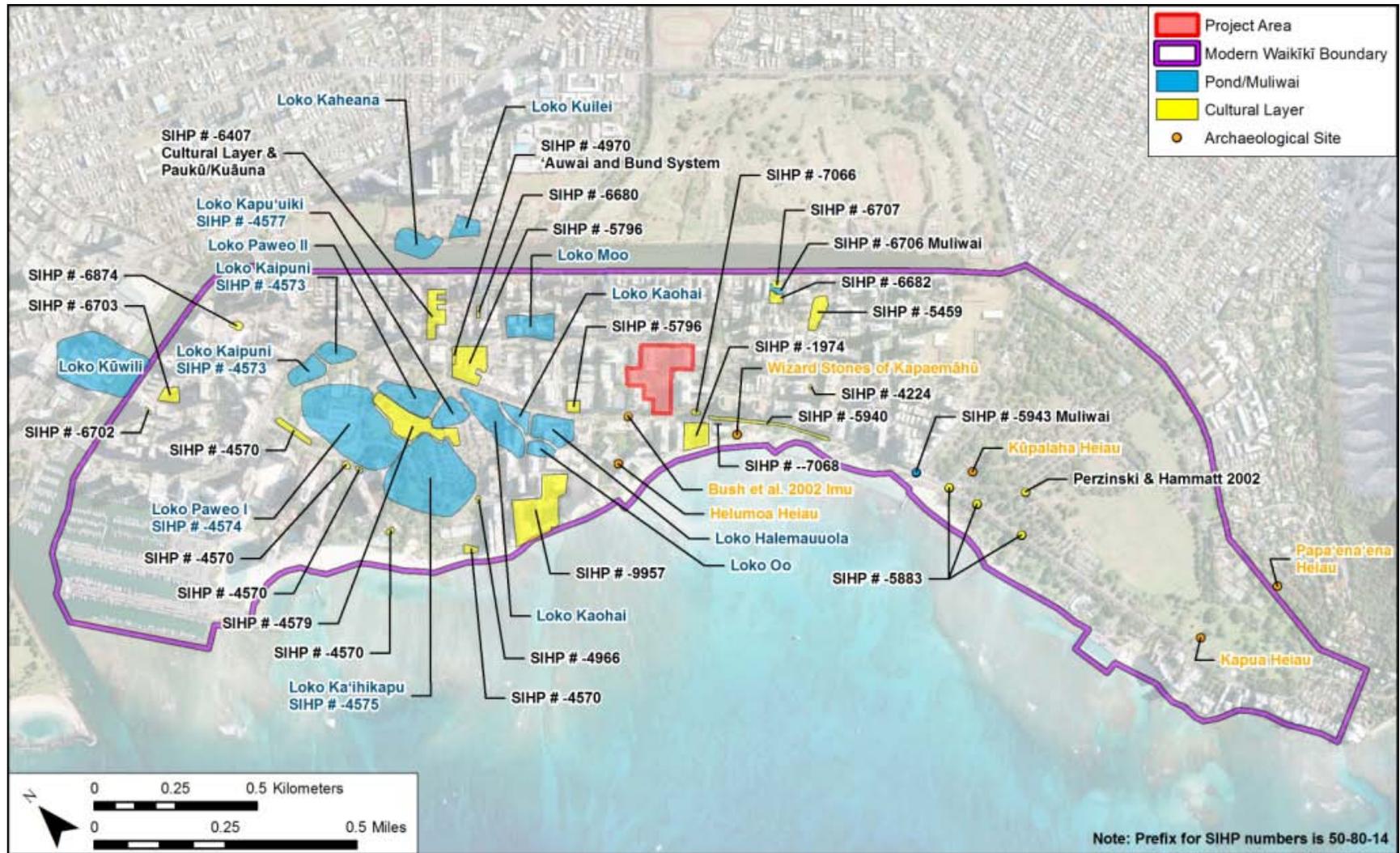


Figure 6. Archaeological sites in Waikiki (Waikiki Kai) (base map, Google Earth 2008)

Table 2. Archaeological sites in Waikīkī (Waikīkī Kai) (organized alphabetically by Site)

Site	Site Description	Site Number	Source
Auwai and Bund System	Structural elements included a two phase rock alignment with a bund, two 'auwai channels, three bunds, and a charcoal stain, in Fort DeRussy, radiocarbon dated to A.D. 1800–1940	SIHP 50-80-14-4970	Denham and Pantaleo 1997b
Cultural Layer	Habitation layer with pits, firepits, post molds, artifacts, food debris (shells, fish, birds, dogs, pigs, rodents), and two human burials (see above, Burials); artifacts (basalt flakes, volcanic glass, worked pearl shell, basalt and volcanic glass cores, a basalt adze, adze fragments, a coral file and abraders, and a pearl shell fishhook) suggest occupational activities of fishing, manufacture of tools or ornaments, and use of tools as adzes; radiocarbon dating indicates habitation between A.D. 1430–1630	SIHP 50-80-14-4224	Beardsley and Kaschko 1997
Cultural Layer	Subsurface pit features containing historic artifacts , charcoal, fragmentary marine shells, and an assemblage of traditional artifacts, radiocarbon dated to before A.D. 1820	SIHP 50-80-14-6874	Bell and McDermott 2006
Cultural Layer and Paukū/Kuāuna	Culturally enriched agricultural soil, and a paukū (narrow strip of land smaller than a mo'ō) with a kuāuna (bank of an irrigated taro patch), with embankment utilized for habitation and planting of crops, radiocarbon dated to A.D. 1400–1660	SIHP 50-80-14-6407	Borthwick et al. 2002
Cultural Layer	Habitation layer, radiocarbon dated from A.D. 1290 to 1530 at its inception and continues to the early 1900s; this is the nineteenth century ground surface of 'Āinahu, the Waikīkī estate of Archibald Cleghorn, his wife Princess Miriam Likelike, and their daughter Princess Ka'iulani	SIHP 50-80-14-6682	Chiogioji et al. 2004
Cultural Layer	Habitation layer with artifacts (coral abraders), animal burials, firepits with midden, imu, postholes, as well as burials (see above), located at the Halekulani Hotel; features indicate activities of cooking and eating fish, shellfish, and pig or dog; radiocarbon dated to A.D. 1620–1700 Associated with the Robert Lewers residence—the original Hale Kūlani—built between 1881 and 1897; bottles, ceramics from trash pits	SIHP 50-80-14-9957	Davis 1984

Site	Site Description	Site Number	Source
Cultural Layer	Habitation layer with fire-cracked basalt, hearths, postholes, pits, midden (fish bones, shellfish), Artifacts (mostly historic, but one fragment of pumice, a polished basalt adze fragment, and three basalt flakes), Subsurface features and remains dated to 1780s–1790s through the mid nineteenth century, as well as one human burial (see above) at Fort DeRussy; Since most of the features uncovered were hearths, the major activity was likely cooking	SIHP 50-80-14-4570	Davis 1991
Cultural Layer	Habitation layer with firepit, pits, coral rock concentration with associated posthole, midden and human burials (see above) in Fort DeRussy, radiocarbon dated to A.D. 1430–1670	SIHP 50-80-14-4570	Denham and Pantaleo 1997a, 1997b
Cultural Layer (LCA 1758:3)	Permanent historic occupation at LCA 1758:3 in Fort DeRussy, and possibly intermittent prehistoric use, including five firepits, a pit, a human burial (see above), two dark stains, two historic middens, and two possible prehistoric middens, radiocarbon dated to A.D. 1510–1950	SIHP 50-80-14-4579	Denham and Pantaleo 1997a, 1997b
Cultural Layer	Cultural layer associated with five human burials (see above), pit, and postholes, with radiocarbon dates that suggested permanent occupation between the A.D. 1200–1600, located in Fort DeRussy	SIHP 50-80-14-4966	Denham and Pantaleo 1997a, 1997b
Cultural Layer	Culturally enriched buried A-horizon (Waikīkī's former land surface prior to the introduction of fill sediments around the time of the construction of the Ala Wai Canal) in geographic association with a house site (LCA 99), radiocarbon dated to A.D. 1720–1890; cultural layer includes marine shell midden, fishbone, charcoal, historic glass, and fragments of large mammal bone	SIHP 50-80-14-6700; 6702	Freeman et al. 2005
Cultural Layer	An intermittent cultural layer (charcoal) noted during archaeological monitoring of a Kapi'olani Park Bandstand redevelopment project, and basalt lamp uncovered	(none); an excavated trench dated 3/30 and 3/31	Perzinski and Hammatt 2002
Cultural Layer	A buried A-horizon containing evidence of traditional land use (charcoal flecking and staining, and probably fire pit) uncovered during archaeological monitoring	SIHP 50-80-14-5883	Winieski and Hammatt 2001

Site	Site Description	Site Number	Source
Cultural Layer	Well-defined cultural layer, located at the Princess Ka'iulani Hotel adjacent to the International Market Place, containing charcoal, fire effected rock, midden material, pits, and intact cultural deposits that radiocarbon dates to A.D. 1725–1815	SIHP 50-80-14-7066	Runyon et al. 2010
Cultural Layer	Cultural layer (charcoal) in association with 24 burials at Moana Hotel (see above) with pits, postholes, and artifacts (boar tooth pendant, volcanic glass, cowry and pearl shell lures and scrapers, coral abraders, basalt adze fragments, and basalt flakes, awls, adzes, and hammerstones), radiocarbon dated to A.D. 1334–1955	SIHP 50-80-14-1974	Simons et al. 1991
Cultural Layer	Subsurface layer containing fire-cracked rock and charcoal deposits, radiocarbon dated to A.D. 1801–1939, at the Moana Hotel	SIHP 50-80-14-7068	Thurman et al. 2009
Cultural Layer	Intermittent habitation layer uncovered during archaeological monitoring with midden (shell and bone), hearths, firepits, charcoal, artifacts (octopus lure sinker, urchin file, bone pick, two basalt adze fragments, two shell ornaments, 11 basalt manuports; radiocarbon dating indicates continuous habitation from A.D. 1555 +/- 115 to modern times	SIHP 50-80-14-5940	Winieski et al. 2001; Winieski et al. 2002
Cultural Layer	Culturally modified wetland ground surface; organic material with soil ridges indicative of 'auwai; two overlapping deposits radiocarbon date to A.D. 1440–1640 and A.D. 1390–1490; located at the Waikiki Shopping Plaza, an extension of wetland agricultural environment documented by LeSuer et al. (2000)	SIHP 50-80-14-5796	Yucha et al. 2009
Imu	A trench (No. 10) extending across Kalākaua Avenue near the International Marketplace, also near a human burial (SIHP 50-80-14-5864), uncovered an imu pit with an entire pig still in situ, radiocarbon dated to A.D. 1441–1671	(none)	Bush et al. 2002
Lo'i	Buried remnants of lo'i and 'auwai, radiocarbon dated to A.D. 1420–1645, as well as a burial (see Burials)	SIHP 50-80-14-5459	McDermott et al. 1996

Site	Site Description	Site Number	Source
Lo'i	Lo'i retaining wall (in association with cultural layer and burial (see above) comprised of five courses of water rounded basalt boulders; likely a remnant of the extensive Waikīkī network of irrigated taro fields constructed in the fifteenth century attributed to the chief Kalamakua; radiocarbon dated to A.D. 1300–1480; data suggests an expansive and intensive wetland agricultural complex in the Waikīkī plains by the fifteenth century	SIHP 50-80-14-6707	Chiogioji et al. 2004
Lo'i	Buried lo'i sediments, radiocarbon dated to A.D. 1010–1280, which appears to be extremely early and is probably anomalous	SIHP 50-80-14-6680	McIntosh and Cleghorn 2004
Loko	Remnant alluvial sediments associated with a fish pond uncovered (name not documented)	SIHP 50-80-14-6700; 6703	Freeman et al. 2005
Loko Ka'ihikapu	Excavated, Fort DeRussy; basal sediments within and underlying the fishpond radiocarbon date to approximately A.D. 1400–1700, and indicate inland burning associated with clearance of land for agriculture	SIHP 50-80-14-4575	Denham and Pantaleo 1997b
Loko Kaipuni	Excavated, Fort DeRussy; basal sediments within and underlying the fishpond radiocarbon date to approximately A.D. 1400–1700, and indicate inland burning associated with clearance of land for agriculture	SIHP 50-80-14-4573	Denham and Pantaleo 1997b
Loko Kapu'uiki	Excavated, Fort DeRussy; basal sediments within and underlying the fishpond radiocarbon date to approximately A.D. 1400–1700, and indicate inland burning associated with clearance of land for agriculture	SIHP 50-80-14-4577	Denham and Pantaleo 1997b
Loko Paweo I	Excavated, Fort DeRussy; basal sediments within and underlying the fishpond radiocarbon date to approximately A.D. 1400–1700, and indicate inland burning associated with clearance of land for agriculture	SIHP 50-80-14-4574	Denham and Pantaleo 1997a, 1997b
Muliwai	Remnant of segment of the 'Āpuakēhau Stream bed, 30 feet in width	SIHP 50-80-14-6706	Chiogioji et al. 2004
Muliwai	Low-energy alluvial sediments associated with the now channelized muliwai of Kukaunahi	SIHP 50-80-14-5943	Winieski et al. 2002

Table 3. Burials in Waikīkī (Waikīkī Kai) (organized alphabetically by source)

Site	Site Description	Site Number	Source
Burials	Two human burials, including a child in a fully flexed position, uncovered during archaeological monitoring, part of a cultural layer (see Cultural Layer)	SIHP 50-80-14-4224	Beardsley and Kaschko 1997
Burials	Two burials uncovered during archaeological inventory survey	SIHP 50-80-14-6873; -6875	Bell and McDermott 2006
Burials	Human remains representing one individual uncovered in 1923	BPBM Oa-A0-18	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burial	Human remains representing two individuals uncovered in 1955, Fort DeRussy area	BPBM Oa-A3-15	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Human remains representing nine individuals uncovered in 1957 near the southeastern end of Kapi'olani Park	BPBM Oa-A3-91 to Oa-A4-02	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burial	Human remains representing one individual uncovered in 1961, Fort DeRussy area	BPBM Oa-A4-19	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burial	Human remains representing one individual uncovered in 1962, Fort DeRussy area	BPBM Oa-A4-21	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Human remains representing five individuals uncovered in 1963, Fort DeRussy area	BPBM Oa-A4-24	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Burials uncovered during excavation in 1963 for the construction of the Outrigger Canoe Club, including children, men and women in traditional burial position (legs bound tightly against the chest); number of burials reported to be 27 (Yost 1971:121-122) and 96 (Bishop Museum)	BPBM Oa-A4-25 to Oa-A4-55	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998; Yost 1971
Burials	Human remains representing four individuals uncovered in 1964, 2431 Prince Edward Street	BPBM Oa-A4-62	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998; Yost 1971

Site	Site Description	Site Number	Source
Burials	Human remains representing four individuals uncovered in 1964 near Outrigger Canoe Club	BPBM Oa-A4-64	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Human remains representing one individual with a funerary object (shell) uncovered in 1967 by Lloyd J. Soehren at the International Market Place where the restaurant "Tahiti by Six" was being built	BPBM Oa-A5-16	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Human remains representing eight individuals uncovered in 1970	BPBM Oa-A5-22	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burial	Human remains representing one individual uncovered in 1986, Queen's Beach	BPBM Oa-A5-84	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burial	Human remains representing two individuals uncovered in 1927, San Souci Beach	BPBM Oa-A6-33	Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998
Burials	Four human burials uncovered during archaeological monitoring, including one burial on the makai side of Kalākaua Avenue near the intersection with Duke's Lane (SIHP 50-80-14-5864)	SIHP 50-80-14-5864; -5856 C; 5860, U-V	Bush et al. 2002
Burial	Burial uncovered during archaeological inventory survey, in vicinity of cultural layer, lo'i and muliwai (see Cultural Layer)	SIHP 50-80-14-6705	Chiogioji et al. 2004
Burials	Three human burials uncovered during archaeological monitoring	SIHP 50-80-14-5861	Cleghorn 2001a, b
Burials	10 human burials and three animal burials uncovered during excavation at Halekulani Hotel in association with a cultural layer (see below)	SIHP 50-80-14-9957	Davis 1984
Burial	One human burial in extended position uncovered during archaeological monitoring in association with a cultural layer (see below) at Fort DeRussy	SIHP 50-80-14-4570	Davis 1991
Burials	During construction at the Waikīkī Aquarium in 1993, previously disturbed human remains were discovered in a back dirt pile	SIHP 50-80-14-4729	Dega and Kennedy 1993

Site	Site Description	Site Number	Source
Burials	45 human burials uncovered in nine burial locations at Fort DeRussy, many associated with cultural layers (see below)	SIHP 50-80-14-4570; -4579:4; -4966	Denham and Pantaleo 1997a, 1997b
Burials	Inadvertent discovery of one human burial during construction	SIHP 50-80-14-5937	Elmore and Kennedy 2001
Burials	Four burials uncovered in 1901 with associated conical whale teeth beads, glass beads, and a small niho palaoa on the property of James B. Castle (present Elks Club) during excavations for the laying of sewer pipes	(none)	Emerson 1902:18–20
Burials	Two burials uncovered during archaeological inventory survey, including a previously undisturbed coffin burial with associated grave goods likely associated with inhabitants of LCA 99	SIHP 50-80-14-6700; -6701	Freeman et al. 2005
Burials	Inadvertent discovery of two human burials during construction, Kalākaua Avenue	SIHP 50-80-14-3745	Griffin 1987
Burial	Inadvertent burial discovered during landscaping of Waikiki Sunset Hotel	SIHP 50-80-14-5301	Jourdane 1995
Burial	Five burials representing six individuals uncovered during archaeological monitoring	SIHP 50-80-14-5859; 6369 (and three unassigned burials)	Mann and Hammatt 2002
Burial	Burial in flexed position uncovered during archaeological inventory survey, as well as buried remnants of 'auwai and lo'i (see Cultural Layer)	SIHP 50-80-14-5460	McDermott et al. 1996
Burial	Inadvertent discovery of burial in back dirt pile during construction	SIHP 50-80-14-4890	McMahon 1994
Burial	Burial uncovered during archaeological monitoring, Hilton Hawaiian Village	SIHP 50-80-14-7087	Mooney et al. 2009
Burials	Recovery of three human burials at construction site	SIHP 50-80-14-2870	Neller 1984

Site	Site Description	Site Number	Source
Burials	Recovery of seven burials at construction site near Kapi'olani Park, including one with a scattering of small waterworn basalt stones ('ili'ili) beneath the burial and the head facing in an opposite direction from the body, two possible customs not reported in the ethnohistoric literature; evidence of porotic hyperostosis (small pores) on some of the skulls may have resulted from minor chronic nutritional deficiency (e.g., reliance on a few staple foods, such as taro), or infectious disease; one burial wrapped in kapa	SIHP 50-80-14-4127	Neller 1984
Burial	Burial in flexed position uncovered during archaeological inventory survey, lying in organic stained soil characteristic of the wetland agricultural soils of Waikiki; soil from nearby trench radiocarbon dated to A.D. 1400–1460	SIHP 50-80-14-6703	O'Leary et al. 2005
Burial	One human burial (SIHP 50-80-14-7067) in pit, in extended position uncovered during archaeological inventory survey of the Princess Ka'iulani Hotel; stratigraphy suggests that the burial likely post dates A.D. 1482–1666; glass whale tooth ivory on necklace were interred with individual—glass indicates historic era burial; disarticulated skeletal elements within the site of Kawaiaha'o Branch Church and Cemetery SIHP 50-80-14-7065)	SIHP 50-80-14-7065 and -7067	Runyon et al. 2010
Burial	Two burials uncovered during archaeological monitoring, as well as pockets of undisturbed cultural layers	SIHP 50-80-14-5744	Perzinski et al. 1999
Burials	24 human burials uncovered during archaeological monitoring of the Moana Hotel, as well as cultural layer (see Cultural Layer), buried in a pit, radiocarbon dated to A.D. 1410–1955	SIHP 50-80-14-1974	Simons et al. 1991
Burial	One isolated human skeletal fragment consisting of one tarsal phalange uncovered on the makai side of the Diamond Head Tower of the Moana Hotel	(none)	Thurman et al. 2009
Burial	Burial uncovered during archaeological monitoring	SIHP 50-80-14-7057	Tulchin and Hammatt 2009
Burial	A traditional burial uncovered during archaeological monitoring near Kapi'olani Park	SIHP 50-80-14-6946	Whitman et al. 2008

Site	Site Description	Site Number	Source
Burial	A previously disturbed burial uncovered during archaeological monitoring	SIHP 50-80-14-5797	Winieski and Hammatt 2001
Burials	44 human burials in clusters uncovered during archaeological monitoring, many were in traditional flexed or semi-flexed positions, near intersection of Kalākaua Avenue and Kealohilani Avenue	SIHP 50-80-14-5856 A-C; -5857; -5858 A-D; -5859 A-G; - 5860 A-T; -5861 A- E	Winieski et al. 2002
Burials	Skeletal remains of ten individuals, as well as four indigenous artifacts (sandstone ulu maika, basalt slingstone, basalt kukui nut lamp, basalt mortar bowl)	SIHP 50-80-14-5857 to -5862; -5863	Winieski et al. 2001

3.4.2.1 Place Names

The name **Waikīkī** translates as “water spurting from many sources,” and reveals the character of the intact watershed system of Waikīkī prior to European contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground. Before the construction of the Ala Wai Canal, these streams did not merge until deep within Waikīkī. As they entered the flat plain of Waikīkī, the names of the streams changed: Mānoa Stream became **Kālia Stream** and Pālolo Stream became **Pāhoa Stream**. They joined in the ‘ili of **Hamohamo** (rub gently [as the sea on the beach]) and then divided into three new streams that flowed into the sea—**Kuekaunahi**, **‘Āpuakēhau**, and **Pi‘inaio**. The land between these three streams was called **Waikolu**, meaning “three waters” (Kanahele 1995:7–8).

Waikīkī Kai was once divided into smaller ‘ili lands, including (listed generally from west to east) **Kālia** (waited for), **Pau** (finished), **Niukukahi** (coconut standing alone), **Loko Moo**, **Keōmuku** (the shortened sand), **Helumoa** (chicken scratch), **Ulukou** (kou tree grove), **Mookahi**, **Kaluaokau**, **Auaukai**, **Hamohamo** (rub gently [as the sea on the beach]), **Uluniu** (coconut grove), **Kapuni** (the surrounding), **Kekio**, **Kāneloa** (tall Kāne), **Kapua** (the flower), and **Kaluahole** (the āhole fish cavern (Bishop 1881; Ī‘ī 1959:92–94).

Kālia ‘Ili, located in the western section of Waikīkī, is a name used for the central portion of Mānoa Stream and the name of the coastal area where the **Pi‘inaio Stream** emptied into the ocean. The exact meaning of Pi‘inaio is unknown, but pi‘ina means “climb or ascend” (Pukui and Elbert 1986:327). The stream’s mouth was on the western end of the Waikīkī coast, where the Ala Moana Shopping Center is now located, west of Duke Kahanamoku Beach and Lagoon.

The Project area is located in **Kaluaokau ‘Ili** in the central area of Waikīkī. There are several possible meanings of Kaluaokau depending on pronunciation and combination of root words. Kaluaokau most likely means “the pit of kau” (Feaser 2006:90). Henry Kekahuna, a Hawaiian ethnologist, pronounced the ‘ili as Ka-lu‘a-o-ka‘u, which Thrum (1922:641) translated as “the grave of Ka‘u” (lu‘a means “heap, pile or grave”). **‘Āpuakēhau Stream**, literally “basket [of] dew” and possibly named for a rain (Pukui et al. 1974), flowed through the southeastern corner of the Project area in this ‘ili (see Section 3.4.3.1, Mo‘olelo, for the story of ‘Ōlohe at **‘Āpuakēhau**).

Helumoa ‘Ili, located in the central makai section of Waikīkī, translates as “chicken scratch,” a reference to mo‘olelo about the bodies of sacrificial victims being pecked over for maggots (see Section 3.4.3.2, Mo‘olelo, Helumoa ‘Ili, ‘Āpuakēhau Heiau, and Ka‘opulupulu for an expanded mo‘olelo). Two foci of chiefly residence were at places called Helumoa, now the site of the Royal Hawaiian Hotel, and **Ulukou** (kou tree grove), now the site of the Moana Hotel (Hibbard and Franzen 1986:2). **‘Āpuakēhau Stream** emptied into the ocean between these two centers. **Kawehewehe**, sometimes synonymous with the mouth of ‘Āpuakēhau Stream and also the name of the reef entrance and channel at what is known today as Grey’s Beach (just east of the contemporary Halekūlani Hotel), translates as “the removal,” which appears to refer to the water’s famous healing powers for removing sickness and forgiving of sins (Pukui et al. 1974:99). A famous surfing spot called **Kalehuawehe** was located at the mouth of ‘Āpuakēhau Stream (Hibbard and Franzen 1986:2).

Kapua ʻĪli, located in the eastern section of Waikīkī, was an ancient surfing area, now filled in and part of Kapiʻolani Park (Finney and Houston 1966:28). In 1809, Kamehameha put to death his nephew, Kanihonui, who committed adultery with Kaʻahumanu, and placed his remains at Papaʻenaʻena Heiau. As Kaʻahumanu's "wrath was aroused," she began to make plans to take the kingdom from Kamehameha by force when she pronounced a surfing holiday at Kapua, since "the surf was rolling fine then" (ʻĪ 1959:51). Kapua was also a site where "bone-breaking wrestlers" engaged in their sport (Kamakau 1992:72).

3.4.2.2 Cultivation and Habitation

The coastal village of Waikīkī was most likely centered around the mouth of ʻĀpuakēhau Stream in the vicinity of the Project area (near the Royal Hawaiian Hotel). Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to the lower valleys of Mānoa and Pālolo. This field system was an impressive feat of engineering, the design of which is traditionally attributed to the chief Kalamakua. It took advantage of streams descending from the valleys of Makiki, Mānoa and Pālolo. The loʻi kalo, in combination with coconut groves and numerous fishponds along the Waikīkī shoreline, enabled the growth of a sizeable population. Captain George Vancouver, arriving in Waikīkī in 1792, and the naturalist of the expedition, Archibald Menzies, described the village of Waikīkī, aqueducts (ʻauwai) that irrigated vast fields of taro on the plain, and well-stocked fishponds (Menzies 1920:23–24; Vancouver 1798:161–164). This was later depicted by Lt. Charles R. Malden, of the British vessel *Blonde*, in 1825 (Figure 8), and Joseph Marie Henri de LaPasse, of the French ship *Eurydice*, in 1855 (Figure 9).

Archaeological surveys and excavations conducted for cultural resource management work in Waikīkī have uncovered cultural layers that have been radiocarbon dated to approximately A.D. 1400 to 1800 (see Figure 6, Table 2 for locations and descriptions throughout Waikīkī). Many of these cultural layers contain evidence of habitation and occupational activities. For example, a cultural layer located approximately 1,300 feet east of the Project area and radiocarbon dated to between A.D. 1430–1630 contains evidence of habitation, with pits, firepits, post molds, food debris (shells, fish, birds, dogs, pigs, rodents), and two human burials, and artifacts (basalt flakes, volcanic glass, worked pearl shell, basalt and volcanic glass cores, a basalt adze, adze fragments, a coral file and abraders, and a pearl shell fishhook) suggest occupational activities of fishing, manufacture of tools or ornaments, and use of tools as adzes (SIHP 50-80-14-4224, Beardsley and Kaschko 1997).

Several cultural layers indicative of habitation are located in close proximity to the International Market Place. A well-defined cultural layer, located at the Princess Kaʻiulani Hotel, contains charcoal, fire effected rock, midden material, pits, and intact cultural deposits that radiocarbon dates to A.D. 1725–1815 (SIHP 50-80-14-7066, Runyon et al. 2010). A cultural layer (charcoal) in association with 24 burials, located at the Moana Hotel, with pits, postholes, and artifacts (boar tooth pendant, volcanic glass, cowry and pearl shell lures and scrapers, coral abraders, basalt adze fragments, and basalt flakes, awls, adzes, and hammerstones) radiocarbon dated to A.D. 1334–1955 (SIHP 50-80-14-1974, Simons et al. 1991). Another cultural layer at the Moana Hotel contains fire-cracked rock and charcoal deposits, radiocarbon dated to A.D. 1801–1939 (SIHP 50-80-14-7068, Thurman et al. 2009). In addition, A trench (No. 10) extending across Kalākaua Avenue near the International Marketplace uncovered an imu pit with

an entire pig still in situ, radiocarbon dated to A.D. 1441–1671 (no SIHP number, Bush et al. 2002).

Other cultural layers provide evidence of the vast wetland cultivation, including buried lo'i sediments, retaining walls and bunds, channelized muliwai and 'auwai, and kuāuna (a bank of an irrigated taro patch) (see Figure 6, Table 2 for locations and descriptions throughout Waikīkī). One such cultural layer is located in close proximity to the Project area. At the Waikīkī Shopping Plaza, a culturally modified wetland ground surface with organic material radiocarbon dated to A.D. 1440–1640 and A.D. 1390–1490 contains soil ridges indicative of 'auwai, which is an extension of a wetland agricultural environment documented by LeSuer et al. (2000) (SIHP 50-80-14-5796, Yucha et al. 2009).

Mā'ilikūhahi, upon his ascent to ali'i nui of O'ahu in approximately A.D. 1490, shifted his residence from Waialua to Waikīkī, which may have initiated the pattern of royal residence at Waikīkī (Kamakau n.d., cited in McAllister 1933:74). With the ascension of Mā'ilikūhahi, Waikīkī became the ruling seat of the O'ahu chiefs (Beckwith 1970:383). Five generations later, during the late 1500s, the ali'i Kākuhihewa lived at Ulukou (now occupied by the Moana Hotel) just makai of the Project area. Kākuhihewa defeated so many invading chiefs that Ulukou (and the island of O'ahu) became known as ke one 'ai ali'i o Kākuhihewa, or the chief-consuming sands of Kākuhihewa (Hibbard and Franzen 1986:2). In addition, La'ie-lohelohe, the daughter of noted Waikīkī chief Kalamakua, was raised within the bounds of Kaluaokau. She was betrothed to a Maui chief and later gave birth to Kiha-a-Pi'ilani, the great Maui leader. Kiha-a-Pi'ilani was born at 'Āpuakēhau Heiau, once located on the beach near Kaluaokau (Kamakau 1991:49). The preeminence of Waikīkī as a residence of chiefs continued into the eighteenth century, marked by Kamehameha's decision to reside there upon wresting control of O'ahu by defeating the island's chief, Kalanikūpule, in 1795. The nineteenth century Hawaiian historian John Papa 'Ī'ī, a member of the ali'i, notes that the king's Waikīkī residence was located at Pua'ali'ili'i near the sands of 'Āpuakehau ('Ī'ī 1959:17).

The focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu changed with Euro-American contact. The village of Kou (Honolulu), with the only sheltered harbor on O'ahu, became the center for trade with visiting foreign vessels, drew increasing numbers of Hawaiians away from cultivation and aquaculture in Waikīkī, and foreign diseases devastated the populace (Chamberlain 1957:26). The shift in preeminence of Waikīkī is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu.

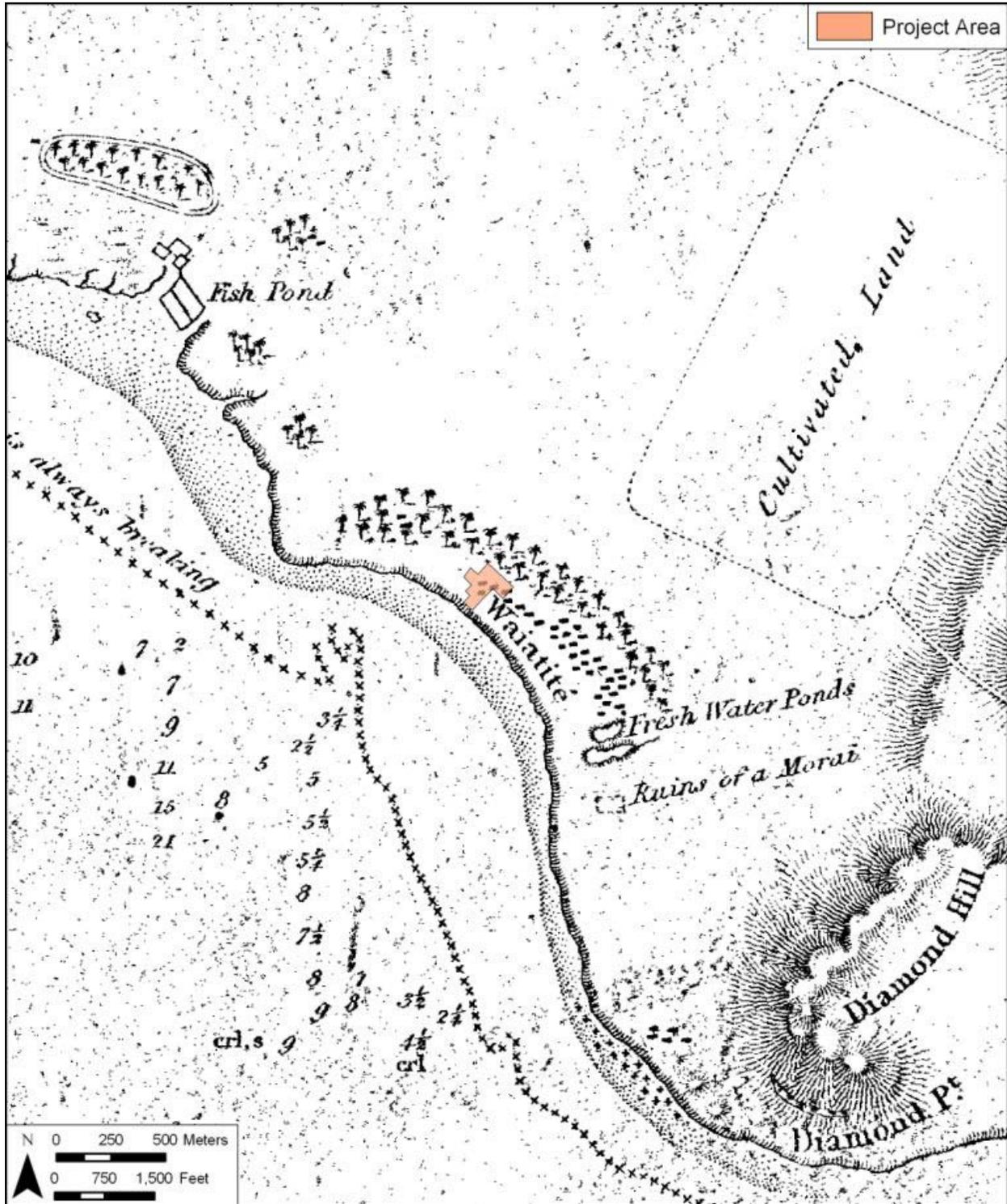


Figure 8. 1825 map by Lt. Charles R. Malden from the British ship *Blonde*, showing the Project area in the village of “Waiatite” [Waikīkī] surrounded by a coconut grove and in the vicinity of taro fields and fishponds

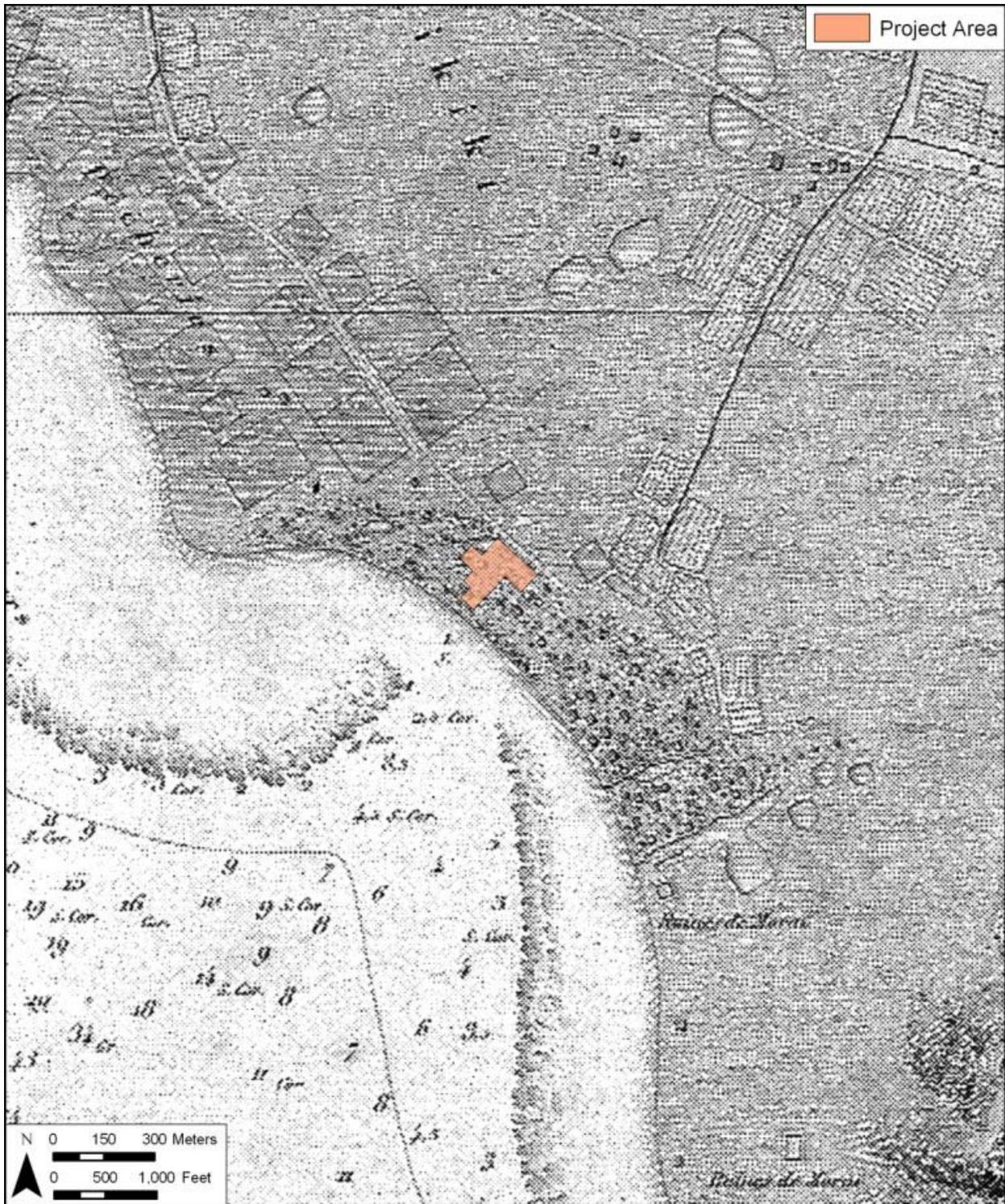


Figure 9. 1855 map of southeastern O'ahu by Joseph Marie Henri de LaPasse, of the French ship *Eurydice* (map reprinted in Fitzpatrick 1986:82–83), showing the Project area within a coconut grove and surrounded by taro fields (rectangles) and near fishponds

3.4.2.3 Aquaculture

Historic maps and images depict the locations of numerous loko i'a in Waikīkī to the west of the Waikīkī Plain (Kapi'olani Park) and the current Project area (see Figure 10), and historic documents describe “several hundred” and “innumerable” artificial freshwater fishponds extending a mile inland from the shore (Bloxxam 1925:35–36, cited in McAllister 1933:76). Two studies by the U.S. Commission of Fish and Fisheries (Bowers 1902:429; Cobb 1902, cited in McAllister 1933:76) listed extant fishponds in Kālia in 1901, including **Ka'ihikapu** (the taboo sacredness), **Kūwili** (stand swirling), **Kaipuni (1 and 2)**, **Paweo (1 and 2)**, **Kapu'uiki**, **Kapaakea**, **Maalahia**, **Opu**, and **Opukaala**, as well as several fishponds with undocumented names. In addition, historic maps provide the locations of several of these and other fishponds: **Kaohai**, **Oo**, **Halemauola**, **Moo**, **Kuilei** (lei stringing), and **Kaheana** (Bishop 1881).

Archaeological excavations of several of these loko have uncovered alluvial sediments (see Figure 6, Table 2 for locations and descriptions). Excavated sediments of four loko in Fort DeRussy—Ka'ihikapu (SIHP 50-80-14-4575, Denham and Pantaleo 1997b), Kaipuni (SIHP 50-80-14-4573, Denham and Pantaleo 1997b), Kapu'uiki (SIHP 50-80-14-4577, Denham and Pantaleo 1997b), and Loko Paweo I (SIHP 50-80-14-4574, Denham and Pantaleo 1997a, 1997b), have radiocarbon dated to approximately A.D. 1400–1700, and indicate inland burning associated with clearance of land for agriculture.



Figure 10. View from a fishpond in Kālia towards Diamond Head circa 1890 (photograph courtesy of Bishop Museum Archives)

3.4.2.4 Heiau and other Religious Sites

Thomas G. Thrum reports that seven heiau were once located in Waikīkī, including Papa'ena'ena Heiau, Kapua Heiau, Kūpalaha Heiau, Helumoa Heiau, Makahuna Heiau, Kamauakapu Heiau, and Kulanihakoi Heiau (1907a:44), as well as four large pōhaku that constituted a religious site, commonly called the Wizard Stones of Kapeimāhū (Thrum 1907b:139–141). Samuel Kamakau notes another heiau of Waikīkī called Halekumukaaha Heiau (n.d., cited in McAllister 1933:78). Several of the heiau were of po'okanaka classification, which were used ceremoniously for human sacrifices (Stokes 1991:24). The locations of several heiau in the vicinity of Kapi'olani Park are indicated on early historic maps, such as by LaPasse in 1855 (Figure 9).

Helumoa Heiau, also known as **'Āpuakēhau Heiau**, was located in central Waikīkī near the muliwai (river mouth) of 'Āpuakēhau Stream in the vicinity of the Project area. This heiau, of po'okanaka class, was the site of the sacrifice of Kauhi-a-Kama, a defeated mō'ī of Maui, during his attempted conquest of Oahu about 1610 (Thrum 1907a:44). This sacrificial heiau was also where Ka'opulupulu—the last O'ahu-born Kahuna Nui of O'ahu—was laid after being slain in Wai'anae by Kahāhana, and Kahāhana was also sacrificed at Helumoa Heiau by Kahekili's invading army from Maui (Thrum 1904:112–113). Portions the Royal Hawaiian Hotel are built on the former site of Helumoa Heiau. An athletic field of ali'i was also formerly built at the site of the Royal Hawaiian Hotel, as excavations for the hotel uncovered 'ulumaika (game) stones (Thrum 1907a:79) (see Section 3.4.3.2, Mo'olelo, Helumoa 'Ili, 'Āpuakēhau Heiau, and Ka'opulupulu for an expanded mo'olelo).

Another religious site in Waikīkī is, according to mo'olelo, **Nā Pōhaku 'Ola Kapaemahu a Kapuni**, commonly referred to as the **Wizard Stones of Kapeimāhū**. These stones were unearthed in the late 1800s on the Waikīkī premises of the Cleghorn family, including Governor A. Cleghorn, his wife Princess Likelike, and their daughter Princess Ka'iulani. According to a mo'olelo gathered by Thrum (1907b:139–141), four soothsayers from the court of a Tahiti king came to Hawai'i and helped to heal many people. Four large stones were gathered from the vicinity of a “bell rock” in Kaimukī and erected in Waikīkī to commemorate them, two at their habitation and two at their bathing place in the sea. The chief of the wizards, Kapaemahu, named his stone after himself, and a virtuous young chiefess was sacrificed and placed beneath the stone. Today they are located at Kūhiō Beach Park (Thrum 1907b:139–141) (see Section 3.4.3.3, Mo'olelo, Nā Pohaku 'Ola Kapaemahu a Kapuni for an expanded mo'olelo).

At the base of Lē'ahi (Diamond Head), **Papa'ena'ena Heiau** was once seen from Waikīkī and visited and described by many early voyagers to Hawai'i (Site 58, McAllister 1933:71–74, noted as “Ruines de Morae” in Figure 9). Papa'ena'ena Heiau, of po'okanaka class, was a quadrangular paved terraces approximately 130 by 70 feet with walls on three sides but open to west, which faced the village of Waikīkī (McAllister 1933:74). Kamehameha commanded sacrifices at Papa'ena'ena Heiau, and in 1795, the bodies of Kiana, mō'ī of O'ahu, and other slain chieftains from the battle of Nu'uānu were impaled upon its walls (Jarves 1843:59–60, cited in McAllister 1933:73). Two travelers, Daniel Tyerman and George Bennett, recorded the ceremonies of this heiau as reported by an observer:

In the year 1804, when the late king, Tamehameha [Kamehameha], was on his way from Hawaii, to invade Tauai [Kaua'i], he halted with an army of eight thousand men at Oahu. The yellow fever broke out among the troops, and in the course of a few days swept away more than two-thirds of them. During the plague, the king repaired to the great marae at Wytiti [Waikīkī], to conciliate the god, whom he supposed to be angry. The priests recommended a ten days' tabu, the sacrifice of three human victims, four hundred hogs, as many cocoanuts, and an equal number of branches and plantains. Three men, who had been guilty of the enormous turpitude of eating cocoa-nuts with the old queen (the present king's mother), were accordingly seized and led to the marae. But there being yet three days before the offerings could be duly presented, the eyes of the victims were scooped out, the bones of their arms and legs were broken, and they were then deposited in a house, to await the coup de grace on the day of the sacrifice. While these maimed and miserable creatures were in the height of their suffering, some persons, moved by curiosity, visited them in prison, and found then neither raving nor desponding, but sullenly singing the national *huru*—dull as the drone of a bagpipe, and hardly more variable—as though they were insensible of the past, and indifferent to the future. When the slaughtering time arrived, one of them was placed under the legs of the idol, and the other two were laid, with the hogs and fruit, upon the altar-frame. They were then beaten with clubs upon the shoulders till they died of the blows. This was told us by an eye witness of the murderous spectacle. (Tyerman and Bennett 1831:423, cited in McAllister 1933:71)

Kamehameha was said to have visited Papa'ena'ena Heiau before setting off to battle for Ni'ihau and Kaua'i in 1804. Five years later, Kamehameha placed the remains of his nephew, Kanihonui, who committed adultery with Ka'ahumanu, at Papa'ena'ena Heiau, "all prepared in the customary manner of that time" (Īī 1959:51). This would have been one of the last human sacrifices in the kingdom. After it was destroyed by Kanaia in about 1856, the stones were used to enclose the premises of Queen Emma as well as road construction (Thrum 1907a:44). Now, the Hawai'i School for Girls at La Pietra is located on the former site of Papa'ena'ena Heiau (Becket 1999:x).

Kapua Heiau, of po'okanaka class, was located in Kapi'olani Park near Camp McKinley. It is reported to have been connected to Papa'ena'ena Heiau. Fragments of its walls torn down in 1860 reveal that it was approximately 240 square feet. Mo'olelo indicate that Kaolohaka, a chief from Hawai'i, was sacrificed at Kapua Heiau on suspicion of being a spy (Thrum 1907a:44).

Another heiau in Kapi'olani Park closely associated with Papa'ena'ena Heiau was **Kūpalaha Heiau**, located near the Cunha cottages (Thrum 1907a:44). According to a previously collected oral history, these cottages were located at the intersection of Lemon Road and Kapahulu Avenue (University of Hawai'i Center for Oral Histories 1985:924). Kakuhihewa, mō'ī of O'ahu circa 1540–1634, attempted to sacrifice a man from Honolulu named Kapo'i at Kūpalaha Heiau for consecrating a heiau called Manu'a on a day that the mō'ī had made kapu (restricted, taboo). Kakuhihewa's warriors were then attacked by owls from Moloka'i, Lana'i, Maui, Hawai'i, O'ahu, Kaua'i, and Ni'ihau at the order of Kapo'i's 'aumakua (deified ancestor), which was a pueo (owl). The owls defeated Kakuhihewa's warriors in the mo'olelo known as the "Battle of

the Owls.” Kakuhihewa acknowledged that Kapo'i's akua (god) was a powerful one and from that time, the owl has been recognized as one of the many deities venerated by the Hawaiian people (Kamakau 1964:23; Thrum 1905:200–202). This failed attempt to sacrifice Kapo'i at Kūpalaha Heiau may indicate that this heiau was of po'okanaka class.

3.4.2.5 Burials and Human Sacrifices

Four heiau in Waikīkī, of po'okanaka class, were associated with human sacrifice, including Papa'ena'ena Heiau, Kapua Heiau, Helumoa Heiau (Thrum 1907a:44), and Kūpalaha Heiau (Thrum 1905:200–202) (see Section 3.4.2.4, Heiau). In addition, sacrificial drownings of kauwā, an outcast caste, took place at several sites on O'ahu, including Kawaiulumuma'i, Kewalo, Kualoa, and Waikīkī. Mo'olelo indicate the sea of Waikīkī was used for such drowning (*Ka Loea Kālai'āina* 1899, translation in Sterling and Summers 1978:33). According to James Macrae, a member of his party discovered numerous skulls at the base of the steep makai cliffs of Lē'ahi in 1825, which he later learned was a place of execution of criminals (Macrae 1922:33–34, cited in McAllister 1933:77–78). In Waikīkī, a row of rocks called **Pae-ki'i** marks a site where, according to Mary Pukui, strangers suspected of initiating war or searching for human sacrifices were drowned, a type of death called kai he'e kai (Beckwith 1970:89).

Previous archaeological excavations and surveys have indicated a relatively high density of burials within the Jaucas sand deposits of Waikīkī (see Figure 7, Table 3 for locations and descriptions). The preferred locations for interment of the dead within these deposits were lands slightly elevated above the water table, which includes the Project area. Areas of very high density of burials include the present Outrigger Canoe Club (96 burials, Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998), Kālia Road in Fort DeRussy (45 burials, Denham and Pantaleo 1997a, 1997b), near the intersection of Kalākaua Avenue and Kealohilani Avenue (44 burials, Winieski et al. 2002), and the Moana Hotel (24 burials, SIHP 50-80-14-1974, Simons et al. 1991). The burials at the Moana Hotel, in close proximity to the Project area, are associated with a cultural layer (charcoal, pits, postholes, and artifacts) that were radiocarbon dated to A.D. 1334–1955 (Simons et al. 1991). In addition, one isolated human skeletal fragment consisting of a tarsal phalange was uncovered on the makai side of the Diamond Head Tower of the Moana Hotel (no SIHP site designation, Thurman et al. 2009).

Smaller concentrations of burials (e.g., two to ten individuals) and individual burials have also been uncovered throughout much of Waikīkī. Of particular significance to the proposed Project are human remains representing one individual buried with a funerary object (shell) that were uncovered in 1967 by Lloyd J. Soehren during construction of the “Tahiti By Six” bar, located within the International Market Place (Bernice Pauahi Bishop Museum [BPBM] Oa-A5-16, Bishop Museum Native American Graves Protection and Repatriation Act [NAGPRA] Inventory O'ahu Federal Register 1998). In addition, the following burials have been uncovered along or near Kalākaua Avenue in close proximity to the Project area (within 400 feet): SIHP 50-80-14-5856-A and SIHP 50-80-14-5856-B, which was found in a flexed position indicative of traditional Hawaiian burial practices (Winiewski et al. 2002); SIHP 50-80-14-5856-C, SIHP 50-80-14-5864-C, 50-80-14-5860-U and –V, which were part of a concentration of burials (Bush et al. 2002); SIHP 50-80-14-3745 (Griffin 1987); SIHP 50-80-14-6703 (two burials), which were associated with wetland agricultural soils that radiocarbon dated to A.D. 1400–1460 (O'Leary et al. 2005); and SIHP 50-80-14-5863 (two burials) (Winieski et al. 2001). Also, a burial at the

Princess Ka'iulani Hotel was uncovered in an extended position with historic-era funerary objects (glass beads) (SIHP 50-80-14-7067, Runyon et al. 2010), and disarticulated human skeletal elements were uncovered within the former Kawaiaha'o Waikīkī Branch Church and Cemetery (SIHP 50-80-14-7065, Runyon et al. 2010).

3.4.2.6 Ala Hele

John Papa 'Ī'ī described the "Honolulu trails of about 1810" ('Ī'ī 1959:89), including the coastal trail from Honolulu to Waikīkī, which traversed just makai of the Project area (Figure 11):

The trail from Kawaiaha'o which led to lower Waikiki went along Kaananiau, into the coconut grove at Pawaa, the coconut grove of Kuakuaka, then down to Piinaio; along the upper side of Kahanaumaikai's coconut grove, along the border of Kaihikapu pond, into Kawehewehe; then through the center of Helumoa of Puaaliili, down to the mouth of the Apuakehau stream; along the sandy beach of Ulukou to Kapuni, where the surfs roll in; thence to the stream of Kuekaunahi; to Waiaula and to Paliik...

From Paliiki the trail ran up to Kalahu, above Leahi, and on to the place where the Waialae stream reached the sand. The trail that ran through Kaluahole went to Kaalawai, up over, and down into Kahala, to meet the other trail at the place where the stream reached the sand...('Ī'ī 1959:92-94)

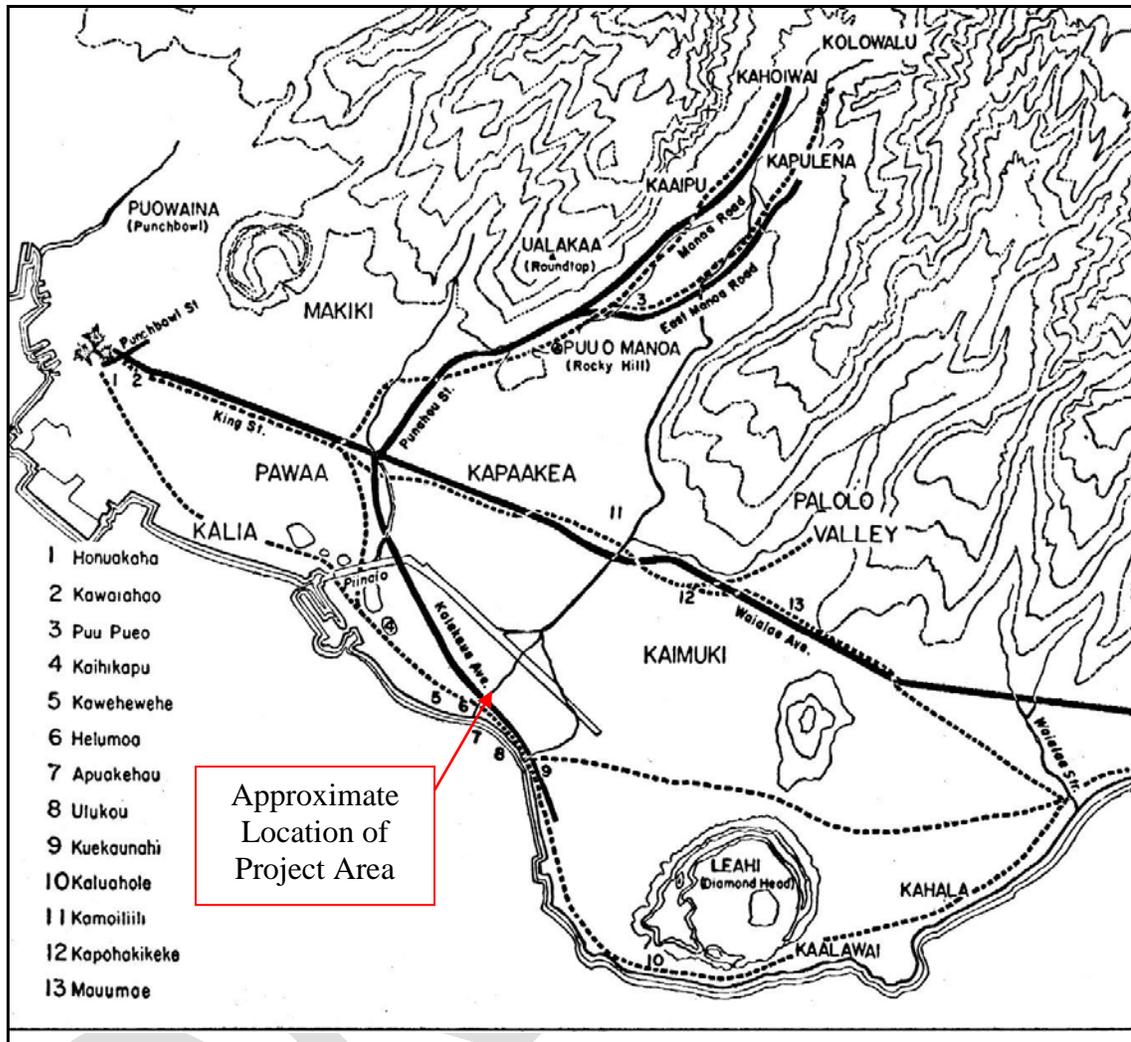


Figure 11. Trails on the southwest coast of O’ahu ca. 1810 (Sketch by Gerald Ober; reprinted in ‘Īī 1959:93; not to scale), showing locations of some place names in Waikīkī; note, the coastal trail traverses near the approximate location of the current Project area

3.4.3 Mo’olelo

In close proximity to the Project area are three wahi pana—the stream of ‘Āpuakēhau, Helumoa (or ‘Āpuakēhau) Heiau, and Nā Pohaku ‘Ola Kapaemahu a Kapuni, commonly referred to as the Wizard Stones—with associated mo’olelo.

3.4.3.1 ‘Āpuakēhau and Ka-lua-‘Ōlohe

‘Āpuakēhau is mentioned in a mo’olelo as the home of the cruel chief ‘Ōlohe, a master of lua wrestling. The defeat of this chief led to the naming of the area now covered by Kapi’olani Park as Ka-lua-‘Ōlohe, or “the lua fighting of ‘Ōlohe” (Pukui et al. 1974:79):

Loheloa came from Waipio on a huge log. He came first to Makapuu and then to Keauau Point, now called Leahi. He saw a strange glow like a ball of fire there. He asked for the chief Olohe and was told that the light was his.

He saw some fishermen who told him to go away for he was scaring the fish. He called to Ku and Hina to bring them a school of fish which they did. The natives were grateful. He lifted his huge canoe and rested one end at Haula and the other at Namahana, against the hill. He told the people that he wanted to wrestle with their chief Olohe, a dogman who lived at Apuakehau, Waikiki. A messenger came to tell the chief who accepted the challenge. In the meantime the men were busy catching fish brought to them by Loheloa. A messenger was sent to bring Loheloa to the chief and Loheloa suggested that they wrestle in the open where they can be seen. He would bet his bones and his canoe on himself.

Olohe and Loheloa fought on the field now known as Kapiolani Park. Olohe punched and raised a gale that flattened the ilima bushes. Loheloa slapped his ear hard enough to throw him in the air. The place he fell is called Kalua-Olohe (Olohe's pit) to this day. Loheloa won and the people shouted with joy over the defeat and death of their cruel chief. (Hainakolo, *Hawaii Holomua*, July 21, 1912, Oahu Place Names, cited in Sterling and Summers 1978:279)

3.4.3.2 Helumoa 'Ili, 'Āpuakēhau Heiau, and Ka'opulupulu

Thrum (1998:203–214) recounts the mo'olelo of the kahuna nui (highest priest), of O'ahu, Ka'opulupulu, who lived in Waimea, O'ahu. He had a son named Kahulupu'e, who he taught all the traditions and rituals of the priestly caste. At this time, the ruler (ali'i aimoku) of O'ahu was Kumuhana, a cruel chief who terrorized his people and would not listen to the counsel of his priest, Kahulupu'e. Kumuhana was finally driven off the island by the people and the lesser chiefs. When Kahakili, the king of Maui, heard this news, he sent his foster son, Kahahana (brother of Kumuhana), to rule O'ahu in Kumuhana's place (ca. 1773). Kahahana chose a grove of coconut and kou trees, called Ulukou, located on the Waikīkī coast as his place of residence, and many ali'i gathered in that place around him. One day, Kahahana sent a messenger to Ka'opulupulu to attend him at Ulukou, who traveled from his home in Waimea and was greeted by the retainers of the king when he reached the mouth of the stream 'Āpuakēhau. At first Kahahana valued the wisdom of the priest, but after several years, Kahahana began to be as cruel to the people as his predecessor, Kumuhana. In protest, the priest Ka'opulupulu left Waikīkī to return to his home in Waimea, where he tattooed his knees, a sign that Kahahana had turned a deaf ear to his advice. This angered the king, who sent messengers to order Ka'opulupulu and his son, Kahulupu'e, to come to Wai'anae, where Kahahana then resided.

At Wai'anae, Ka'opulupulu and his son were placed into a special grass hut, one tied to the end post and one tied to the corner post. The next day, Kahahana ordered his men to torture the son, stabbing his eyes and stoning him while his father watched. When Ka'opulupulu saw this, he commanded his son to flee into the sea, saying these words, which contained a prophecy:

*E nui ke aho, e ku'u keiki,
a moe i ke kai, no ke kai la
ho'i ka 'āina.*

Take a deep breath, my son, and
lay yourself in the sea, for then
the land shall belong to the sea. (Pukui 1983:44)

Ka'opulupulu was taken by the soldiers to Pu'uloa (Pearl Harbor), at 'Ewa, and slain before the king. His body was put into a canoe and taken to Waikīkī, where it was placed high in the coconut trees at Kukaeunahi (at the heiau of Helumoa, or 'Āpuakēhau), so that the flesh would decompose and fall to the sand (Thrum 1998:214). According to one mo'olelo, the meaning of Helumoa, "chicken scratch," refers to chickens scratching to find the maggots that fell from victims placed in the trees who were human sacrifices at the heiau of 'Āpuakēhau (Pukui et al. 1974:44). When the king of Maui, Kahekili, heard this news he grieved for Ka'opulupulu and turned against his foster son. With his warriors, he set out over the sea for Waikīkī to take back the rulership of O'ahu under his own authority. This fulfilled the prophecy of Ka'opulupulu. According to S.M. Kamakau and David Malo, this saying was also in keeping with a prophecy by Kekiopilo presaging the arrival of the islands by foreigners, which would lead to "the foreigners possess[ing] the land" (Thrum 1998:214).

The sand of Helumoa was known as Ke one'ai ali'i o Kakuhihewa (The Chief Devouring Sand of Kakuhihewa) because of the curse placed by the prophet Ka'opulupulu. When Ka'opulupulu was brought with his son, Kahulupu'e, to be executed at Waikīkī, he cursed the place where his body-grease (hinu) would drip upon the sand, as well as the chiefs and the people (Hibbard and Franzen 1986:5). This curse continued to have an effect for the descendants of Kamehameha. Kamehameha II died in England. From the warning of this curse by the kahuna, Luau-nui-a-lepokapo, after the death of Kamehamea II, Kamehameha III (Kauikeaouli) transferred the seat of the government from O'ahu to Lahaina in 1938. He later reconsidered moving back to O'ahu against the counsel of his kahuna:

"O chief! This land of Oahu of Lua is made bitter by the fat of the man of god and his words lie like a squirming maggot for Kakuhihewa. If you listen to those who ask that the government be taken back to Oahu, it will become a maggot which will consume your race." (Green and Pukui 1936:123)

However, Kauikeaouli ignored the advice, and the prophecy was fulfilled with the smallpox epidemic of 1852–1853 (Thrum 1998:214).

3.4.3.3 Nā Pohaku 'Ola Kapaemahu a Kapuni

Richard Paglinawan summarizes the history of Nā Pōhaku 'Ola Kapaemahu a Kapuni, or the Life-giving Stones of Kapaemahu and Kapuni, commonly referred to as the Wizard Stones (Paglinawan 1997). According to Mr. Paglinawan's summary of various mo'olelo, four healers gifted in medicinal practices once came from Kahiki [the ancestral homeland of the Hawaiians], most likely the sacred land of Raiatea. While some sources claim that they were homosexuals, Tutu Mary Kawena Pukui asserts that they were gender neutral. The wizards included Kapaemahu, who, due to his impartial gender, could examine and heal both men and women, Kahoe, a diagnostician who could determine illness just by visual assessment, Kahaloa, who was able to breathe life into ill patients, and Kapuni, who could envelope his patients with his mana to overcome their illness (Paglinawan 1997).

When the four healers returned to Kahiki, they had stones placed to commemorate their existence. They were most likely quarried from a site in Kaimukī near the present-day intersection of Wai'alae Avenue and 5th Avenue, and then transported to Waikīkī. The coastal and inland region of Waikīkī was dominated by lo'i, which would have made the movement of

these pōhaku difficult, but, according to Dr. George S. Kanahēle, the stones may have been moved on a 12-foot wide causeway that extended between Mānoa and Waikīkī, which was observed by George Vancouver in 1792 (Paglinawan 1997).

Two of the commemorative stones were placed at the healers' residences, and two were placed in their bathing place in the sea. The Honorable A.S. Cleghorn unearthed an eight-ton stone at his residence close to the Moana Hotel in 1905. Another stone weighing ten tons was uncovered by Mr. Luted, and two more were excavated in a straight line with the others. Underneath the ten-ton stone Mr. Cleghorn uncovered a female jaw bone and some crude images, which he later cemented onto the stone. In 1941, the Waikiki Bowling Alley was constructed with the stones serving as part of the foundation, but were then uncovered in 1958 when the building was razed. In 1963 the stones were located together on the beach, and in 1980 they were relocated to their present site near the police substation. The location of Mr. Cleghorn's cement casings indicated that the stones had been positioned incorrectly; however, a decision was reached to leave them as they had been placed (Paglinawan 1997).

3.4.4 The Māhele

To try to maintain sovereignty of the land, the Mōi (King) Kamehameha III in 1846–1848 supervised the Māhele—the division of Hawaiian lands—that transformed the land system in Hawai'i from collective to private ownership. Modeled after Western concepts, certain lands to be reserved for himself and the royal house were known as Crown Lands, lands claimed by ali'i and their konohiki were called Konohiki Lands, and lands set aside to generate revenue for the government were known as Government Lands. In 1850, these three categories of land were subject to the rights of the maka'āinana and other tenants (naturalized foreigners, non-Hawaiians born in the islands, or long-term resident foreigners), who could make claims for their habitation and agricultural plots, known as kuleana (Native land rights) parcels (Chinen 1958:8–15).

Under the Kuleana Act of 1850, the maka'āinana were required to file their claims with the Board of Commissioners to Quiet Land Titles (Land Commission) within a specified time period in order to apply for fee-simple title to their lands. The claim could only be filed after the claimant arranged and paid for a survey, and two witnesses testified that they knew the claimant and the boundaries of the land, knew that the claimant had lived on the land since 1839, and knew that no one had challenged the claim. Then, the maka'āinana could present their claims to the Land Commission to receive their Land Commission Award (LCA) (Kame'eleihiwa 1992).

Not everyone who was eligible to apply for kuleana lands did so and not all of those claims were awarded. Some claimants failed to follow through and come before the Land Commission, some did not produce two witnesses, and some did not get their land surveyed. In addition, some maka'āinana may have been reluctant to claim 'āina that had been traditionally controlled by their ali'i, some may have not been familiar with the concept of private land ownership, and some may have not known about the Māhele, the process of making claims (which required a survey) or the strict deadline for making claims. Further, the Land Commission was comprised largely of foreign missionaries, so the small number of claimants and awards may reflect only those maka'āinana who were in good standing with the church. Significantly, the surveying of the land was not standardized (Kame'eleihiwa 1992:296–297).

A total of 14,195 claims were filed and 8,421 awards were approved to about 29 percent of the 29,220 adult Native Hawaiian males living at the time of the Māhele, averaging three acres each (Kame'eiehiwa 1992:295). Out of the potential 2,500,000 acres of Crown and Government lands, 28,658 acres of land were awarded to the maka'āinana, less than one percent of the total acreage of Hawai'i (Kame'eiehiwa 1993:295). The small number of kuleana awards and their small size prevented the maka'āinana from maintaining their independent subsistence, often forcing them to abandon their newly acquired property (Chinen 1958:32).

Although many Hawaiians did not submit or follow through on claims for their lands, the distribution and written testimonies of LCAs can provide insight into patterns of residence and agriculture. Many of these patterns probably had existed for centuries. By examining the patterns of kuleana LCA parcels in the vicinity of the Project area, insight can be gained to the likely intensity and nature of Hawaiian activity in the area.

In 1848, the Crown, the Hawaiian government, and the ali'i received their land titles. William Lunalilo—the future Kamehameha VI was granted the 'ili of Kaluaokau, including the present Project area, as part of the konohiki award, LCA 8559, 'Āpana (Lot) 31 (Waihona 'Aina 2000). Since the ali'i and konohiki were not required to record the use of their large land awards, the surrounding smaller kuleana awards of the maka'āinana can be used to understand the land use of this area of Waikīkī.

The maka'āinana received their kuleana awards (individual land parcels) in 1850 and thereafter. Eleven kuleana parcels are located in or near the vicinity of the Project area. These are depicted graphically and represented in table format (Figure 12, Table 4). The claims reveal that Hawaiian households had multiple 'āpana in different geographical locations, involving lo'i irrigated by 'auwai from streams and muliwai (lagoons or stream mouths), fishponds and ponds, kula (plain, field) lands for pasture and dry-land cultivation of sweet potato and gourds, and access to such resources as coconut, hau (hibiscus), hala (pandanus), and bulrush (Waihona 'Aina 2000). Overall, the LCA documentation indicates a wide range of indigenous Hawaiian subsistence activities being practiced in the vicinity of the Project area in Waikīkī.

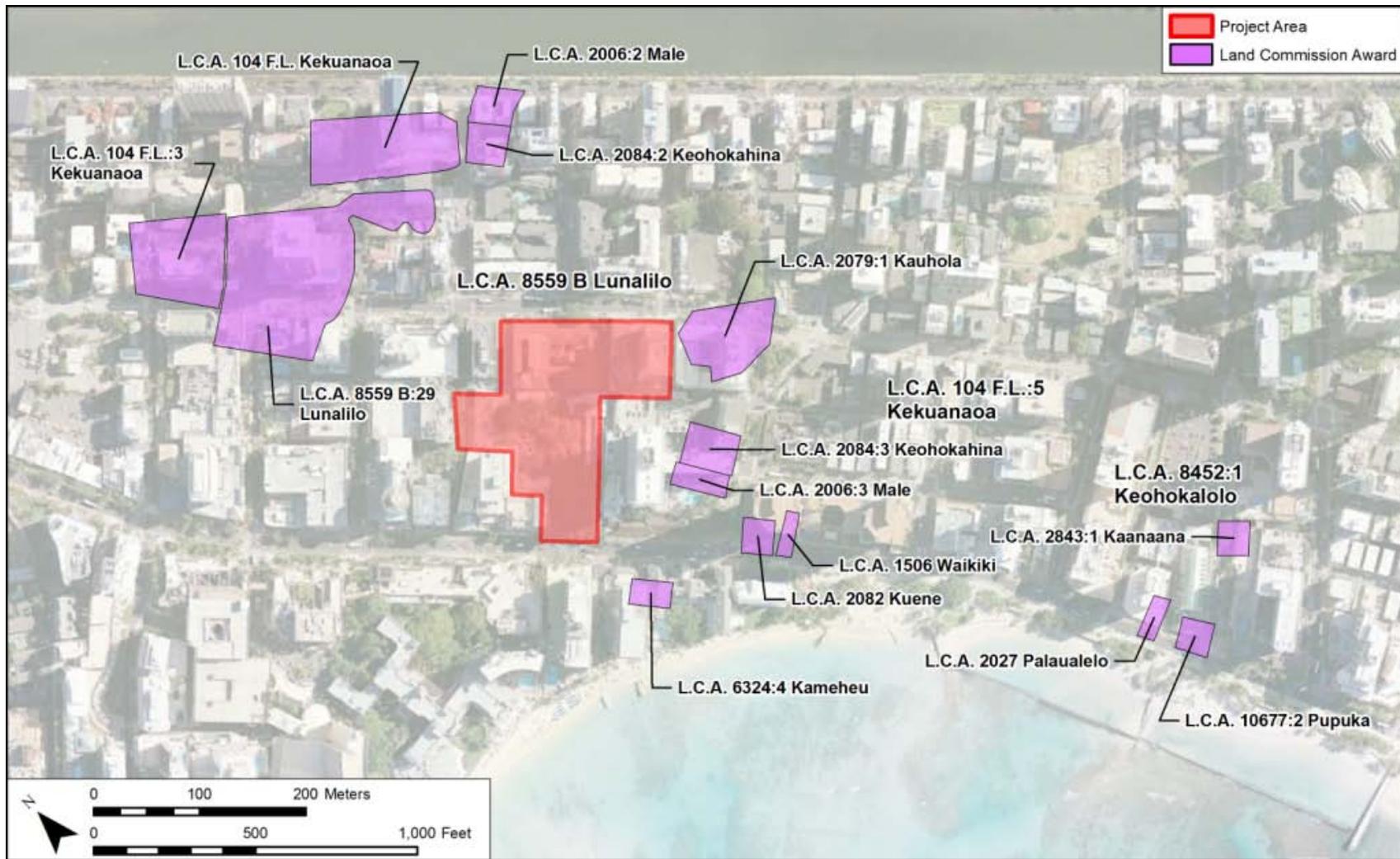


Figure 12. Kuleana LCAs in Waikīkī (Waikīkī Kai) in the vicinity of the Project area (note that LCA 8559, LCA 104 FL:5, and LCA 8452:1 are not drawn, since their boundaries on the Bishop 1881 map are not clear, see Figure 14)

Table 4. Kuleana LCAs in Waikīkī (Waikīkī Kai) in the vicinity of the Project area

LCA	Claimant	'Ili	Acres	Description
104-FL	Kekuanaoa	Kālia, Kapuni, Uluniu, Piinaoi	112.9	Two lo'i and five fishponds in Kālia, one muliwai in Piinaoi, a houselot in a coconut grove
1506	Waikiki	Ulukou	16.0	One row of taro, one kula, and one houselot
2006	Male	Kalokoeli	27.0	Five lo'i by two 'auwai, a pool for fish fry in the stream, a house lot with coconut trees
2027	Palaualelo	Mo'okahi, Hamohamo	0.55	Three taro lo'i, four bulrush lo'i by two 'auwai; one houselot, one hau tree
2079	Kauhola, wahine	Kiki, Mo'okahi, Kawalaala	7.25	13 taro lo'i, one 'auwai, two kula lands, a pond for fish fry, hala trees, a house lot
2082	Kuene	Mo'okahi	0.9	Four lo'i at an 'auwai, one houselot with two houses, four coconut trees
2084	Keohoka-hina	Kalokoeli, Uluko	0.53	Two lo'i near 'auwai, one houselot
2843	Kaanaana	Hamohamo	0.73	One lo'i, one houselot
6324	Kameheu	'Au'aukai	0.72	Three lo'i one kula planted in sweet potato and gourds
8452	Keohok-alolo	Hamohamo	101.92	Seven lo'i
10677	Pupuka	Mo'okahi, Hamohamo	0.43	Three lo'i, three 'auwai

3.5 Kaluaokau 'Ili

The International Market Place is located within the 'ili of Kaluaokau, which may mean “the pit of kau” (Feeser 2006:90) or “the grave of Ka‘u” (Thrum 1922:641, see Section 3.4.2.1, Place Names) (Figure 14). 'Āpuakēhau Stream flowed through the southeastern corner of Kaluaokau 'Ili, and a coastal trail once extended along the southern coast just makai of this 'ili (see Section 3.4.2.6, Ala Hele). Historic-era sites throughout Waikīkī (Waikīkī Kai) are depicted graphically and in table format (Figure 13, Table 5).

Archaeological surveys and excavations conducted for cultural resource management work indicate numerous trash pits with artifacts dating to, or indicative of, the late nineteenth and early twentieth centuries, such as bottles, ceramics, porcelain, glass, soda bottles. In the vicinity of Kaluaokau 'Ili and the Project area are at the Moana Hotel (SIHP 50-80-14-7069, Winieski et al. 2002) and three trash pits just east of the Project area (Bush et al. 2002). Other historic-era sites in Kaluaokau 'Ili in the vicinity of the Project area include the Moana Surfrider Hotel, which was placed on the Hawai'i Register of Historic Places (1971) and the National Register of Historic Places (1972) (SIHP 50-80-14-9901), and the former Kawaiaha'o Church and Cemetery, Waikīkī Branch, in which excavations encountered isolated and disarticulated human skeletal elements after the burials had been removed in 1916 (SIHP 50-80-14-7065, Runyon et al. 2010).

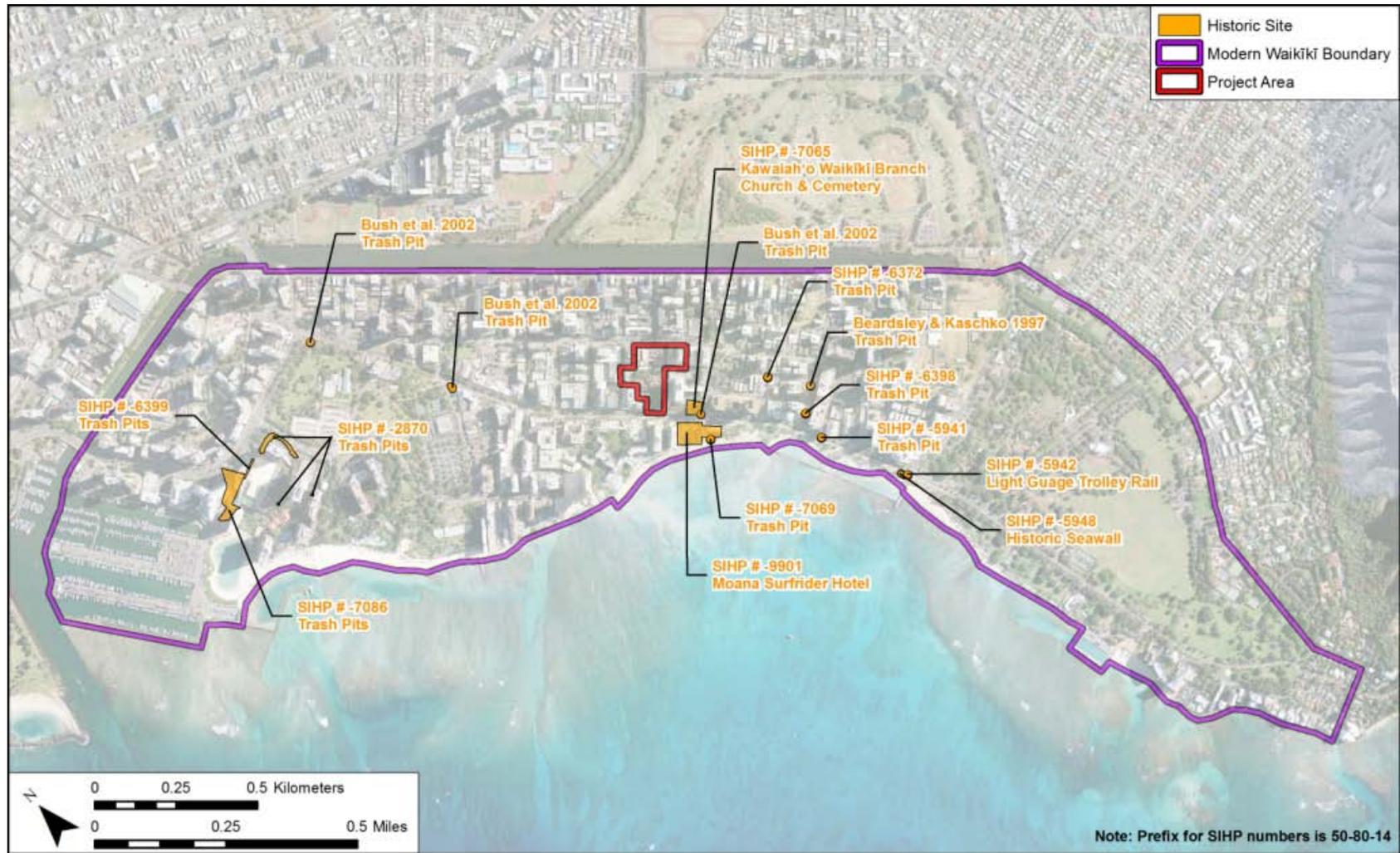


Figure 13. Historic sites in Waikiki (Waikiki Kai) (base map, Google Earth 2008)

Table 5. Historic sites in Waikīkī (Waikīkī Kai)

Site	Site Description	Site Number	Source
Kawaiaha'o Waikīkī Branch Church and Cemetery	Former Kawaiaha'o Church and Cemetery, Waikīkī Branch (burials were removed in 1916), excavations encountered isolated and disarticulated human skeletal elements	SIHP 50-80-14-7065	Runyon et al. 2010
Light Gauge Trolley Rail	Remnant of Honolulu Rapid Transit Tramway (light rail gauge)	SIHP 50-80-14-5942	Winieski et al. 2002
Moana Hotel	Placed on the Hawai'i Register of Historic Places (1971) and the National Register of Historic Places (1972)	SIHP 50-80-14-9901	
Seawall	Historic seawall constructed around 1900 near the intersection of Kapahulu and Kalākaua Avenues	SIHP 50-80-14-5948	Winieski et al. 2001
Trash Pit	Historic trash pit (bottles, ceramics) uncovered during archaeological monitoring, possibly associated with Queen Kapi'olani house that was located nearby	(none)	Beardsley and Kaschko 1997
Trash Pits	Two historic trash pits uncovered during archaeological monitoring; SIHP 50-80-14-6372 (porcelain, glass, animal bone fragments) most likely dates to the early 1900s to post 1950s, and SIHP 50-80-14-6398 (mostly soda bottles) most likely dates from the late 1800s to the mid 1950s	SIHP 50-80-14-6372; -6398	Mann and Hammatt 2002
Trash Pits	Historic trash feature complex, consisting of architectural demolition and burn layers, bottle dumps, a partial pig skeleton buried in clean beach sand, stone structure remnants, pits and trenches, trash layers, trash pits, trash and burn layers, predominantly East Asian ceramic assemblages, in the Hilton Hawaiian Village	SIHP 50-80-14-7086	Monney et al. 2009
Trash Pits	Historic refuse pits with artifacts (glass bottles, glass fragments, ceramic fragments, butchered cow bones)	SIHP 50-80-14-6399	Putzi and Cleghorn 2002
Trash Pits	12 historic refuse pits with numerous artifacts associated with land use after 1881, at the Hilton Hawaiian Village	SIHP 50-80-14-2870	Rosendahl 1992

Site	Site Description	Site Number	Source
Trash Pit	Historic trash pit (glass bottles and ceramics), dated to the late nineteenth century through the early twentieth century, at the Moana Hotel	SIHP 50-80-14-7069	Thurman et al. 2009
Trash Pit	Historic trash pit (metal, glass, ceramic, stoneware, and porcelain fragments) uncovered during archaeological monitoring	SIHP 50-80-14-5941	Winieski et al. 2002
Trash Pits	Three historic trash pits (ceramic, metal, tile, and glass fragments) uncovered during archaeological monitoring	(none)	Bush et al. 2002

3.5.1 Royal Residence

The 'ili of Helumoa was the site of Kamehameha I's residence in Waikīkī following his conquest of O'ahu. Mid-nineteenth century Māhele documents confirm the significance of this portion of Waikīkī, including Helumoa, Kaluaokau, and adjacent 'ili, in the lives of the Hawaiian ali'i. The 'ili of Kaluaokau was purchased sometime in the mid-nineteenth century by Henry Macfarlane, an entrepreneur from New Zealand who had settled on O'ahu. It was Macfarlane and his wife who planted the banyan tree currently growing in the center of the International Market Place. They lived on this property for a while, eventually raising six children, some of who became financiers for sugar plantations and for the early tourist industry in Waikīkī (Hibbard and Franzen 1986: 66–67).

At the Māhele, the 'ili of Kaluaokau was granted to William Lunalilo (LCA 8599, 'Āpana 31), who was democratically elected in 1873, defeating Kālakaua (see Section 3.4.4, Māhele). Following Lunalilo's death in 1874, his Kaluaokau home and land were bequeathed to Queen Emma, the widow of Kamehameha IV (Alexander Liholiho), who had died in 1863. Queen Emma is known to have resided occasionally on the Waikīkī property before her death in 1885. An old photograph taken sometime during her residence (1874-1885) shows the simple beach cottage (Figure 15). An 1880 photograph shows the makai portion of the estate, the portion from Beach Road to the coast, with a long wall adjacent to 'Āpuakēhau Stream (Figure 16). Queen Emma had Papa'ena'ena Heiau on the slopes of Diamond Head dismantled, and she used the rocks to build a fence to surround her Waikīkī estate (Kanahale 1995:136).

In 1878, Queen Emma sued the Lunalilo Trust, as she believed her bequest from Lunalilo should have included the entire 29-acre Kaluaokau parcel, not just the four acres of land immediately around the house lot. From this suit, a little information on the land is presented. The testimony states that the land was referred to as the "Marine Residence" by King Lunalilo and it consisted of a residence, a detached cottage, and outbuildings, surrounded by a fence to keep out straying animals. Queen Emma wanted the entire parcel, including access to the water (Āpuakēhau Stream) and the taro growing on the property. The suit mentions that the first structure on the property was a simple grass hut. Queen Emma won her suit, as the court determined that the term "Marine Residence" used in Lunalilo's will, although ambiguous, probably referred to the entire Kaluaokau (spelled Kaluakau in the testimony) parcel (Hawaiian Reports 1883:82–88). A 1915 Land Court Application map shows the extent of this estate, including a small section that extends makai to the sea, and includes several small outbuildings ("lanai") and a canoe shed (Figure 17). In the 1885 will of Queen Emma, her lands were put in trust with the proceeds to benefit the Queen's Hospital in Honolulu, which Queen Emma, along with her husband, Kamehameha IV, had helped to found (Kanahale 1995).

An 1875–1877 "working map," by C. J. Lyons of the surveyor's triangulation points for Waikīkī (Figure 18) shows the position of the Kamehameha V cottage at Helumoa 'Ili and the position of the Lunalilo cottage in Kaluaokau 'Ili, adjacent to 'Āpuakēhau Stream. This working map was later used to create several finished maps of the 'ili within Waikīkī, but on those maps the locations of the two cottages were not marked. The location of King Lunalilo's cottage appears to be just outside the Project area to the southwest. This accords well with a description of the Royal Hawaiian Hotel in a 1930 tour guide, which states; "Near where the tennis-courts are now used to be the home of King Lunalilo" (Griffis 1930:61).

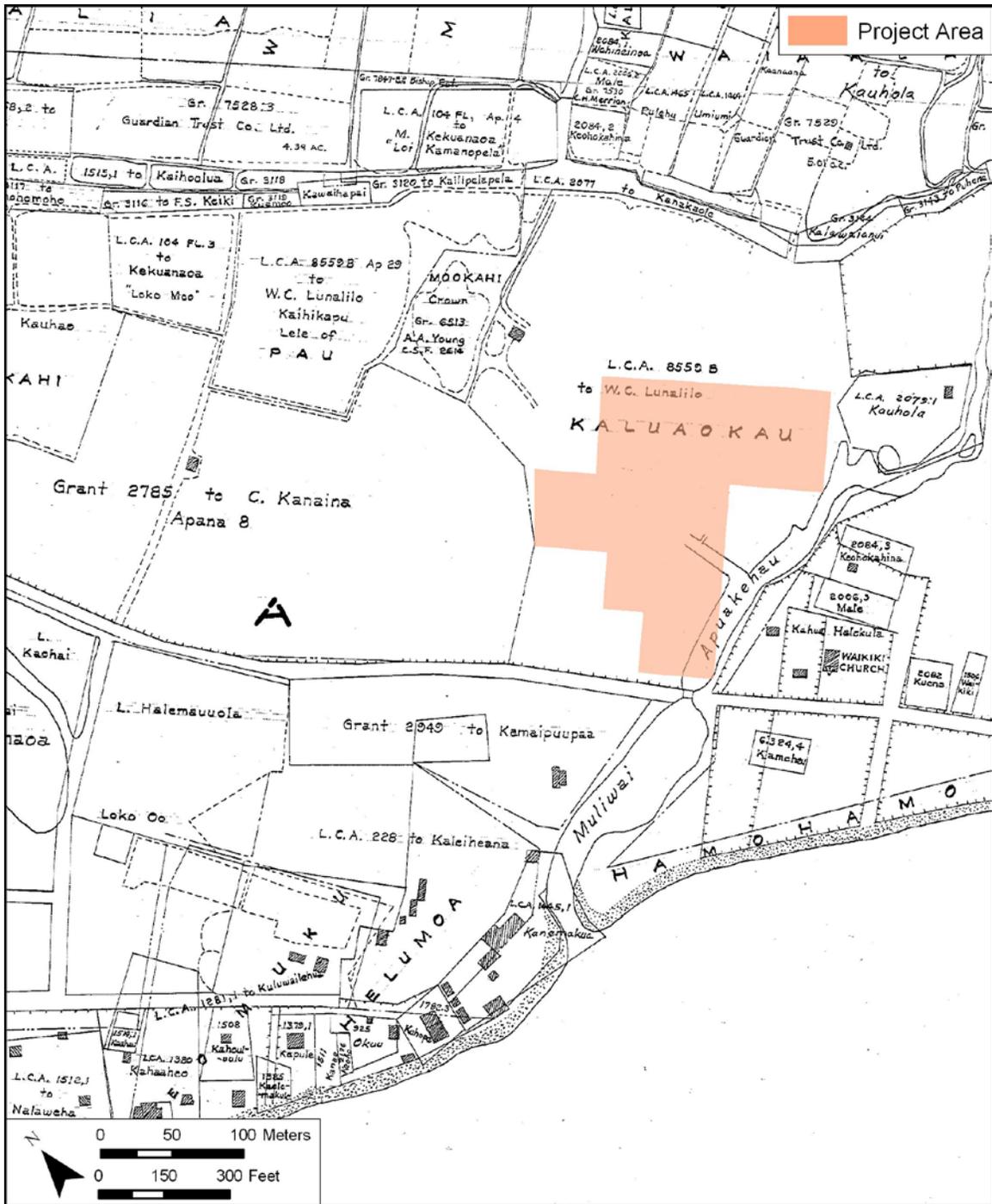


Figure 14. 1881 map of Waikīkī by S.E. Bishop showing location of Kaluaokau ‘Ili and ‘Āpuakēhau Stream (Bishop 1881)



Figure 15. Photograph (taken between 1874 and 1885) of the Waikīkī cottage at Kaluaokau, owned by King Lunalilo and bequeathed to Queen Emma (Bishop Museum Archives; reprinted in Grant 1996:22–23)



Figure 16. 1880 photograph of the makai portion of the King Lunalilo and Queen Emma estate at Kaluaokau, view from the Beach Road and Kalākaua Avenue (on right) towards the mouth of 'Āpuakēhau Stream (Hawai'i State Archives, reprinted in Kapono 2009:19)

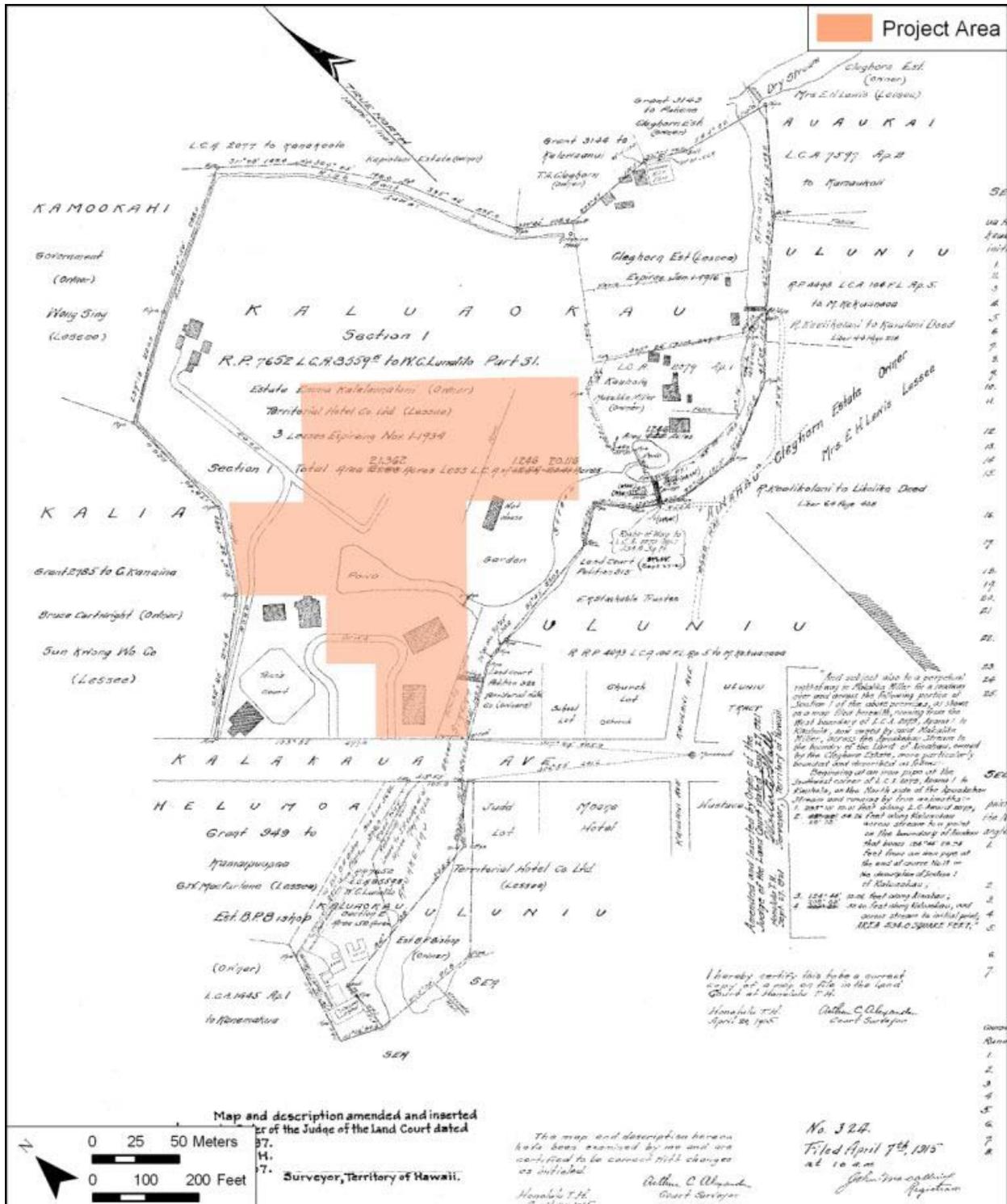


Figure 17. 1915 map of Kaluaokau showing the extent of the land bequeathed by King Lunalilo to Queen Emma in relation to the Project area (Hawai'i Land Survey Division, Land Court Application Map)

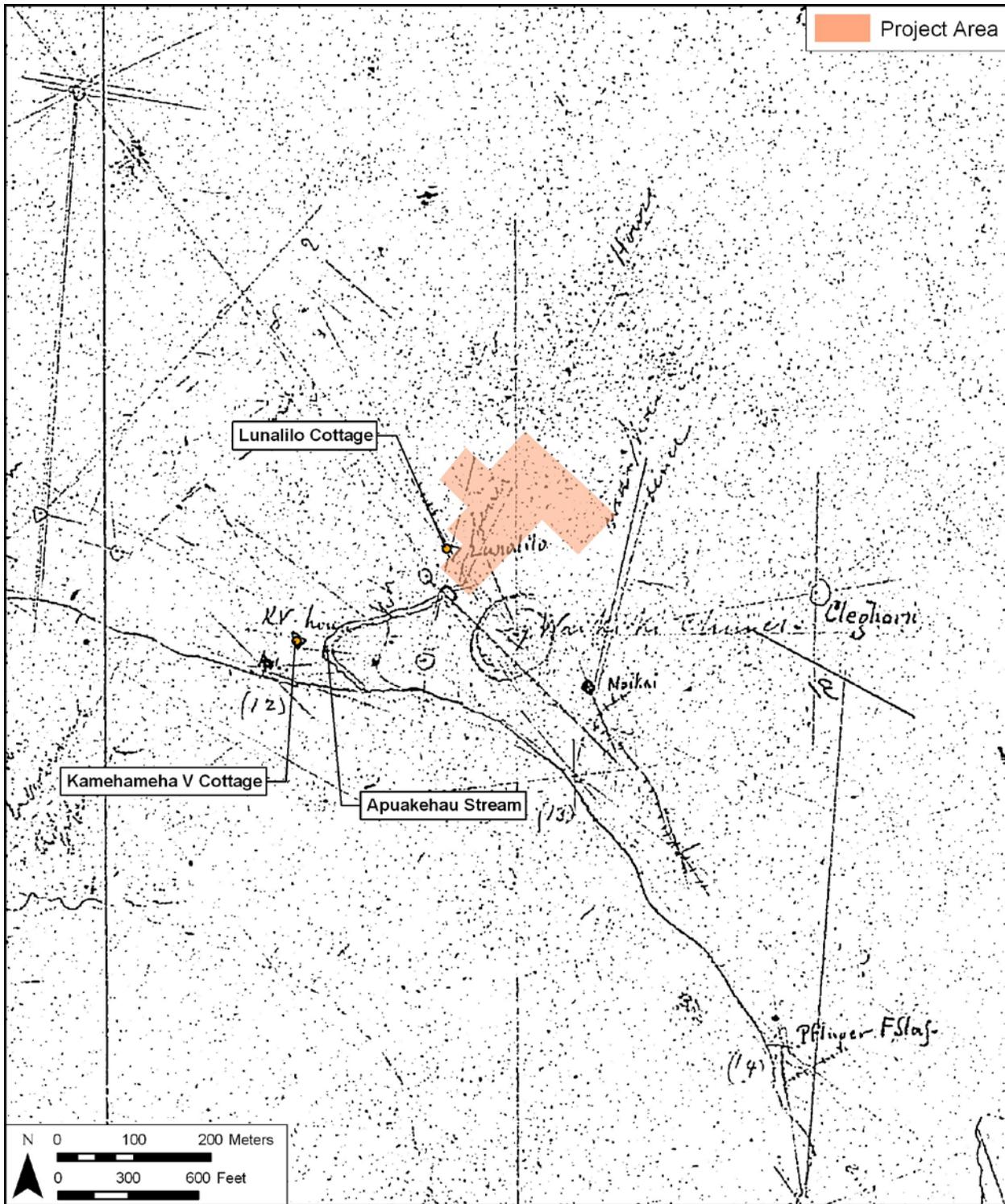


Figure 18. 1875–1877 working map of Waikīkī triangulation points, by C. J. Lyons, depicting the locations of the Kamehameha V cottage at Helumoa and the Lunalilo Cottage at Kaluaokau, in relation to the ‘Āpuakēhau Stream (Lyons 1875–1877)

3.5.2 Residential Development and Tourism

An 1893 map by W.A. Wall (Figure 19) shows the Project area in an uncultivated area surrounded by swampland, probably still used to grow taro, with rice fields mauka of the Project area. Although no houses are shown in the Project area on this map, this does not mean that there was not a cottage on the property. Early surveyors only mapped what they considered substantial “permanent” structures, but did not map grass houses or “beach cottages.” An 1897 map by M. D. Monsarrat (Figure 20) shows that the present Project area mauka of the Beach Road (the future Kalākaua Avenue), with ‘Āpuakēhau Stream coursing through the southeastern section. This 1897 map shows one large house, perpendicular to the orientation of the stream, south of an inlet, labeled “Queen Emma.” This label probably refers to the property, owned by the Queen Emma trust, as the map post-dates Queen Emma’s death in 1885. Whether this structure was a building that dates to the time of Queen Emma’s residence is unknown. It does not seem to be in the same area as the Lunalilo cottage.

In the late nineteenth century, the Waikīkī beach area in Ulukou and Kahaloa was dotted with small cottages and some bathing houses. These “bathing houses,” placed strategically near the beach, were places where people could change into their bathing suits, rent towels, and walk directly into the ocean. One of the first of these bathhouses was the “Long Branch Baths,” named after a popular New Jersey resort. This long wooden shed was built near the edge of ‘Āpuakēhau Stream by James Dodd in 1881 at the former residence of Kākuhihewa (Scott 1968).

W.C. Peacock, a wealthy Honolulu landowner, had a seaside cottage in Waikīkī east of ‘Āpuakēhau Stream. He tore down his cottage and built the Moana Hotel, which opened March 11, 1901. The first hotel building had 75 rooms, each with its own private bath and telephone, an unheard of luxury. In 1905, Peacock sold the hotel to Alexander Young, who had an interest in several other Hawaiian hotels. Young’s estate managed the hotel until 1928, when it was purchased by the Matson Navigation Company to cater to the new steamship tourists that were flocking to Hawai‘i as a vacation spot. Under the title of the Territorial Hotel Co., Ltd., Matson operated a number of hotels in Hawai‘i, including the Moana, the Royal Hawaiian, and its predecessor the Seaside Hotel. The Seaside Hotel was built in 1906, and consisted of a ten-acre parcel west of ‘Āpuakēhau Stream, and west of the Moana Hotel. Scattered on the grounds were bungalows and tent houses for guests. Many famous people came to stay at the hotel, including Alice Roosevelt Longworth, the daughter of the Theodore Roosevelt, and Jack London, who wrote several of his South Pacific stories at the hotel during his stay (Scott 1968).

A 1910-1917 U.S. Engineers map (Figure 21) shows the Project area in the taro area, with rice fields mauka marked by earthen berms. On this map, two large rectangular structures are shown—a structure oriented diagonal to ‘Āpuakēhau Stream and a structure south and oriented parallel to the stream. These structures also appear on a 1927-28 U.S. Geological survey map (Figure 22) and a 1943 U.S. War Department map (Figure 23). A 1914 Sanborn Fire Insurance map (Figure 24) shows the diagonal and parallel structures labeled as “Moana Hot’l Rooms” of the Moana Hotel. It also shows several smaller structures labeled “Moana Hot’l Cottages.” The structures are also shown on the 1915 Land Application map (see Figure 17). These structures can be clearly seen on a 1920 photograph (Figure 25) just northwest of the H-shaped Moana Hotel. On a 1929 photograph (Figure 26), the parallel structure can still be seen, but the diagonal structure is probably hidden by the trees.

The original construction date of these hotel rooms and cottages is unknown, although they must predate 1914, the date of the Land Court Application map. The size and roof lines of the two larger structures are identical, indicating that they were built at the same time and for the same function. The two large rectangular structures were probably built by the Moana Hotel as auxiliary Hotel Rooms sometime between the Moana Hotel's opening in 1901 and the date of the Sanborn Fire Insurance map of 1914 and the Land Court Application map of 1915. A 1927 Sanborn Fire Insurance map (Figure 27) shows the Moana Rooms and Cottages, the tennis courts, and a horse-shoe shaped drive surrounding a "pavilion" in area labeled as the "Seaside Hotel." This is probably the horseshoe-shaped drive of the Seaside Hotel mentioned by Scott (1969:623) as "in the lattice-front entrance, on the *mauka* side, were the hotel offices facing a horseshoe driveway that entered from a connecting roadway off Waikiki Road." The map also shows two long strips used for automobile parking (labeled "A"). The Outrigger Canoe Club, then located across Kalākaua Avenue on the site of the present Outrigger Hotel, leased parking space in this area in the 1920s. East of the Project area, the Moana also built a power plant and hotel garage.

By the 1920s, the Territorial Hotel Company owned the Moana Hotel and held the lease for the Seaside Hotel. In 1925, they began to move many of the bungalows and cottages on the Seaside Hotel beach area to the *mauka* side of Kalākaua Avenue to clear the ground for the construction of the new Royal Hawaiian Hotel. An oral history interviewee, Beatrice Tominagam, who lived in the Moana Hotel employee housing area east of Ka'iuilani Street from 1919 to 1925, has memories of life in this area when she was just a young girl:

Oh, when we were there when I was a little girl, this was an empty lot. Just empty, nothing was on it. When I was living there, we watched them build these four big beautiful buildings (and a small two-bedroom cottage). They were beautiful (and painted white). They were two stories and they had a chimney on each one of them, and a big yard. The hotel called it the Moana Hotel Annex. And then, this part, 'Ainahau Court, had many two-bedroom cottages and lot of date trees over here. We used to pick dates when they fell on the ground. (Beatrice Tominagam, University of Hawai'i Center for Oral History 1985)

The four buildings referred to are probably four of the eight structures labeled "Moana Hotel Cottages" on the west side of Ka'iuilani Avenue, east of the Project area on the 1927 Sanborn map (see Figure 27). The 'Ainahau Court is *mauka* of these structures.

Mrs. Tominagam remembers that many of the buildings on the *mauka* side of Kalākaua Avenue were used for hotel guests; not all the buildings were used for hotel employees. The small cottages *mauka* of the Moana Annex, in the 'Ainahau Court, were also for visitors. She noted: "Ainahau Court, were (for) Mainland people who rented those cottages and they lived there for many years." In the current Project area:

Oh, this area right here where the International Market [Place] is now was the Seaside Hotel cottages that they moved from Kālia Road to make room for the Royal Hawaiian Hotel. They moved them here and they were over here. They were cottages, you see. After the war [World War II] they got rid of those

cottages. And in the middle 1950s they built the International Market Place. (Beatrice Tominagam, University of Hawai'i Center for Oral History 1985).

Stan Cohen (1997:42), in his book on the Princess Ka'iulani Hotel, recounts "In 1920 cottages and an expansive lawn were built across Kalākaua Avenue at the former site of 'Āinahau." These generally refer to a number of small rectangular cottages directly opposite the Moana Hotel on the mauka side of Kalākaua Avenue, east of Ka'iulani Avenue and east of the current Project area. These neatly aligned cottages can be seen on the 1929 aerial photograph (see Figure 26) directly across Kalākaua Avenue from the main entrance of the Moana Hotel.

On a 1950 Sanborn map (Figure 28), the two large rectangular structures in the Project area are still labeled as "Hotel Rooms," and a series of smaller cottages, the former beachside Seaside bungalows, are labeled as "Hotel Cottages." The area within the horseshoe drive has a number of kitchen and dining facilities. In the northeastern section of the Project area, the Miramar Hotel parcel, the Moana built a series of interconnecting structures for hotel maintenance, including shops for pipes, woodworking, furniture, and pillows and mattresses. On the 1956 Sanborn map (Figure 29), all of the hotel rooms and cottages are gone, and most of the land is labeled as "Parking." The only remaining hotel structures are the kitchen and dining facilities in the horseshoe-shaped driveway area.

By the mid-1950s, 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-1950s, 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. By the late 1950s, a row of retail shops had been constructed along Kalākaua Avenue. In 1952, Matson built a new hotel adjacent to the Moana on the east side, called the Surfrider Hotel. The 1953 U.S. War Department map of O'ahu (Figure 30) shows this addition, and significant development in Waikīkī. Matson sold all of its Waikīkī hotel properties to the Sheraton Company in 1959 and no longer required housing for its hotel staff. Additionally, properties were likely cleared in anticipation of the extensive development that occurred throughout Waikīkī in the 1960s and 1970s.

The International Market Place was built in 1957, as described in the market's history:

On January 16, 1955, entrepreneur Donn Beach (Don the Beachcomber) announced plans for a "Waikiki Village" that was to be called "The International Market Place." Designed originally to encompass 14 acres between the Waikiki Theater and the Princess Ka'iulani, extending from Kalakaua Avenue halfway to Kuhio Avenue, the International Market Place was to be a "casual, tropical village with arts, crafts, entertainment, and foods of Hawai'i's truly diverse people...including Hawaiian, South Sea islander, Japanese, Chinese, Indian, and Filipino..." (Queen Emma Foundation n.d.)

In the same timeframe, the present Miramar Hotel parcel was being re-developed. Circa 1950 (see Figure 28) there was a mattress and awning shop on the parcel understood as a "back-of-house" portion of the Matson Navigation Hawaiian Hotels Division. This was largely cleared out by 1956 (see Figure 29). In 1961 a four-story "Waikiki International Terminal Parking Garage and Transportation Center" was developed including a service station and restaurant fronting

Kūhiō Avenue and with a large covered terminal loading area on the makai side. The 349-room, 22-floor Miramar Hotel was constructed almost immediately thereafter in 1962 incorporating the recent construction. It started as a sister hotel to the Miramar Hotel in Hong Kong and it is decorated in a predominantly Chinese motif. The Miramar Hotel was purchased in 1976 by the Milford (International) Investment Co., Ltd. (Young 2010).

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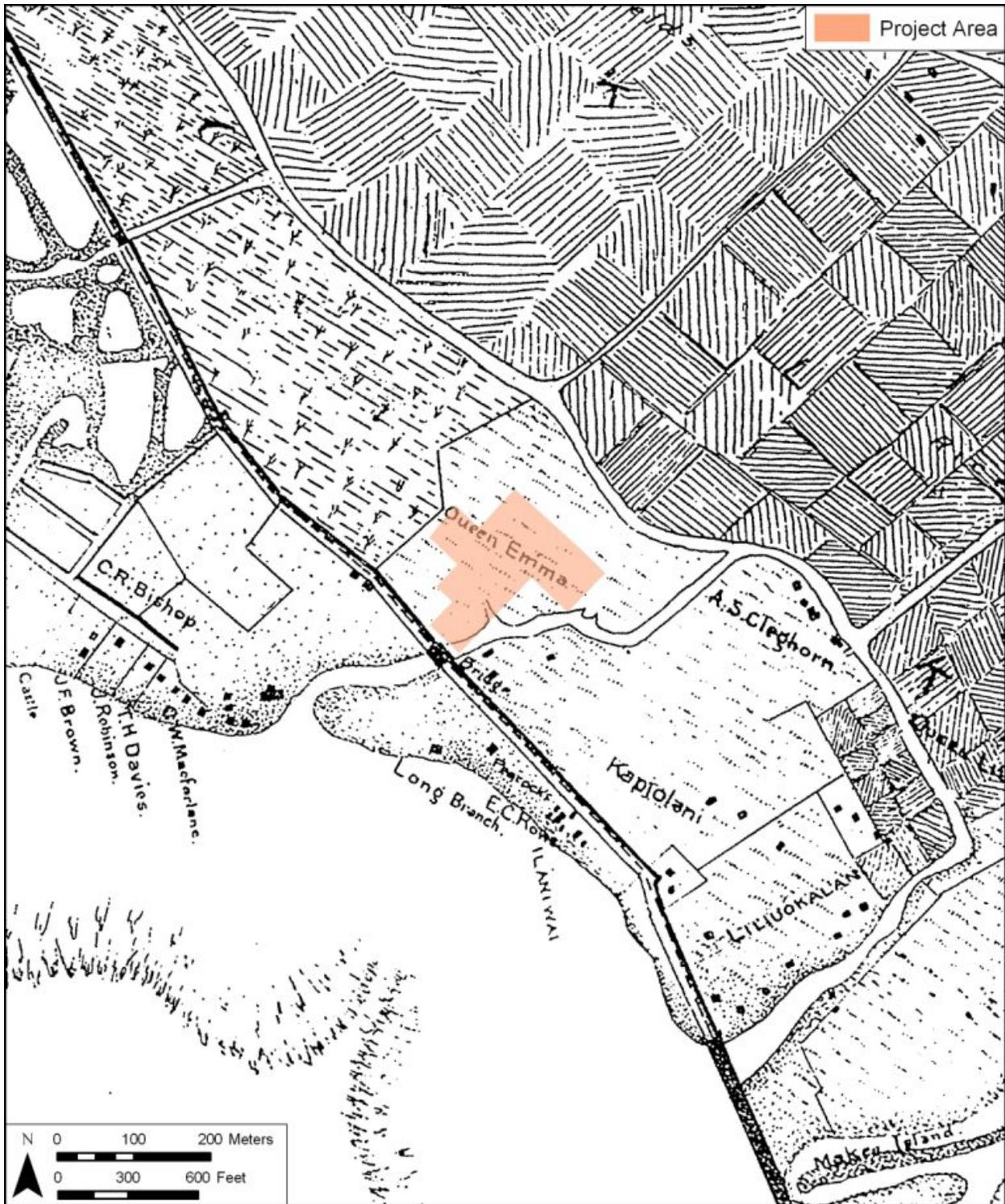


Figure 19. 1893 map by W.A. Wall of Waikīkī, showing the Project area on land owned by the Queen Emma estate (Wall 1893)



Figure 20. 1897 map of Honolulu by M.D. Monsarrat map, showing proposed Project area; one structure in the Project area is labeled “Queen Emma” (Monsarrat 1897)

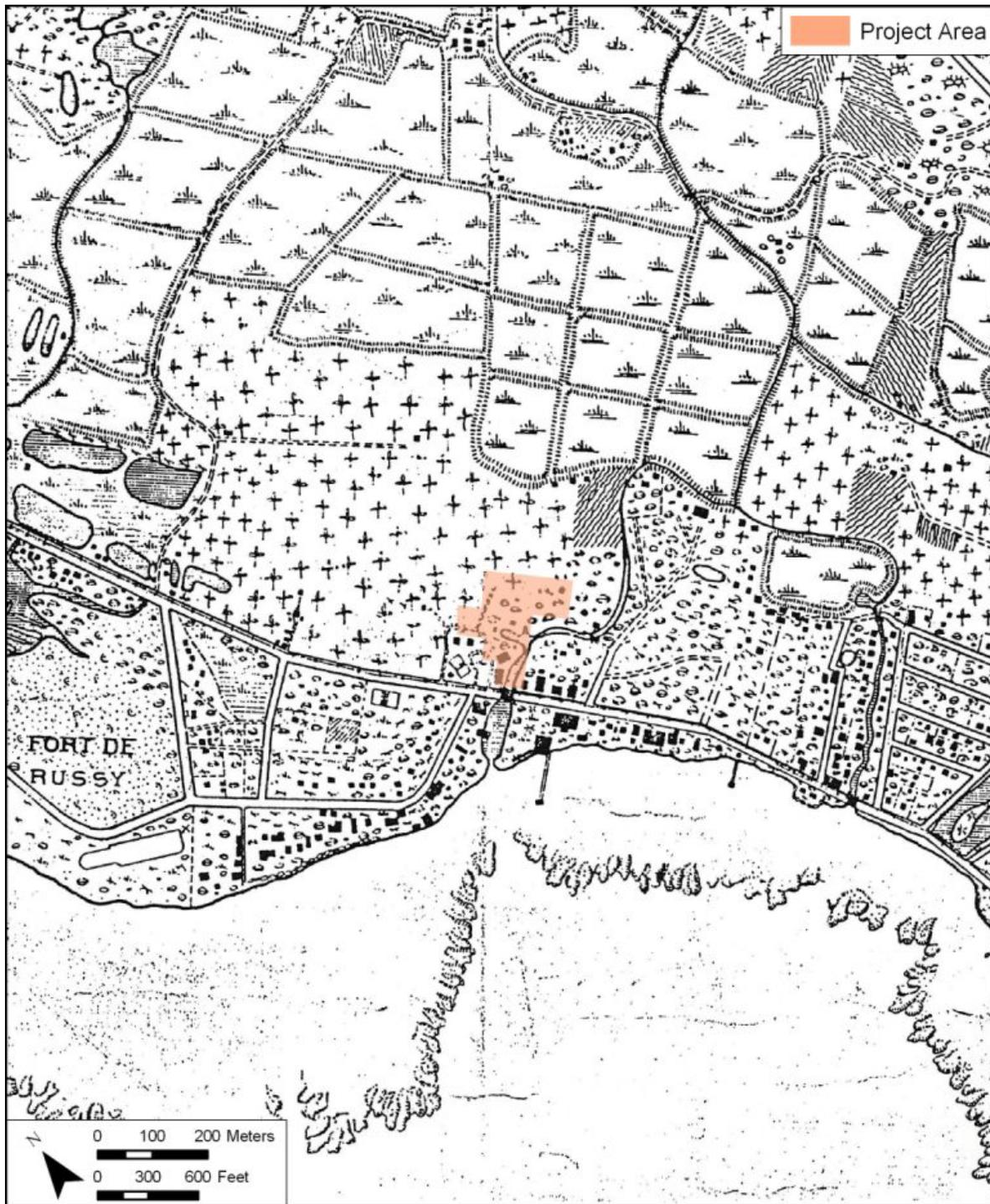


Figure 21. Portion of the 1910–1917 U.S. Engineers map, showing the approximate location of the Project area

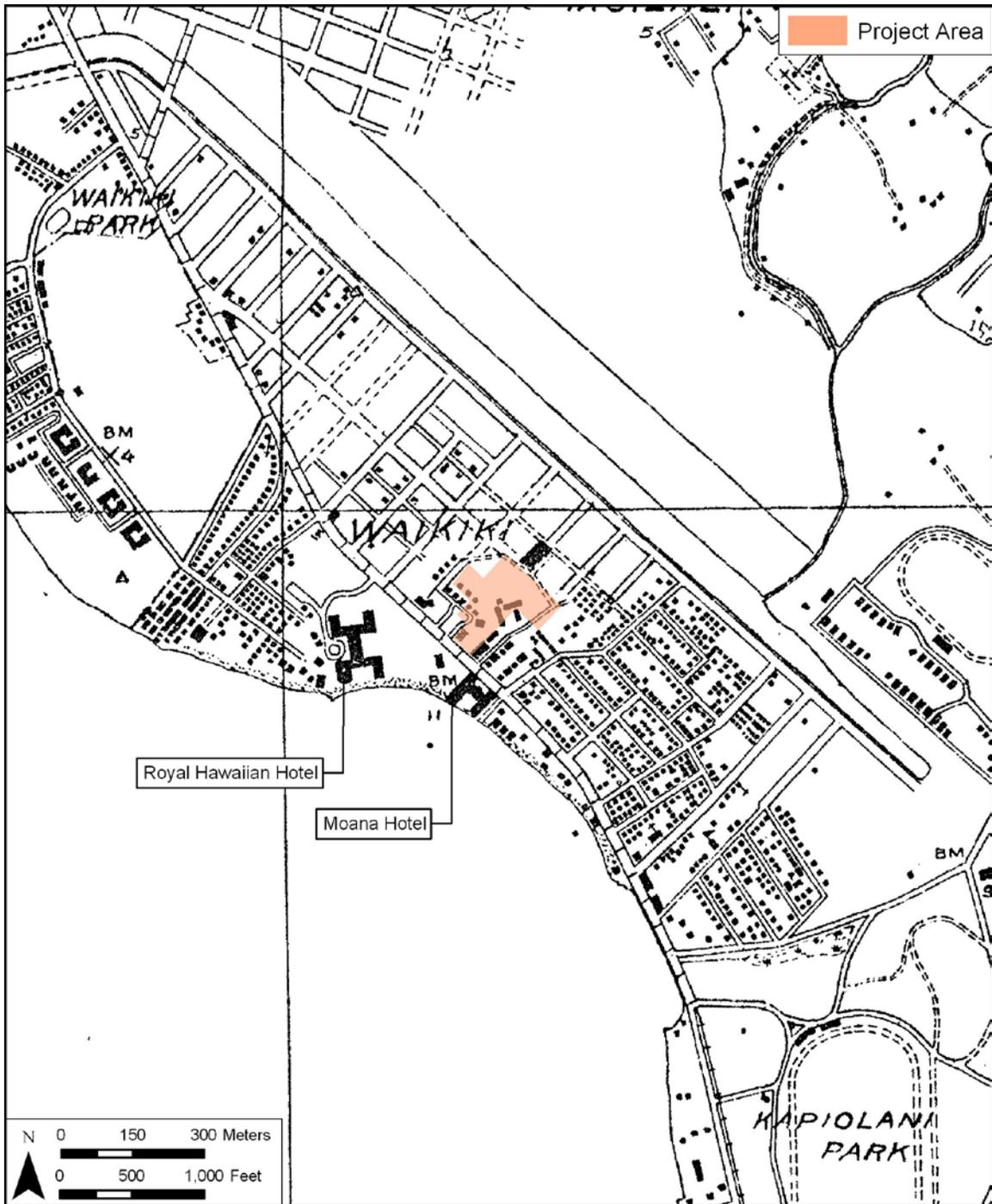


Figure 22. Portion of 1927–1928 USGS 7.5-minute topographic map, Honolulu quadrangle, showing the Project area northwest of the Moana Hotel and northeast of the Royal Hawaiian Hotel



Figure 23. Portion of 1943 U.S. War Department map, Diamond Head quadrangle, showing the Project area

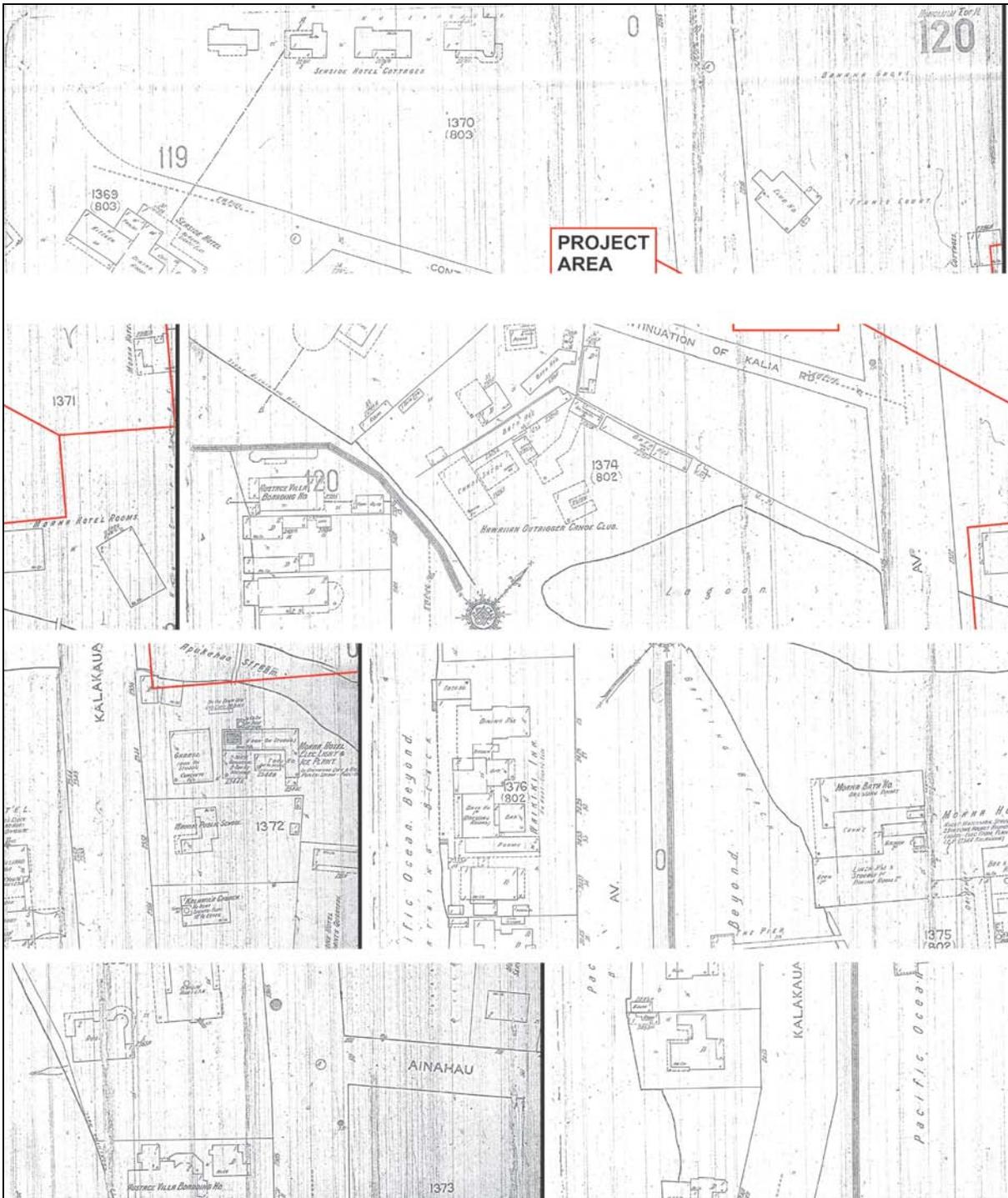


Figure 24. 1914 Sanborn Fire Insurance map with seaward portion of the Project location (note: the “0” on the right edge of the map indicates that there is no adjoining map); the two structures in the southern portion of the Project area are labeled “Moana Hot’l



Figure 25. 1920 aerial photograph of the Moana Hotel coastal area, showing general Project area; the two structures (diagonal and parallel to the stream) shown on earlier maps are still present (U.S. Army Air Service, reprinted in Cohen 1995:59)

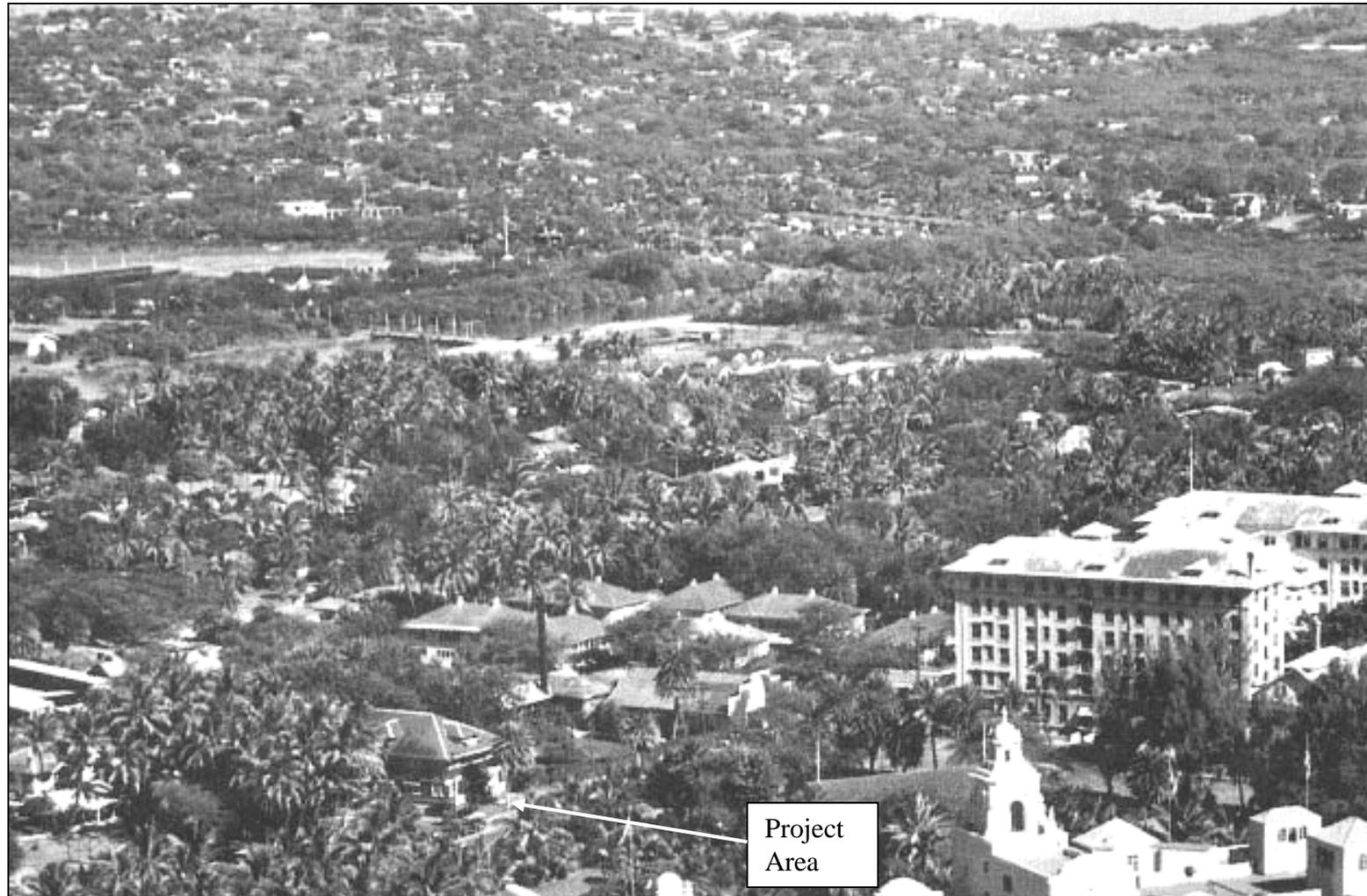


Figure 26. 1929 aerial photograph of Waikīkī, showing numerous cottages behind the Moana Hotel (Hawai‘i State Archives 1929, reprinted in Brown 1985:40); one of the older structures is still present, but the original Queen Emma Trust house is hidden

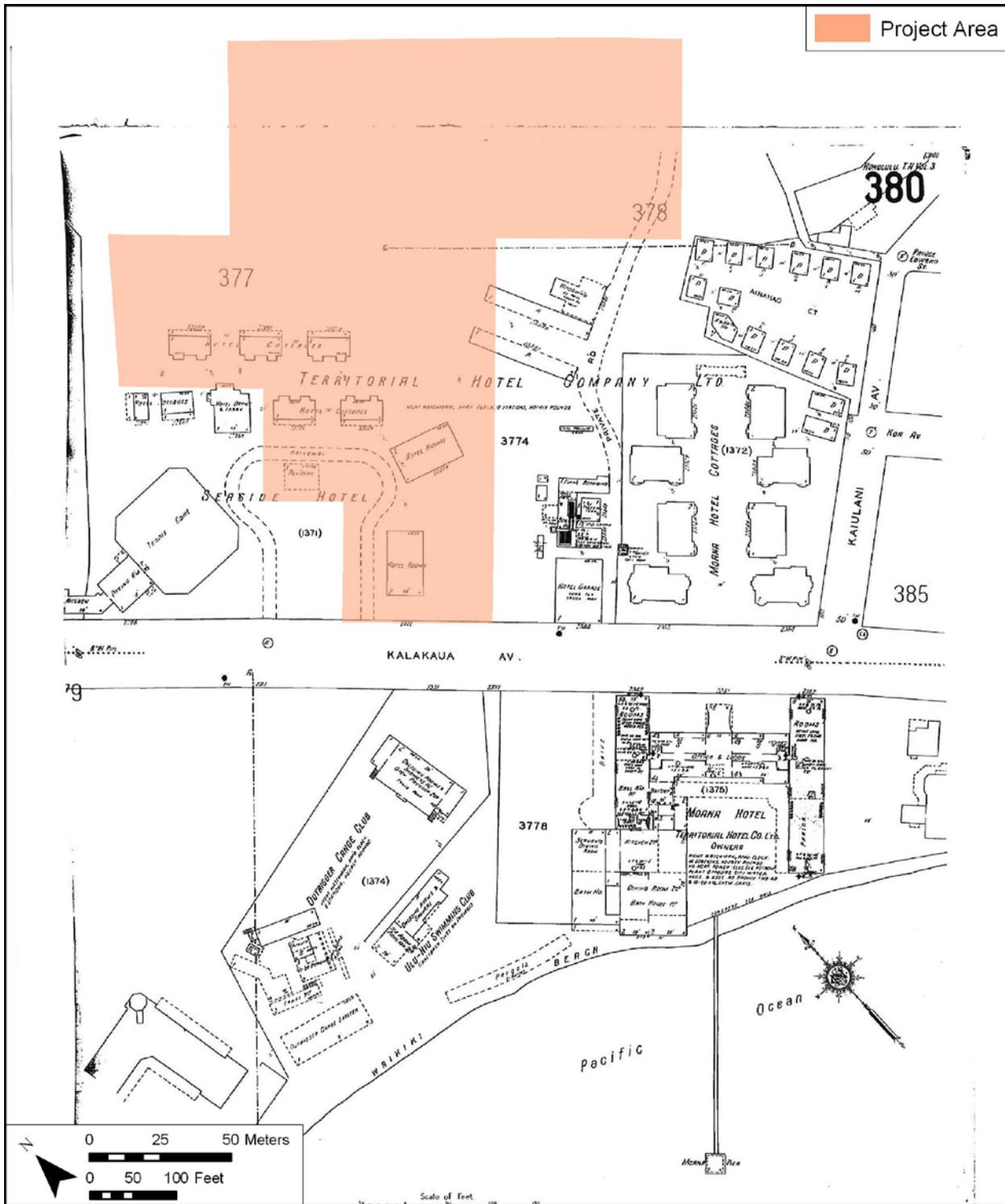


Figure 27. 1927 Sanborn Fire Insurance map showing the Project area with structure labeled for the Seaside Hotel and the Moana Hotel, both owned by the Territorial Hotel Company

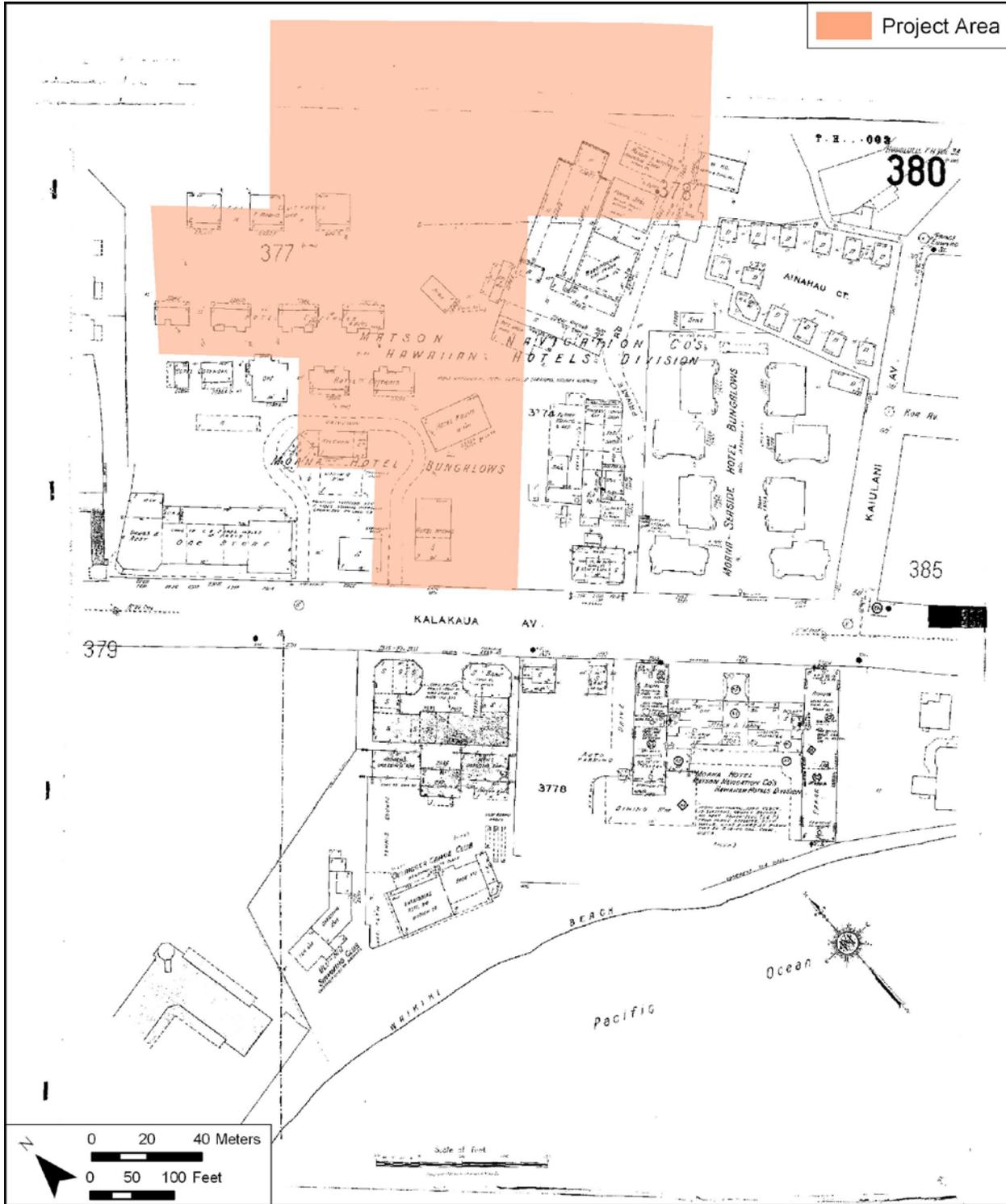


Figure 28. 1950 Sanborn Fire insurance map showing structures in Project area during early 1950s

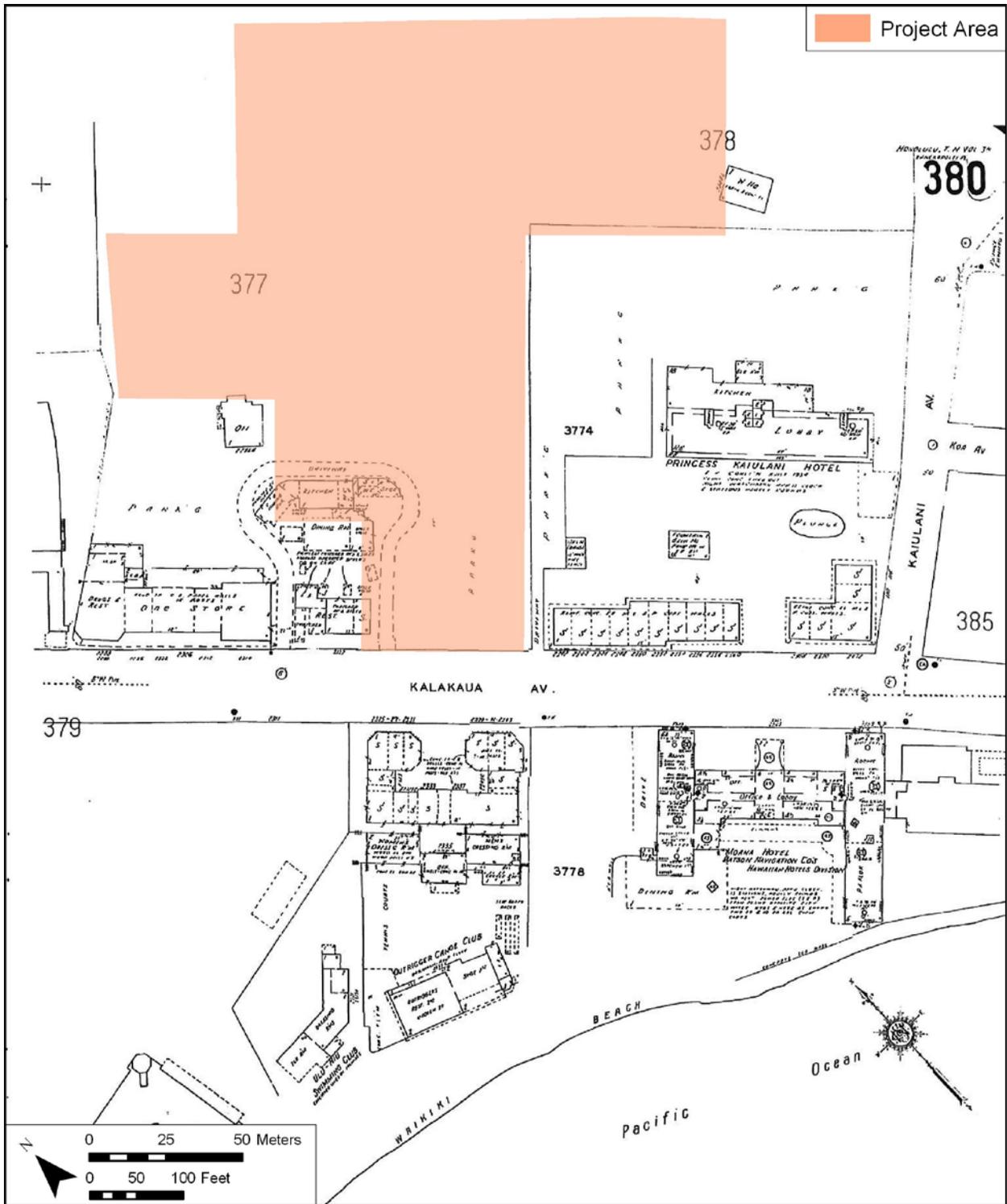


Figure 29. 1956 Sanborn Fire Insurance Map, showing the removal of most of the Moana Hotel structures in the Project area

3.5.3 Previous Oral History Research

This section draws from previous oral history research conducted by the University of Hawai'i's Center for Oral History (UHCOH) in 1985 to highlight the voices of several people who have or have had deep knowledge of the culture and history of the ahupua'a of Waikīkī, with particular connections to the 'ili of Kaluaokau. Their mo'olelo color the cultural and historical background with nuanced recollections and add a depth to the information provided by kūpuna and kama'āina who were interviewed for this CIA (see Section 5). Summaries and excerpts from this vast collection of oral histories are presented below.

3.5.3.1 Robert Anderson

The UHCOH interviewed Robert Anderson on March 4, 1988 at his Diamond Head home. Mr. Anderson was born in Honolulu in June 6, 1894 and graduated from Punahou School in 1912. Mr. Anderson is best known as one of Hawai'i's most prolific composers of hapa-haole songs (a type of song that is a hybrid of both the English and Hawaiian language). Mr. Anderson's most famous work is *Mele Kalikimaka*, which translates as Merry Christmas in Hawaiian and is learned by most grade school students throughout Hawai'i. Other compositions by Mr. Anderson include *Lovely Hula Hands* and *Haole Hula*. In his interview with UHCOH, Mr. Anderson described what Waikīkī was like during the early 1900s:

Well the Moana Hotel was there. That was the biggest thing. And it did not have the wings at that time. It was just the central building which was frame construction. Later on, the two wings were built of concrete. That was in 1918 that the wings were put on.

The Halekūlani Hotel, I don't remember the year, but that was just about along in there. And Niumalu [Hotel], little further down where the Hilton [Hawaiian Village Hotel] is today. That was about it. Coming out this way, there was the - - I forget what the year the Outrigger [Canoe] Club started.

Well, they had what they call the Royal Hawaiian Hotel and cottages right next to Bertha Young where it is today. It was just a frame building and some little cottages scattered all through the grounds. And then, next to that was the Outrigger and then the Moana. The other side of the Moana was Judge Steiner's home, and then a place called the Waikīkī Tavern. And about that time, you came to the seawall out there.

Across the way were coconut palms and undeveloped property. And there was quite a bit of water up in there, the ponds. And when it ever rained hard, you'd get a run-off right pass the Outrigger Club, which was next to the Royal Hawaiian at that time, and mud would come down into the ocean. You'd get some dirty conditions in the water for a few days, until much later when they built the Ala Wai Canal to take care of that extra drainage. It dried it all up. (UHCOH 1985:209)

3.5.3.2 John C. Ernstberg

The UHCOH interviewed John C. Ernstberg on March 15, 1985 at his home in Waikīkī. Mr. Ernstberg was born in 1910 in Kahului, Maui and is a former Waikīkī beach boy, musician and a

retired Honolulu City and County lifeguard. In his interview with UHCOH, Mr. Ernstberg described the various ocean resources in Waikīkī during his youth:

The limu [seaweed] was there. You want limu. You need limu now. All the Hawaiian[s] do. I do. My wife needs limu because she's got goiter, in that for the throat and things like that. Before all the limu, all the lipoa and everything I can get here manaua, lipoa, wawae'iole and eh, everything you like. All kinds of limu. You like lipoa?

You like manini? I love manini [reef surgeonfish], one, two manini. I go out there, see, I go on the reef over there when the tide coming up. You go out there with your net, walk outside on the reef, flat reef, you wait over there. Soon as the tide starts coming up, you see the manini. All big schools come up. They go on top of the reef. When the wave break, you can see them—all that green. You stay up there. You wait, wait, wait, wait till they all come on the flat one time. Throw. You look, you see the all green and spiral. You go in there and pick 'em up little by little now. Go pick up, put 'em all in your bag. You look—full, 'nough. Going home. (UHCOH 1985:125)

3.5.3.3 Wilbur Craw

The UHCOH interviewed Mr. Wilbur Craw on April 11, 1985 at his home in Ka'a'awa on the island of O'ahu. Mr. Craw is a former Waikīkī beach boy and founded a food brokerage company along with his brother. In his interview with UHCOH, Mr. Craw described his experiences with 'Āpuakēhau Stream in Waikīkī:

When we first got down there, the old Outrigger [Canoe Club] was built on the banks of the ['Āpuakēhau] stream that came into the water between the Moana Hotel and the Seaside Hotel which is now the present site of the Royal Hawaiian [Hotel].

(Across) that stream, (a) bridge was built across Kalākaua Avenue, a low concrete bridge, almost flat on the road, then the stream went up into the duck ponds. We used to paddle surfboards up there, small kids, go (up) and (explore) at the duck ponds, the rice paddies, the taro patches and we'd paddle along and look around. Now and then you'd see duck eggs, (and) swipe the duck eggs, (don't) know what the hell for. Used to kinda be adventurous, you know, all these waterways going up all around (and) which is all built now in highrises.

Then when we would get back down we would go fishing in the stream. They had lots of little baby fish, I guess, you might call them "mosquito fish." Or when the stream would open up and the water would come in, it would be moi [threadfish] season or 'oama [young of the weke, or goatfish] season, some of these fish would go up in there. Actually, some of the regular fish like manini and stuff, they became acclimated to the water. You'd see these damn manini swimming around in the fresh water! (UHCOH 1985:334–335)

Mr. Craw also stated that the area in front of the Royal Hawaiian Hotel, where 'Āpuakēhau Stream entered into the ocean, was once abundant with various types of limu:

They had a lot of limu there...Manaua and limu līpoa. Waikīkī was very famous for its limu. It had līpoa, they had manaua. They had huluhuluwaena. They had, some spots there, wāwae'iole. Only thing that you couldn't find too much of and wasn't a good place for it, was lipēpē [limu līpēpē]. It's crunchy, when it grows flat looks like a Christmas tree. It's very crunchy, and real good tasting. Oh, boy! There's some out here but it's scrubby stuff.

Oh, limu-kala is broader leaf than the other limu līpoa. It is a coarser limu. It has almost the same taste but it is a wide coarse limu, and for that reason, the Hawaiians don't particularly care for it. They call it limu-kala. It is the līpoa that has the fine (leaf). It's about half or one-third the width of the limu-kala, and that is the preferred limu [līpoa]. (UHCOH 1985:335–336)

Mr. Craw expressed a recipe that he used for limu gathered from the shores of Waikīkī:

...it's that red manaua...if you want to make namasu-style [pickled]; you gotta clean out the fine (green) limu that grows in with every now and then. You have to clean that out, chop it up, blanch it and then run it under cold water so it doesn't cook because when it gets too cooked it gets soft and mushy. But just so you blanch it, and then you make your vinegar, sugar, ginger, (sauce) namasu-style, put it in.

Otherwise, you would chop it up, mix it with say wāwae'iole, a good mix is līpoa, wāwae'iole, lipēpē and manaua. Mix 'em all together, put it together. Whew! (UHCOH 1985:336)

3.5.3.4 Lemon "Rusty" Holt

The UHCOH interviewed Mr. Lemon "Rusty" Holt on March 15, 1985 at his home in Wilhemina Rise in Honolulu. Mr. Holt was born and raised in Waikīkī in 1904. Mr. Holt graduated from Kamehameha Schools in 1928 and later from the University of Hawai'i. Later he became a postmaster, personnel department head, and store and apartment manager. In his interview with UHCOH, Mr. Holt described his experiences with the dangers of gathering wana (sea urchin) in Waikīkī during his youth:

The best wana grounds is at where Queen's Surf is. There's a little channel, and right next to the channel is a reef. Wana growing underneath running water or (white) waves breaking is supposed to be fat. Good wana. Worthwhile getting and eating. You pick them in the month of October. They're fatter then.

Well, one day we went out, and (who was) steering, I forget. I was in the middle. We had gotten what wana we wanted—three or four gunny sack bags, filled up. They were in the front of me, at the bow was my sister Dawn Kinney, who just recently passed away. So in coming in, we caught a wave, a good sized wave. We shouldn't have. We shouldn't have, but we did. I can't remember now who was steering. Anyway, we caught the wave and as we came in, it ran into white water. The spray, came into the boat. My sister, who was sitting at the bow, when the spray came in, leaned back. When she leaned back, she leaned back onto the wana (bags), into the spears. Those spears are deadly because they break off. You can't

get them out unless you use tweezers right away. I don't know how many hours it took for somebody to pick out all they could find.

Years later, quite a few years later, I can't remember how many years later, my sister complained of her big toe hurting. So somebody got a razor and started to scrape around where she said it was hurting because they could feel it was hard. Then somebody got a pair of tweezers, and they opened it up a little bit, and they pulled out the tip of one of those wana spears...

...After all those years, one of them came out in her big toe. It was white in color, being in the stream, the bloodstream, all that time. But they could see, they could tell that it was still in the shape of the wana point. (UHCOH 1985:808-809)

3.5.3.5 Sadao Hikida

The UHCOH interviewed Mr. Sadao Hikida on December 18, 1986 at his home in Honolulu. Mr. Hikida was born and raised in Waikīkī in 1914 and is a *nisei* (second generation) Japanese. He was a caretaker for 'Āinahau, the former home of Princess Ka'ūlani, and a night watchmen for the Moana Hotel. In his interview with UHCOH, Mr. Hikida shared a story about 'Āpuakēhau Stream:

The 'Āpuakēhau Stream flowed pass our back and front yards and emptied into the ocean between the Moana Hotel and the Outrigger Canoe Club. The banks of the river were lined with hau groves and palm trees. The river was abundant with shrimp and fishes such as mullet, 'a'awa [wrasse], āholehole [young stage of āhole, or Hawaiian flagtail], pāpio [young stage of ulua, or crevalle, jack or pompano], manini and 'o'opu [goby]. I spent many happy relaxing hours fishing from the banks of the river or from the bridge which spanned the river. There was also a pond by our home which was connected to the 'Āpuakēhau Stream. It was filled with shrimps and small fishes. And it was where we raised our ducks. (UHCOH 1985:967)

Mr. Hikida also discussed the Ala Wai Canal project during his youth in the 1920s:

The dredging of Ala Wai Canal started about 1920 and was completed around 1926. The canal is about two and a half miles long, ending at Makee Road. It is about 150 feet wide and about 10 to 20 feet deep. This solved the flooding problem of Waikīkī. The dredged material of mud and coral was used to fill up hundreds of acres of pond fields and marshland in Waikīkī, Mō'ili'ili, McCully, Kapahulu and Kapi'olani Park. They also filled up the 'Āpuakēhau, the Kukaunahi and other small streams. While the 'Āpuakēhau Stream was being filled, thousands of mullet and other fishes and shrimps were being smothered by the land fill. (UHCOH 1985:970)

Mr. Hikida also discussed his past employment experiences at the Royal Hawaiian Hotel before switching over to the Moana Hotel:

I first started to work at the hotel in 1930 as a summer hire at the Royal Hawaiian Hotel. I started as an elevator operator. My immediate supervisor was Thomas Ishii (bell captain). The manager of the hotel then was Mr. Bignalia and Jack

Fishback. From 1931-34 while still a student in high school I worked full-time at the Moana Hotel on the midnight shift for three years as an elevator operator, bellhop and relief telephone switchboard operator. (UHCOH 1985:973)

3.6 Project Area

In summary, the archival research for this cultural and historical background of Waikīkī Kai and the 'ili of Kaluaokau indicate that the International Market Place has been connected to patterns of habitation, as indicated by a burial within the Project area uncovered by Lloyd J. Soehren in 1967 (BPBM Oa-A5-16, NAGPRA Inventory O'ahu Federal Register 1998) and royal residence for William Lunalilo (LCA 8559, 'Āpana 31 (Waihona 'Aina 2000), and Queen Emma (Kanahele 1995), with Lunalilo's cottage located just outside the Project area (Lyons 1875–1877) (). 'Āpuakēhau Stream once flowed through the southeast portion of the Project area, and is connected to broader patterns of lo'i cultivation, habitation, as well as mo'olelo of 'Āpuakēhau Heiau, and Nā Pohaku 'Ola Kapaemahu a Kapuni. The Project area is connected to these and other aspects of the broader cultural landscape, including the entire area of Waikīkī Kai. For a synthesis of this cultural landscape and the community interviews, see Section 6, Cultural Landscape.

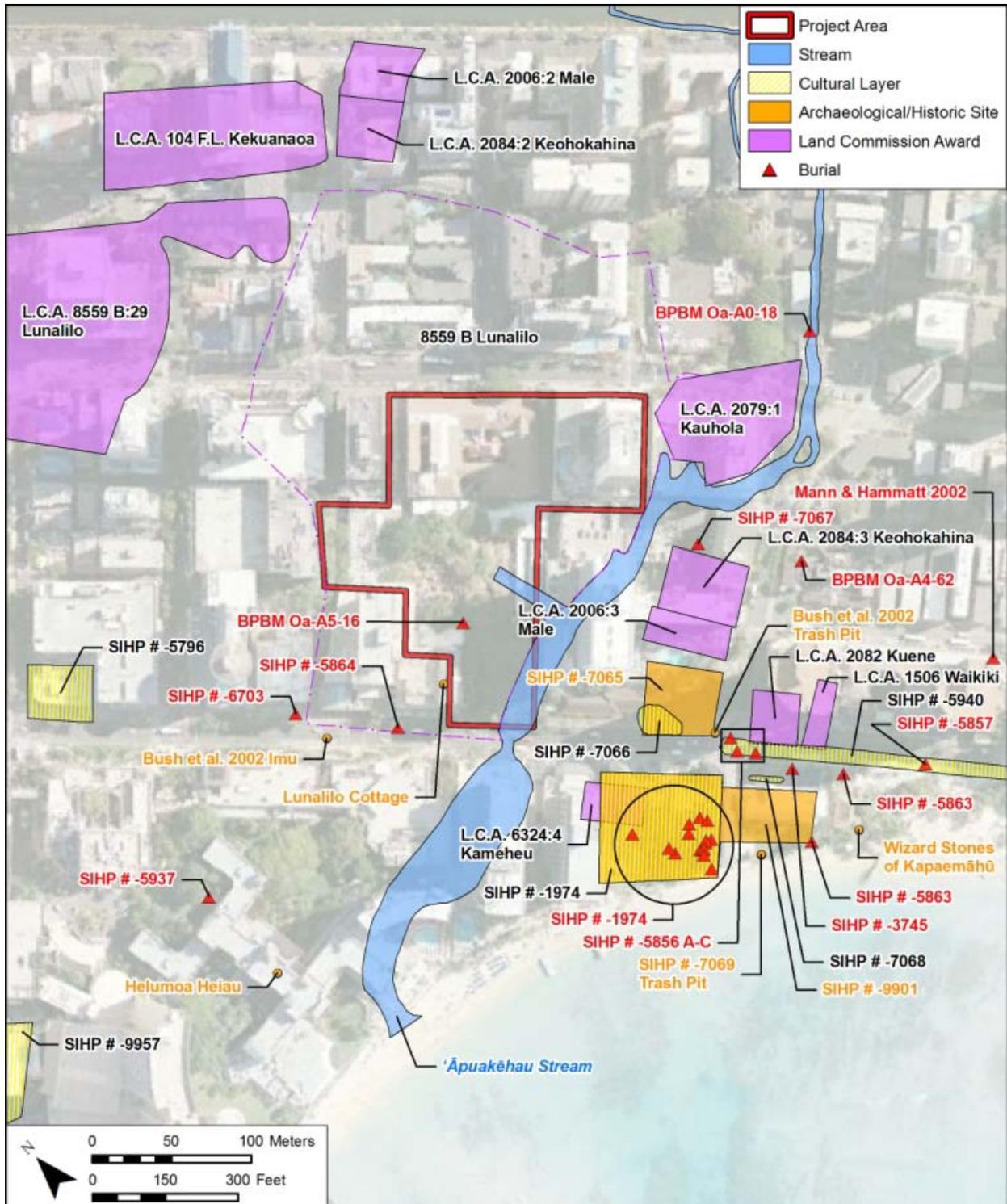


Figure 31. Composite image of place names, archaeological sites and cultural layers, burials, Māhele LCAs, and historic-era sites in the immediate vicinity of the Project area (base map Google Earth 2008)

Section 4 Community Consultation

Throughout the course of this assessment, an effort was made to contact and consult with Hawaiian cultural organizations, government agencies, and individuals who might have knowledge of and/or concerns about traditional cultural practices specifically related to the Project area. This effort was made by letter, email, telephone and in-person contact. The initial outreach effort was started in August 2011 and completed in October 2011. In the majority of cases, an aerial photograph (see Figure 1), a USGS map (see Figure 2), and a letter (Appendix D) of the Project area were mailed.

In most cases, two to three attempts were made to contact individuals, organizations, and agencies apposite to the CIA for this Project. The results of the community consultation process are presented in Table 6. Written statements are presented in Section 4, and excerpts from interviews are presented in Section 5.

Table 6. Results of Community Consultation

Name	Affiliation, Background	Comments
Agard, Louis Buzzy	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Ahlo, Charles	Cultural Descendent	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Ailā, William	Hui Mālama I Nā Kūpuna 'O Hawai'i Nei	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Apaka, Jeff	Waikīkī Neighborhood Board Subdistrict 2-Chair	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Arcalas, Cara	Cultural Descendent	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Ayau, Halealoha	Hui Mālama I Nā Kūpuna 'O Hawai'i Nei	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email

Name	Affiliation, Background	Comments
Bates, Cline	Cultural Descendent	August 29, 2011 CSH sent letter September 30, 2011 CSH sent letter
Bates, Ke'ala	Cultural Descendent	August 29, 2011 CSH sent letter September 30, 2011 CSH sent letter
Battle, Cherie Kahealani Keohokālole	Cultural Descendent	August 29, 2011 CSH sent letter September 30, 2011 CSH sent letter
Beckett, Jan	Photographer, Kamehameha Schools	August 17, 2011 CSH sent letter October 11, 2011 CSH sent letter by email October 12, 2011 Mr. Becket responded, intends to visit a culturally significant pōhaku that overlooks Waikīkī
Bissen, Tony	Cultural Historian at the Moana	August 29, 2011 CSH sent letter September 30, 2011 CSH sent letter
Blaisdell, Dr. Kekuni	Resident	October 6, 2011 CSH sent letter by email
Boyd, Manu	Royal Hawaiian Center	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Bridges, Cy	President, Native Hawaiian Hospitality Association	August 29, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Brown, Desoto	Bishop Museum Archivist	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Cayan, Phyllis Coochie	History and Culture Branch Chief, SHPD	August 17, 2011 CSH sent letter September 9, 2011 Ms. Cayan responded, referring Van Horn Diamond (see Section 4.1)

Name	Affiliation, Background	Comments
Cazimero, Anna Ka'olelo Machado	Waikīkī Musician and Kupuna	October 12, 2011 CSH conducted interview, and Ms. Cazimero gave permission to re-use previous interview (see Section 5.2)
Del Toro, Benjamin	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Del Toro, Daniel	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Del Toro, Rachel	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Del Toro, Samuel	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Diamond, Van Horn	Cultural Descendant, Former OIBC Chair	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 18, 2011 CSH conducted phone interview, and Mr. Van Horn Diamond gave permission to re-use a previous interview (see Section 5.6)
Downing, George	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH sent letter by email
Finley, Bob	Waikīkī Neighborhood Board	August 17, 2011 CSH sent letter August 24, 2011 Mr. Finely responded by email, and is supportive of the Project without any mana'ō on cultural impacts
Gomes, Phoebe	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Gomes, Robin	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Gora, Amelia K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Grace, Nadine	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Ha'ole, William Papa'i'ku	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Harris, Cy K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 11, 2011 CSH called and left a message, and sent email October 13, 2011 CSH conducted phone interview, and Mr. Harris gave permission to re-use previous interview (see Section 5.5)
Hatchie, Andrew	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Hukiku, Clarence Moses	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Ka'awakauo, Emma	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaimuki Senior Care, LCC	Cultural Descendant	September 9, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, Ali'ikaua	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, Haloa	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, Kala	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Kaleikini, Mahiaimoku	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, Moehonua	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, No'eau	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kaleikini, Paulette	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kam, Thelma	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Betty	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Kīhei	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Luther	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Michelle	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Noelani	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Regina	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keana'āina, Vicky	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Keana'āina, Wilsam	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kekaula, Ashford	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kekaula, Mary K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keli'inoi, Kalahikiola	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keli'inoi, Moani	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keli'ipa'akaua, Chase	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keli'ipa'akaua, Justin	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, Adrian K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, Dennis Ka'imina'auao	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, Emalia E.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, James Hoapili	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, Jeanine Leikeonaona	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Keohokālole, Joseph Moses Keaweahaheulu	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Keohokālole, Lori Lani	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kihikihi, Kaona	E Noa Tours, Waikīkī Cultural Historian	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kini, Debbie	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kini, Nalani	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Koko, Kanaloa	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Krewson-Reck, Sylvia	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 18, 2011 CSH conducted phone interview, and Ms. Krewson-Reck gave permission to re-use previous interview (see Section 5.4)
Kruse, T. Kehaulani	OIBC	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Kuhea, Kealoha	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Lanikila Multi- Purpose Senior Center		August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Lew, Haumea	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Lopes, Kamaha'o	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Lopes, Leina'ala	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Lopes, Puahone Kini	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Luka, Alika	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Mamac, Violet L. Medeiros	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Mānoa Senior Care		August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
McDonald, Ruby Keana'āina	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
McKeague, Mark Kawika	Chair, OIBC	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros Jr., Clarence	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter October 12, 2011 CSH emailed Mr. Medeiros, who gave permission to re-use previous interview (see Section 5.3)
Medeiros, David	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Jacob L.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Medeiros, Jaimison K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Jayla A.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Jim	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Kareen K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Lincoln K.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Medeiros, Roland	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Naguwa, Joan	Executive Director, Waikiki Community Center	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Nāmu‘o, Clyde	Administrator, OHA	August 17, 2011 CSH sent letter August 30, Mr. Nāmu‘o replied in a written statement (see Section 4.2)
Napolean, Rhoda and Barry	‘Ohana to Nalani Olds	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Nobrega, Malia	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Norman, Eileen	Pelekikena, Waikīkī Hawaiian Civic Club	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Norman, Kaleo	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Norman, Keli'inui	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Norman, Theodore	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Norman, Carolyn	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Olds, Nalani	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Paglinawan, Richard	Queen Emma Trust	August 17, 2011 CSH sent letter September 20, 2011 CSH conducted interview, which is still pending approval
Paoa, Clarke	Kama'āina of Kālia	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Papa, Jr., Richard Likeke	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Pascua, Bruce H.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Peters, David	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Rash, Regina	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Rochlen, Lillian Kenuenue Kaeo	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Roy, Corbett	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Shirai, Jacqueline	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Shirai, Jr., Thomas T.	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Soares, Moani Kaleikini	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Souza, William D.	Royal Order of Kamehameha, Kūhiō Chapter	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Spinney, Charles	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Suzuki, Ashley	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Suzuki, Kimberly	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Takaki, Miles	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Takaki, Moses	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Takaki, Tracy	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Takizawa, Lorna Medeiros	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Tesoro, Cassandra,	Executive Director, Kapahulu Center	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

Name	Affiliation, Background	Comments
Theone, Nicole Gulia	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Wagner, Pat	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Waikīkī Community Center Kūpuna		August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter by email
Williams, Evern	Resident	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Wong, Hinaleimoana	Vice Chair, OIBC	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter
Yokooji, Dayleen	Cultural Descendant	August 17, 2011 CSH sent letter September 30, 2011 CSH sent letter

4.1 State Historic Preservation Division

CSH contacted Phyllis “Coochie” Cayan, History and Culture Branch Chief of SHPD, on August 17, 2011, and Ms. Cayan responded to CSH on September 9, 2011 (Figure 32). According to Ms. Cayan, the SHPD is concerned about the possibility of burials or burial sites in the Project area, as there have been finds in adjacent parcels. Ms. Cayan summarizes Waikīkī as a place for fishing and kalo lo‘i of the chiefs, followed as a place for Hawai‘i’s former royalty to relax and entertain. Ms. Cayan recommends interviewing kūpuna who grew up in Waikīkī, which can be facilitated by contacting Jeff Apaka at the Waikiki Community Center and other senior citizens in the adjacent neighborhoods of Kapahulu, Kaimukī, Mānoa, the Lanikila Senior group of Liliha. Ms. Cayan also recommends contacting the University of Hawai‘i at Mānoa’s (UHM) Center for Hawaiian Studies regarding the historic use of the Project area and the ali‘i use of the ‘āina for their homes in Waikīkī. Ms. Cayan also recommends using interviews and other media from the Oral History program at UHM for histories of the early fishing village, plantation era, and modern culture. Finally, Ms. Cayan refers Van Horn Diamond, a renowned Hawaiian musician who grew up in Waikīkī.

4.2 Office of Hawaiian Affairs

CSH contacted Clyde Nāmu‘o, Administrator of OHA, on August 17, 2011, and Mr. Nāmu‘o responded to CSH on August 30, 2011 (see Figure 33). According to Mr. Nāmu‘o, OHA suggests that native plant species traditionally found in the Project area should be considered in

the landscaping design to encourage practical traditional plant uses and, if drought resistant, to reduce demands on irrigation water.

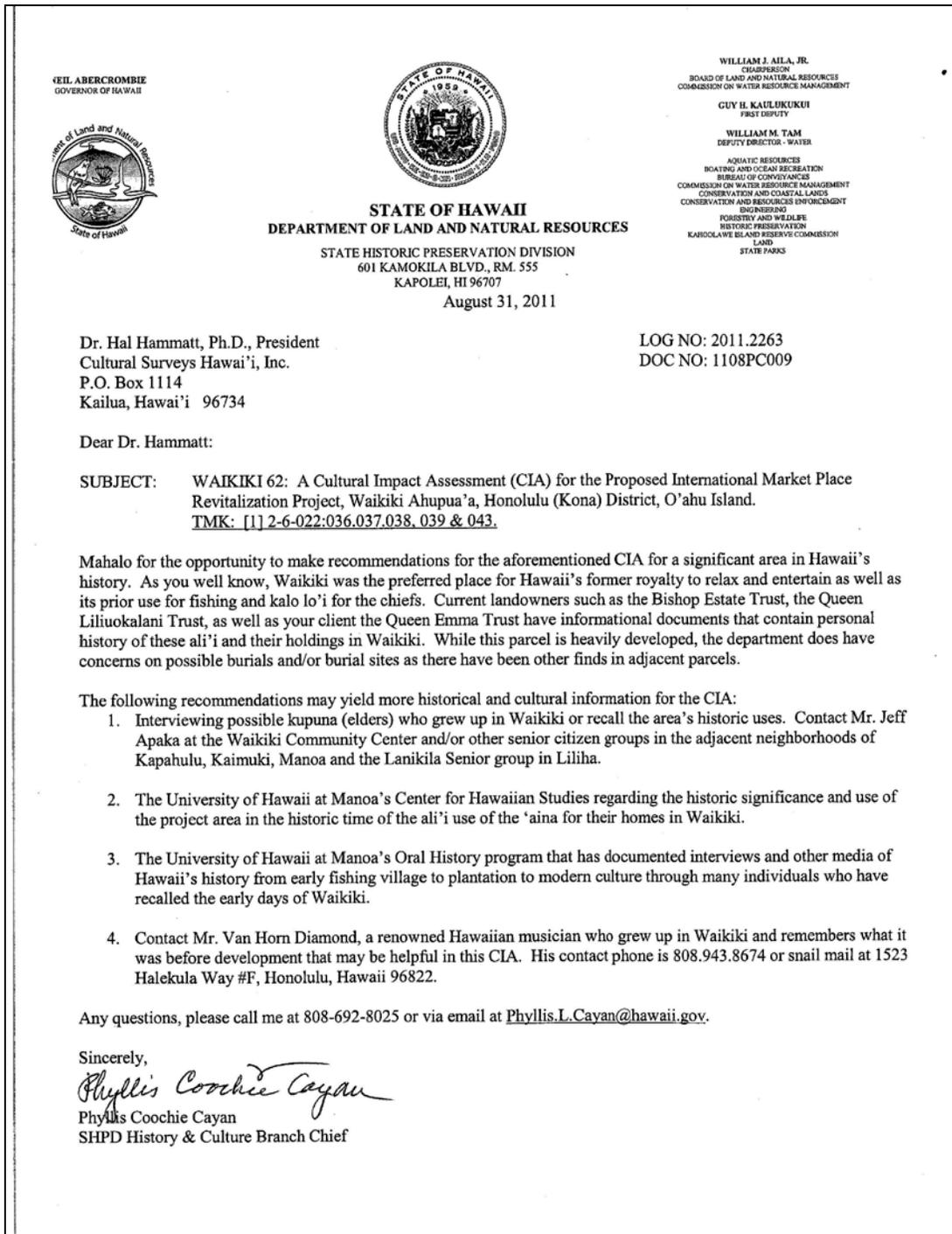


Figure 32. SHPD response letter

PHONE (808) 594-1888

FAX (808) 594-1865



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

HRD11/5916

August 30, 2011

Joe Genz, Cultural Researcher
 Cultural Surveys Hawai'i, Inc.
 P.O. Box 1114
 Kailua, Hawai'i 96734

**Re: Pre- Cultural Impact Assessment Consultation
 International Marketplace Revitalization Project
 Waikiki, Island of O'ahu**

Aloha e Joe Genz,

The Office of Hawaiian Affairs (OHA) is in receipt of your August 16, 2011 request for comments ahead of a cultural impact assessment (CIA) which will be prepared to support the International Marketplace Revitalization Project (the project) proposed by the Queen Emma Land Company and the Taubman Company.

The project will demolish the existing structures which constitute the "International Marketplace". A new three level retail center will be constructed and supporting utilities, amenities and infrastructure installed within the 5.98 acre project area. OHA does seek clarification whether an archaeological inventory survey will be conducted. CSH has well established relationships with the many recognized descendant families (families) of Kaka'ako and surrounding ahupua'a and we are confident that the forthcoming CIA will reflect extensive consultation with these families.

As project plans move forward, OHA suggests that native plant species traditionally found in the project area be considered in project landscaping design. In general, OHA believes utilizing certain native species has the potential to encourage practical traditional uses, while utilizing others that are drought tolerant has the potential to reduce demands on irrigation water.

We have no additional comments at this time. We look forward to reviewing the CIA when it is completed. Should you have any questions, please contact Keola Lindsey at 594-0244 or keolal@oha.org.

'O wau iho nō me ka 'oia'i'o,

Clyde W. Nāmu'o
 Chief Executive Officer

CWN:kl

Figure 33. OHA response letter

Section 5 Interviews

Kama'āina and kūpuna with knowledge of the proposed Project and study area participated in semi-structured interviews from August to October 2011 for this draft CIA. CSH attempted to contact 126 individuals for this draft CIA report; of those, ten responded and six participated in formal interviews; one interview is still pending approval. CSH initiated the interviews with questions from the following five broad categories: wahi pana and mo'olelo, agriculture and gathering practices, freshwater and marine resources, cultural and historic properties, and burials. Participants' biographical backgrounds, comments, and concerns about the proposed development and Project area are presented below.

5.1 Acknowledgements

The authors and researchers of this report extend our deep appreciation to everyone who took time to speak and share their mana'ō (thoughts, opinions) with CSH whether in interviews or brief consultations. We request that if these interviews are used in future documents, the words of contributors are reproduced accurately and not in any way altered, and that if large excerpts from interviews are used, report preparers obtain the express written consent of the interviewee/s.

5.2 Anna Ka'olelo Machado Cazimero

CSH interviewed Anna Ka'olelo Machado Cazimero, a retired musician and Waikīkī kupuna, by phone on October 12, 2011 and previously on June 21, 2010 at the Lunalilo Home Adult Day Care Center in Hawai'i Kai (Cruz and Hammatt 2011). Mrs. Cazimero was born to parents Manuel Ka'olelo and Sarah Koleka Kuhaupi'ō on August 28, 1920 in Kailua-Kona on the island of Hawai'i.

Mrs. Cazimero spent her early childhood in Kailua-Kona in an area called Hōlualoa Makai. She explained that there were two areas of Hōlualoa, one called Hōlualoa Makai, located in the coastal area of Kailua-Kona, and the other Hōlualoa Mauka, located in the uplands of Kailua-Kona. Today there is no Hōlualoa Makai. During her teens and early adulthood, Mrs. Cazimero spent some of her time sorting coffee beans at the Kona Coffee Mill in Kailua-Kona. She noted that little children went to work with their parents because there were no babysitters, so children at a very young age also worked at odd tasks and were paid a small amount by the coffee companies. At times, she also worked in the fields picking coffee beans for what she considered small pay but still financially worthwhile because things were much cheaper back then.

Mrs. Cazimero explained that her family's home in Hōlualoa, like other homes of Hawaiian families in the area, usually had some instrument in the house like a guitar or 'ukulele. At an early age, Mrs. Cazimero learned to play the various musical instruments at her home, although she insists she had no formal training. She learned to sing and to play the instruments by "ear," a method of learning and practicing music by listening to a song and replicating the melody on an instrument or by voice without actually knowing what chords are that are being played. To help her learn and understand the Hawaiian songs that were being played by other musicians, her family spoke both Hawaiian and English. By the time she was in her early twenties, Mrs.

Cazimero had acquired more than enough musical talent to join the musicians union. She began playing music and singing professionally soon after.

At the age of 20, Mrs. Cazimero relocated to O'ahu to seek job opportunities in the musical industry in Waikīkī. She recalled catching a ride on a cattle ship that frequently traveled between islands for five dollars, an activity affordable to and commonly practiced by local people. The two cattle ships she recalled were the *Humu'ula* and the *Hawai'i*. During the trips on the cattle ships, where everyone slept on deck with the cattle, Mrs. Cazimero recalled playing music, the practice of *kanikapila* (to play music together), aboard the ship with other musicians. She states that the atmosphere on the deck of the ship was like a big party and lots of fun.

One of her first gigs was playing for the Kodak Hula Show in Waikīkī. The Kodak Hula Show officially began March 7, 1937 in Waikīkī. It was created by Fritz Herman, then vice-president and manager of Kodak Hawai'i, to create an opportunity for tourists to photograph hula dancers in the daytime. Mrs. Cazimero was part of the Kodak Hula Show at Sans Souci Beach near the Natatorium in Waikīkī.

Mrs. Cazimero continued to play for the Kodak Hula Show until it finally ended in 2002 after a 65 year run in the islands. Instruments played by Mrs. Cazimero include 'ukulele, guitar and the stand-up bass; as well as vocals. She recalled that the show, held during daylight hours, was in an outdoor setting in the sun that was hot for the show's cast.

During her early stint in Waikīkī with the Kodak Hula Show, Mrs. Cazimero was residing at 411e Kapahulu Avenue, minutes from the Waikīkī Beach. She recalled the December 7, 1941 bombing of Pearl Harbor by Japan, and how soon after, blackout laws were imposed by the U.S. military. She continued by sharing that no light was allowed to escape her house during the evening time or a night watchman would come to the house and reprimand her family for violations of the war-imposed blackout laws.

Soon after the historic attack on Pearl Harbor, Mrs. Cazimero found herself working at the Pearl Harbor Naval Yard building ammunition for the war effort of the U.S. military. She explained that she would take the bus early in the morning from Waikīkī and make her way to Pearl Harbor. Once there, she would board a ferry to get to Ford Island. In the factory where she worked, it was required that she have on her at all times her government-issued gas mask or she would not be allowed to work. The U.S. military was concerned for a chemical attack in the islands by Japan, so Mrs. Cazimero made sure she had her gas mask everyday she went to work at Pearl Harbor.

During the time she resided in Waikīkī, Mrs. Cazimero recalled gathering *limu* (seaweed) and catching fish along Waikīkī's shores. The type of *limu* she collected was *limu līpe'epe'e* (see Appendix B for common and scientific plant and animal names mentioned by community participants), a much-desired edible red seaweed found near-shore in basaltic rocks and coral reefs throughout the Hawaiian islands. She recalled picking only enough *limu* for her family's next meal and not over picking because the practice was to pick only as much as would be consumed for one meal. She noted that all practitioners knew that the ocean was an icebox that would hold the *limu* until the next meal, so picking more than was needed made no sense. She says this particular type of *limu* went well with all kinds of dishes.

Mrs. Cazimero recalled catching ‘upāpalu in Waikīkī, a type of cardinal fish. ‘Upāpalu is usually caught at night when the moon is bright, thus earning the nickname “moonfish” and its length is commonly three to five inches. This fish was eaten either raw or cooked, and was a favorite of her mother-in-law at the time, Mrs. Amelia Machado, with whom she lived. Mrs. Cazimero also used to gather wana, sea urchin varieties with sharp pointed spikes, and hā‘uke‘uke, a type of shingle urchin used for both food and medicine.

One story shared by Mrs. Cazimero involved a dream she had about being given a gift by the sea. The day after she had the dream, she went to Sans Souci Beach to pick limu. The area, also known as Kaimana Beach, was during Mrs. Cazimero’s time, a narrow strip of rocky sand with a wide reef where local residents gathered octopus, limu, and other seafood. She typically wore *tabis*, (tabi is a Japanese shoe that can be used to walk on reefs) and a wide-brimmed hat secured with a string tied under her chin. That day, while she was out on the reef, a strong wind came and blew her hat off. It flipped over and landed on the shallow reef and a fish (an uhu) jumped into her hat. Immediately she stopped gathering limu, picked up her hat with the fish in it, and went home. She gave the fish to her mother-in-law and told her about the dream. Her mother-in-law cooked the fish and they had it for dinner. She later told Mrs. Cazimero that the fish was a gift from the ocean and that the gift came for a reason, so she should be mindful that something else would likely happen. Several days later, Mrs. Cazimero went to the beach again to pick limu, but when she entered the water she found that the bottom of her feet hurt, so she went back on shore and discovered that the soles of her feet were cracking. She went to the doctor, who took some tests. Shortly afterward he determined that Mrs. Cazimero had become allergic to salt water. After that, she stopped going to the beach to gather limu and other seafood.

Now residing in Hawai‘i Kai at the Lunalilo Home Adult Day Care Center with other kūpuna, Mrs. Cazimero expressed her enjoyment of sharing her life stories with CSH. She spent over 50 years of her life in Waikīkī. She has worked with numerous musicians throughout her career such as Bill Lincoln, Van Horn Diamond, Lena Machado and John Alameida. Mrs. Cazimero was part of a group called the Diamond Head Trio, which included herself, Richard Wells and Doreen Lindsey. Her late husband, Bill Cazimero, is the father of the famous Hawaiian musical duo *The Brothers Cazimero*.

Mrs. Cazimero does not have any concerns or recommendations for the proposed Project.

5.3 Clarence Medeiros, Jr.

CSH contacted Clarence Medeiros, Jr. on October 12, 2011 to follow-up on a previously conducted interview in Kailua-Kona, Hawai‘i on May 27, 2010 (Cruz and Hammatt 2011) and by phone on December 29, 2004 for a cultural evaluation of the International Market Place (Mitchell et al. 2005). In this interview and in the past statements regarding projects in Waikīkī, which Mr. Medeiros approved to be re-used, he details his ‘ohana (family) links to Waikīkī as well as provide comments specific to this Project. He has four documented genealogical connections with Waikīkī.

Mr. Medeiros was born in 1952 in South Kona to Clarence Medeiros Sr. and Pansy Hua Kalalahua. He served in the United States Army from 1969 to 1972, including a tour of duty in Vietnam. Mr. Medeiros is married to his wife, Nellie, and they tend to a coffee, taro, and macadamia nut farm on Hawai‘i Island. They have two children: Jacob, 36, and Kareen, 38.

Mr. Medeiros' interest in his genealogy was sparked when he first saw a picture of his grandmother, Violet Leihulu Mokuohai Parker. Grandma Violet was tall, fair and had green eyes. But inside, she was pure Hawaiian. Mr. Medeiros grew up learning about his grandmother through stories from his parents, kūpuna, and from his grand-uncle, the famed canoe carver Charles Mokuohai Parker, the brother of Grandma Violet. Grand-uncle Charles made canoes for canoe clubs throughout the islands. By the time Mr. Medeiros was in his 20s, he had spent many hours documenting his family connections. Using sources such as oral history, Mormon genealogical records and scholarly works, he outlined four connections to the Waikīkī area.

Mr. Medeiros states that the Project area involves Waikīkī kai, and is part of Honolulu district. While showing CSH a map of 1874 Waikīkī, he notes that "Mānoa, Makiki, and Pauoa Ahupua'a all take care of the Waikīkī area. Most of the land we are talking about went through Kamehameha IV. Kamehameha IV owned several big portions."

Stating that he has Hawaiian, Portuguese, English, Scottish, Spanish and Chinese in his background, Mr. Medeiros explains that his first connection to Waikīkī is through his great-great-great grandfather, Samuel Puhalahua. He documented that LC Award 1268 was awarded to Nakai and it involved 1.60 acres and 23/100 acres in Waikīkī waena, not at the beach area of Waikīkī. The land consisted of a lo'i. Nakai conveyed the land to William Smith who later conveyed it to Naomi Nakuapa Puhalahua, the wife of Kuwalu Puhalahua. Kuwalu, the father of Samuel Puhalahua, was Mr. Medeiros' great-great-great grandfather.

Samuel Puhalahua married Kanika and they had a son named John Mokuohai Puhalahua, the great-great-grandfather of Mr. Medeiros. Mr. Puhalahua married a half-English, half-Hawaiian woman named Kaehamalaole Elemakule Clark. They had one child, Abigail Mokuohai, who is the great-grandmother of Mr. Medeiros. Abigail married William Parker Jr. and they had two children, one of them was Violet Leihulu Mokuohai Parker, who was the grandmother of Mr. Medeiros and whose picture first inspired his genealogical interest when he was a young boy.

As for the second connection to the Waikīkī area, Mr. Medeiros describes his great-grandfather, Zen Man Sing, (also known as "Zane Man Sing"), who is connected to Mr. Medeiros' maternal side. His great-grandfather was Chinese and arrived in Hawai'i in 1888. Shortly after his arrival, Mr. Medeiros' great-grandfather worked in Waikīkī with relatives planting rice and taro and working in the Sun/Soong stores which were owned by his mother's family. Mr. Medeiros states the following:

It was all water, swampland. Waikīkī was all lo'i kind of land around 1890s. Life was kind of hard then. But they [great-grandfather and family] are Chinese; they are business-minded. They are looking to get better. After five years of planting rice, great-grandpa came to Kona, hearing stories that coffee would make money. He went to Ho'okena where he met my great-grandmother, Kaaumoana Niau. They got married and ended up in Kalahiki. Then he moved back to O'ahu. All his kids were raised in Kalahiki as well as O'ahu. Now they are all over Honolulu.

From this union, Mr. Medeiros' grandma, Annie, was born in Waiea, South Kona. Her full name was Annie Man Sing Zen, and she did not follow her parents and siblings when they later moved to Honolulu. Instead, she stayed behind and lived with different family members in

Ki'īlae, Honaunau, Kēōkea and Kalahiki. Grandma Annie married her first husband, Charles Hua, the grandfather of Mr. Medeiros. After his death, Annie married Charles Weeks.

In 1975, Mr. Medeiros went to a family reunion and spent time with his grandma Annie and other relatives:

My grandma was still alive at that time. In her 90s, and also one of her brothers. We got to talk about their life in Kalahiki and O'ahu...They remembered going to school in Kalahiki and Ho'okena; [they] walked to school, fished, worked in the farm and picked coffee. When they moved to O'ahu, they worked in a hotel. The older ones liked the old-time life, fishing, hunting which they could do in Kalihiki, but not in O'ahu.

Regarding the third connection to Waikīkī, Mr. Medeiros explains that his grand-aunt Miriam Peleuli Crowingburg Amalu owned several parcels of choice land in Waikīkī. She and Mr. Medeiros share the same bloodline through a relative named Kameeiamoku. Miriam was a close friend and relative of Queen Lili'uokalani and often visited the palace to see the queen. She later had her properties auctioned off and conveyed to others. It was from Miriam's grandson that some properties were conveyed to Mr. Medeiros. These properties included 1/4 of an acre in Ho'okena Beach and 300-plus acres in Waiea on Hawai'i Island.

His fourth connection to the ahupua'a of Waikīkī is from the Portuguese side of his family. When Mr. Medeiros was around seven years old, he attended school in O'ahu. He first lived with his great-grandmother Mary Costa Pimental. Great-grandma Mary was married three times: her first marriage was to Marion Medeiros, whose son was Frank Medeiros. Frank Medeiros had married Grandma Violet, who was a direct descendant of Samuel Puhalahua who owned land in the middle part of Waikīkī (see above).

Mr. Medeiros' great-grandma Mary's maiden name was "Pacheco" and she came from a Portuguese-Italian background. During the year he visited and lived with them in their home on Birch St., Mr. Medeiros would watch his great-grandpa by marriage, Frank Pimental, play *bocci* (ancient game stemming from the Roman Empire which resembled bowling) along with other elderly men. He and great-grandma Mary would bake bread every Thursday. All the great-aunts would converge to help with the baking of bread and *malassadas* (sweet doughnuts originating from a Portuguese colony), and they would hug and squeeze their eight-year-old great-nephew until he was blue.

While his father worked for the survey of the Wilson Tunnel, Mr. Medeiros went to Lanakila School in Kalihi. His father also worked part-time for former Mayor Frank Fasi as a truck driver. Mr. Medeiros remembered old landmarks of Honolulu during his time there, like the old Honolulu Stadium and Ft. DeRussy where his great-grandpa played *bocci*. In Kalihi, there was a wigwam store that is no longer there. The remaining eight months of that year, Mr. Medeiros lived with his father's half-sister who was also named Violet. Her neighbors were relatives of Mr. Medeiros' mother. Kalihi had a river, and there he used to catch tilapia with relatives and friends.

Mr. Medeiros believes that because of the customary Hawaiian practice of burying family members within their pā hale (yard), it is highly likely that Native Hawaiian burials may exist in

this Project area. He also thinks that since foreigners also lived in Waikīkī, burials of these foreigners may also be found within the Project area. Mr. Medeiros does not have any concerns or recommendations for the proposed renovation of the International Market Place.

5.4 Sylvia Krewson-Reck

CSH interviewed Sylvia Krewson-Reck by phone on October 12, 2011 and previously at her home in Kahalu'u on the windward side of O'ahu on March 23, 2010 (Cruz and Hammatt 2011). Aunt Sylvia, as she is affectionately known, was born in 1929. When she was seven years old she and her family moved to O'ahu to a small home in Kalihi Valley. She grew up in the Waikīkī area beginning at the age of eight. Two years later, she and her siblings were put into the custody of the St. Mary's Orphanage on King Street in Mō'ili'ili, where they spent the next five years:

...we were placed in the St. Mary's Orphanage; we attended Lunalilo School in Honolulu. We still had visits from our parents every now and then but we continued to stay at St Mary's. I was lucky enough to be named "Princess O'ahu" on May 1, 1941 for Lunalilo School...I don't know how that happened but there I was, "Princess O'ahu" with the flowers and all on May Day.

I remember riding the trolley from the orphanage into Waikīkī. As we rode on McCully Street heading towards Waikīkī, on the left hand side or the Diamond Head side of McCully Street, were all these fishponds and lo'i [Figure 34 and Figure 35]. Didn't have all the buildings like now. It was taro and fishponds but I guess they all got filled in.

In 1932, George P. Mossman, an 'ukulele maker, opened Lālani Hawaiian Village in Waikīkī to demonstrate traditional Hawaiian music, crafts and lū'au (Hawaiian feast). The presence of Kuluwaimaka, the former chanter for Kalākaua, lent the village much credibility (Figure 36). After spending five years at St. Mary's, Aunt Sylvia attended the Lālani Hawaiian Village in Waikīkī, at the corner of Kalākaua Avenue and Kapahulu Boulevard:

I became a student at Lālani Hawaiian Village. That's where I started learning about the Hawaiian culture. It was right near the beach in Waikīkī. I believe the person that ran the village was George Mossman. He even created a place in the village that I believe was a heiau. Lālani had a very Hawaiian cultural feel to the place. I danced hula there. Our hālau [hula group] was called "Ho'o Na'auao Hawai'i o Mokīmana." It means "Spread Knowledge of Hawai'i." My kumu hula was Pualani and Leilani Mossman, they were wonderful people.

While Aunt Sylvia attended Lālani Hawaiian Village, she recalled that sometimes her parents took her to play at Waikīkī beach, where she enjoyed the beaches and surfed:

When my father used to take us kids with him, he would bring us to the beach at Waikīkī. He would hang out at this bar called the Tavern. It was right on the beach, so he'd be at the bar and us kids would be on the beach. So we basically grew up on Waikīkī beach. All the old timers were there. Folks like George Downing and there was this one gentleman named Joseph Kaopuiki [Figure 37]. His nick name was "Scooter Boy." He was known at that time as the surfer who

rode the biggest wave on the North Shore. Everyone knew him. He was Cherokee Hawaiian. He was a really close friend of mine, he was a little older than me but we were really close. He would take me tandem surfing all the time. We were best friends but he never made a move on me, I'll never forget that [smiling as she said that]. I think he respected me too much. He was such a good man...quiet...and very respectful.

Anyway, while we were at the beach and my dad was at the Tavern, there was this guy named Richard Kauhi. He was a musician upstairs at the Tavern. He played the piano and sang. He was so good. When I hear his songs now, it brings back those memories, he died very young.

Aunt Sylvia elaborated about the Hawaiian music scene in Waikīkī when she was growing up:

At night in Waikīkī, there were all these Hawaiian music entertainers. It was before Don Ho's time. Under this big Banyan tree at Kūhiō Beach, was the Kalima Brothers. They used to play for the crowds and there was this bucket that was passed around for people to put money in for the brothers. They were really great musicians. At night, you could hear the music and people would follow the music and that's where the party was.

Gabby Pahinui was also playing. His gig was at this hotel called Niumalu Hotel. He played with Pua Alameida, I remember they were good. It was before Gabby was big time. They played at this dinner and dance place. I used to go there on dates and dance away to their music.

After the illegal overthrow of the Hawaiian Kingdom in 1893, members of the Royal Hawaiian Band visited Ellen Wright Prendergast, a close friend of Queen Lili'uokalani, and expressed their unhappiness with the takeover of the Hawaiian Kingdom. At her father's home in Kapālama, Ms. Prendergast put the band member's feelings into the song "*Kaulana Nā Pua*," or "Famous are the Children." Today, this song continues to be symbolic of the Hawaiian independence movement. Aunt Sylvia shared a story of Ms. Prendergast during her childhood years:

I had a classmate and her name was Lorna Prendergast. One day we were invited to go to her home in Kapālama and hang out and play music. When we were in her home, we were talking and stuff and there was a woman in the kitchen. She came out to us and brought us juice or something. Lorna introduced the woman as her grandma Ellen. She was very nice to us and they had a piano in which we played and sang songs. This was in 1947.

One day about ten years ago, I recalled that day in 1947 and it was then that I realized that Lorna's grandmother was Ellen Wright Prendergast, the woman who wrote *Kaulana Nā Pua*. On that day at Lorna's house, we never heard of that song so we just played on the piano and had fun.

Aunty Sylva also recalls that in *Hawaii's Story* (1898), Lili'uokalani wrote that she delighted in seeing people of opposite political views enjoy themselves at Kūhiō Beach in the land of Hamohamo.

With such massive development that has taken place in Waikīkī, Aunty Sylvia is not aware of any potential cultural impacts from the proposed Project at the International Market Place, and does not have any concerns or recommendations.



Figure 34. Photograph of trolley on Waikīkī Road circa 1940 described by Mrs. Krewson-Reck in her interview (photograph courtesy Hawai'i State Archives)

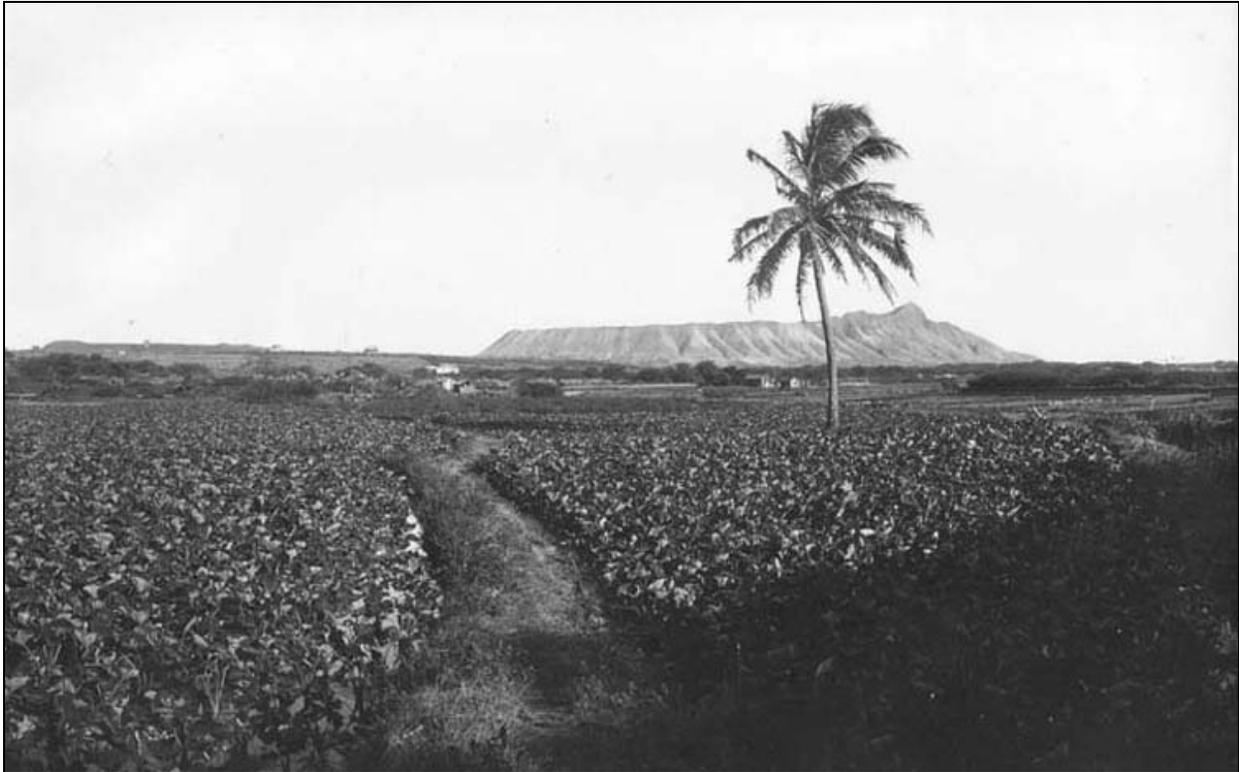


Figure 35. View of Diamond Head from McCully Street showing fields of lo'i kalo circa 1940 described by Mrs. Krewson-Reck in her interview (photograph courtesy of Kamehameha Schools' Baker Collection 1826–1940)



Figure 36. Kuluwaimaka, the court chanter for Kalākaua, at the Lālani Village (Hibbard and Franzen 1986:130)



Figure 37. Photograph of Aunt Sylvia Krewson-Reck with Joseph “Scooter Boy” Kaopuiki circa 1945 (photograph courtesy of Aunt Sylvia Krewson-Reck)

5.5 Cy Harris

CSH interviewed Cy Harris by phone on October 13, 2011 and previously on December 16, 2004 for a cultural evaluation of the International Market Place (Mitchell et al. 2005). Mr. Harris, a cultural descendant with familial ties to Waikīkī, was born in Honolulu in 1953, and is a member of the Kekumano 'Ohana. Mr. Harris notes that several heiau were located in Waikīkī, with the most famous heiau located on the slope of Lē'ahi Crater. He mentions that the Hawaiians used the ocean off Waikīkī for gathering limu kohu (seaweed) and wāwae'iole (a moss).

Based on research undertaken by his kumu, Mr. Harris thinks it is very probable that burials will be found in the Project area. He explains that the epidemics that occurred in post-Contact Hawai'i resulted in mass burials along coastal regions. Additionally, the Project construction may uncover remnants associated with the ali'i who once lived in Waikīkī.

5.6 Van Horn Diamond

CSH interviewed Van Horn Diamond by phone on October 18, 2011 and previously on June 21, 2010 in Honolulu (Cruz and Hammatt 2011). Mr. Diamond was born and raised in Waikīkī. Mr. Diamond served six years on the OIBC and is the former OIBC chairperson. His family's residence was on Kānekapōlei Street, named after one of the wives of Kamehameha I. Mr. Diamond adds that most of the place names in Waikīkī, including the street names, were associated with Kamehameha I or the ali'i class in general.

Mr. Diamond describes his mother's occupation during his youth:

My mom was a schoolteacher and played music. My grandmother had a hula troupe and her sister had a hula troupe. My grandmother's hula troupe was the Honolulu Girls. They called it glee clubs at the time. Her sister's one was the Royal Hawaiian Girls Glee Club. The Royal Hawaiian Girls Glee Club was the ones that maintained and performed at the Kodak Hula show all these years.

Mr. Diamond describes his childhood home on Kānekapōlei Street:

It was pretty much urbanized by then. When I was growing up there was a fence line. On the other side of the fence were date trees. And the other side of the fig trees there were bachelors' quarters, Filipino workers for the hotels. And the community shower and there were these banyan trees. That was Supervisor's Road. And where the parking lot is, it connects to Kānekapōlei, that part of the parking lot, there was a platform. It could've been... Now, in retrospect, it could've been a platform for iwi, for whatever. What I saw there was, they had like, rotted out, badminton net kind of situation. And they had backboard for basketball. That's all there was. But thinking about it now, it could've been a platform. And the banyan tree was right there.

Where we lived, I go the ball game, I walk home. Cheaper than riding the bus. Take too long the bus. Gotta get on the bus in front of the stadium, go all the way to Pāwa'a, where Cinerama was, get off there, get on another bus and we'd get on the bus that came from Mānoa, then it'd take you down around by Fisherman's

Wharf and come all the way and then up along the Ala Wai. Or take the bus that went right down through Waikīkī and ended up by the Moana Hotel, Moana Surfrider, then walk home. Too long! So we just got off, walk down.

The International Market Place has a strong history of entertainers. During his childhood, Mr. Diamond listened to the musicians who played there, including Don Ho. He has fond memories of the group, "Hawaii Calls," which broadcast its radio show from the banyan tree inside the International Market Place. This music scene was, and continues to be, an integral part of the International Market Place, and Mr. Diamond recommends that it be perpetuated in the Project's revitalization design.

Musicians in Waikīkī during the 1940s and 1950s were unionized already. Mr. Diamond shares some insight into what it was like for his mother being a musician in the union:

There was a union, but they didn't pay that much attention to it. Some were unionized, some were not. My mom got kicked out of the union because she wouldn't stop playing for her mother. She knew who the union president was and one day she was playing at the Royal Hawaiian Hotel on arrival day, or boat day and the union president showed up. He was wondering what she was doing. She said, "Oh, I got kicked out of the union." So he got her back in. She got back in after she saw him.

Mr. Diamond expresses his mana'ō regarding burials in the vicinity of the Project area. There is a possibility of uncovering burials in the eastern section of the Project area and makai of the Project area along Kalākaua Avenue. Mr. Diamond explains that the area of the current Princess Kai'ulani Hotel used to be an open area with guest cottages of the Moana, and human remains have been previously discovered in this former cottage area. Thus, it may be possible that burials may extend into the eastern section of the Project area. In addition, a previous study uncovered a burial at the crosswalk just makai of the Project area under Kalākaua Avenue, which suggests that burials may be located closer to the makai portion of the Project area. Should any burials be uncovered within the International Market Place, Mr. Diamond asserts that as much information of the remains and context must be understood as possible. He recommends legally extricating the remains to a proximate location in order to address them, and to ascertain the significance of the site of the remains. Depending on the findings, the human remains could be preserved in a memorial for "all past generations" within Waikīkī.

5.7 Richard Paglinawan

CSH interviewed Richard Paglinawan on September 20, 2011. This interview is still pending approval.

Section 6 Cultural Landscape

Discussions of specific aspects of traditional Hawaiian culture as they may relate to the Project area are presented below. This section integrates information from Sections 3–5 in order to examine cultural resources and practices identified within or in proximity to the Project area in the broader context of the encompassing landscape of Waikīkī Kai.

6.1 Settlement

After the first settlement of O‘ahu, which may have occurred between approximately A.D. 1040 and 1219 in the windward Ko‘olaupoko region (Dye and Pantaleo 2010), the southern coast of Waikīkī Kai was occupied by at least A.D. 1400. Numerous excavated subsurface cultural layers have been radiocarbon dated to between approximately A.D. 1400 and 1800, with evidence of habitation, subsistence and other occupational activities.

6.2 Habitation

Subsurface cultural layers throughout Waikīkī Kai contain pits, firepits, post molds, food debris, and associated burials that indicate habitation, as well as stone tool production, as early as approximately A.D. 1400 (e.g., SIHP 50-80-14-4224, Beardsley and Kaschko 1997). Such cultural layers have been uncovered in close proximity to the Project area, including Moana Hotel (SIHP 50-80-14-1974, Simons et al. 1991; SIHP 50-80-14-7068, Thurman et al. 2009), the Princess Ka‘iulani Hotel (SIHP 50-80-14-7066, Runyon et al. 2010), and across Kalākaua Avenue (no SIHP number, Bush et al. 2002). This area close to the mouth of ‘Āpuakēhau Stream was most likely the area of the coastal village of Waikīkī Kai.

Waikīkī Kai was an area for royalty to relax and entertain, according to community participant Ms. Cayan, starting with Mā‘ilikūkahi in approximately A.D. 1490 (Kamakau n.d., cited in McAllister 1933:74), continuing with Kākuhihewa in the late 1500s (Hibbard and Franzen 1986:2), and extending until the time of Kamehameha’s conquest of O‘ahu in 1795 (‘Ī‘Ī 1959:17). La‘ie-lohelohe, the daughter of Kalamakua, was raised within the bounds of Kaluaokau, the ‘ili within which the Project area is located, and gave birth to her son at the nearby ‘Āpuakēhau Heiau (Kamakau 1991:49). At the Māhele, the ‘ili of Kaluaokau was granted to William Lunalilo (LCA 8599, ‘Āpana 31) (Waihona ‘Aina 2000), whose cottage was located just outside the Project area (Lyons 1875–1877), and who bequeathed the ‘ili to Queen Emma (Kanahele 1995).

More recently, community participants Ms. Krewson-Reck, Ms. Cazimero, and Mr. Diamond express their cultural attachment to Waikīkī as a place of surfing and other forms of recreation, such as swimming and listening to Hawaiian music, such as at the International Market Place.

6.3 Cultivation

The population of Waikīkī Kai was supported by a vast area of wetland taro cultivation, as well as coconut groves and fishponds, as stated by Ms. Cayan and supported by archaeology. Subsurface cultural layers throughout Waikīkī Kai provide evidence of this wetland cultivation, including buried lo‘i sediments, retaining walls and bunds, channelized muliwai and ‘auwai, and

kuāuna. One such layer has been uncovered in close vicinity to the Project area at the Waikīkī Shopping Plaza (SIHP 50-80-14-5796, Yucha et al. 2009).

6.4 Makai Resources

The streams that watered the lo'i in the flat plain of Waikīkī originated from the valleys of Mānoa and Pālolo, but the names of the streams changed: Mānoa Stream became Kālia Stream and Pālolo Stream became Pāhoa Stream. They joined in the 'ili of Hamohamo and then divided into three new streams that flowed into the sea, including 'Āpuakēhau that flowed through the southeastern portion of the Project area. The land between these three streams was called Waikolu, meaning "three waters" (Kanahēle 1995:7–8). Historic documents describe "several hundred" and "innumerable" artificial freshwater fishponds extending a mile inland from the shore (Bloxam 1925:35–36, cited in McAllister 1933:76). Cultural layers provide evidence of some of these fishponds that date to approximately A.D. 1400 to 1700, as well as inland burning associated with clearance of land for agriculture SIHP 50-80-14-4573, -4574, -04575, and -4577, Denham and Pantaleo 1997a, 1997b). Oral histories indicate early twentieth century gathering practices of several varieties of limu and wana along the Waikīkī coast, and catching of manini in the near-shore waters and moi, shrimp, 'oama, mullet, 'a'awa, āholehole, pāpio, and 'o'opu in 'Āpuakēhau Stream (UHCOH 1985). In their youth, community participants Mrs. Cazimero and Mr. Harris gathered limu līpe'epe'e, limu kohu, wāwae'iole, wana, and hā'uke'uke, and caught 'upāpalu along the Waikīkī coast.

6.5 Storied Landscape

Numerous wahi pana are located throughout Waikīkī Kai, including the most important heiau on O'ahu, Papa'ena'ena Heiau, according to community participant Mr. Harris. 'Āpuakēhau Stream is connected to mo'olelo of 'Āpuakēhau (or Helumoa) Heiau, and Nā Pohaku 'Ola Kapaemahu a Kapuni. The eighteenth century ali'i Kahahana, lived close to the mouth of 'Āpuakēhau Stream, slayed his priest, Ka'opulupulu, whose body was placed at 'Āpuakēhau Heiau after he prophesized the loss of O'ahu sovereignty and his own death (Thrum 1998:214). In addition, two of four large pōhaku, quarried in Kaimukī, were originally placed near the mouth of 'Āpuakēhau Stream (and later moved to the current site near the police substation) to commemorate four healers from Kahiki (Paglinawan 1997).

6.6 Burials and Human Sacrifice

Waikīkī Kai was a place for sacrificial drowning of kauwā (*Ka Loea Kālai'āina* 1899, translation in Sterling and Summers 1978:33), human sacrifices at four po'okanaka-class heiau, including 'Āpuakēhau (Helumoa) Heiau (Thrum 1905:200–202), and numerous burials in Jaucas sand deposits. Interment of the dead included large concentrations of burials such as the Moana Hotel near the Project area (24 burials, SIHP 50-80-14-1974, Simons et al. 1991), smaller concentrations and individual burials. Human remains representing one individual buried with a shell were uncovered in 1967 by Lloyd J. Soehren during construction of the "Tahiti By Six" bar, located within the Project area (BPBM Oa-A5-16, Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998), and other burials have been uncovered along or near Kalākaua Avenue near the Project area (SIHP 50-80-14-5856-A and -5856-B Winiewski et al. 2002; SIHP 50-80-14-5856-C, -5864-C, -5860-U and -V, Griffin 1987; SIHP 50-80-14-6703, O'Leary et al. 2005;

SIHP 50-80-14-5863, Winieski et al. 2001), at the Princess Ka'iulani Hotel (SIHP 50-80-14-7067, Runyon et al. 2010), and at the former Kawaiaha'o Waikīkī Branch Church and Cemetery (SIHP 50-80-14-7065, Runyon et al. 2010). Community participants Mr. Harris, Mr. Medeiros, Mr. Diamond, and Ms. Cayan assert a high likelihood of uncovering burials or burial sites within the Project area for a variety of reasons.

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Section 7 Summary and Recommendations

CSH undertook this CIA at the request of the Queen Emma Land Company and The Taubman Company. The cultural survey broadly included the entire ahupua'a of Waikīkī (Waikīkī Kai) including the specific Project area within the 'ili of Kaluaokau.

7.1 Results of Background Research

Background research for this Project yielded the following results (presented in approximate chronological order):

1. A vast system of irrigated taro fields was constructed across the littoral plain from Waikīkī Kai to the lower valleys of Mānoa and Pālolo in approximately A.D. 1400. This, in combination with coconut groves and fishponds along the shoreline, enabled the growth of a sizeable population, including the coastal village of Waikīkī, which most likely centered around the mouth of 'Āpuakēhau Stream in the vicinity of the Project area.
2. Cultural layers excavated throughout Waikīkī Kai and radiocarbon dated to approximately A.D. 1400 to 1800 provide evidence of this habitation, cultivation and aquaculture, as well as occupational activities of fishing, manufacture of tools and ornaments, and the use of adzes (see Figure 6, Table 2). In close proximity to the Project area are cultural layers indicative of habitation at the Princess Ka'iulani Hotel (State Inventory of Historic Places [SIHP] 50-80-14-7066, Runyon et al. 2010), Moana Hotel (SIHP 50-80-14-1974, Simons et al. 1991; SIHP 50-80-14-7068, Thurman et al. 2009), and at Kalākaua Avenue (Bush et al. 2002). In addition, a cultural layer indicative of wetland cultivation is located at the nearby Waikīkī Shopping Plaza (SIHP 50-80-14-5796, Yucha et al. 2009).
3. At least seven heiau (places of worship) and other religious sites were located in Waikīkī Kai, including Helumoa Heiau (also called 'Āpuakēhau Heiau) (Thrum 1907a:44) and Nā Pōhaku 'Ola Kapaemahu a Kapuni (commonly called the Wizard Stones) (Paglinawan 1997; Thrum 1907b:139–141) in the vicinity of the Project area. These sites are connected through mo'olelo (oral traditions) to 'Āpuakēhau Stream, which once flowed through the southeast portion of the Project area.
4. Four of these heiau were associated with human sacrifice, including Helumoa Heiau (Thrum 1907a:44). Sacrificial drownings of kauwā (outcast caste) also took place in Waikīkī (*Ka Loea Kālai'āina* 1899, translation in Sterling and Summers 1978:33). In addition, excavations and surveys have documented a high density of burials within the Jaucas sand deposits of Waikīkī, including 24 burials at the Moana Hotel (SIHP 50-80-14-1974, Simons et al. 1991). Within the Project area, human remains representing one individual buried with a funerary object (shell) were uncovered in 1967 by Lloyd J. Soehren during construction of the "Tahiti By Six" bar (Bernice Pauahi Bishop Museum [BPBM] Oa-A5-16, Bishop Museum Native American Graves Protection and Repatriation Act [NAGPRA] Inventory O'ahu Federal Register 1998). In addition, the following burials (single or small concentrations) have been uncovered along or near Kalākaua

Avenue in close proximity to the Project area (within 400 feet): SIHP 50-80-14-5856-A; SIHP 50-80-14-5856-B (Winieski et al. 2002); SIHP 50-80-14-5856-C; SIHP 50-80-14-5864-C; 50-80-14-5860-U and -V (Bush et al. 2002); SIHP 50-80-14-3745 (Griffin 1987), SIHP 50-80-14-6703 (O'Leary et al. 2005); SIHP 50-80-14-5863 (Winieski et al. 2001); SIHP 50-80-14-7067 (Runyon et al. 2010); and SIHP 50-80-14-7065, Runyon et al. 2010).

5. Waikīkī Kai was a place of royal residence, starting with Mā'ilikūhahi in approximately A.D. 1490 (Kamakau n.d., cited in McAllister 1933:74) and extending through Kamehameha ('Ī'ī 1959:17). The 'ili of Kaluaokau, in which the Project area is located, was one such place of royal residence. At the Māhele (division of Hawaiian lands), the 'ili of Kaluaokau was granted to William Lunalilo (LCA 8599, 'Āpana 31), and bequeathed to Queen Emma. A map by C.J. Lyons in 1855–1877 shows the location of Lunalilo's cottage just outside the Project area to the southwest.
6. The Moana Hotel was built in 1901, with auxiliary cottages in the Project area (1914 Sanborn Fire Insurance map). Other cottages were built in the 1920s at the Moana Hotel Annex and 'Āinahau Court, located to the east of the Project area (the current Princess Ka'iulani Hotel). The International Market Place was built in 1957 (Queen Emma Foundation n.d) and the Miramar Hotel was constructed in 1962 (Young 2010).
7. Oral histories indicate early twentieth century gathering practices of several varieties of limu (seaweed) and wana (sea urchin) along the Waikīkī coast, and catching of manini (reef surgeonfish) in the near-shore waters and moi (threadfish), shrimp, 'oama (young weke, or goatfish), mullet, 'a'awa (wrasse), āholehole (young stage of āhole, or Hawaiian flagtail), pāpio (young stage of ulua, or crevalle, jack or pompano), and 'o'opu (goby) in 'Āpuakēhau Stream (University of Hawai'i Center for Oral History 1985).

7.2 Results of Community Consultation

CSH attempted to contact 126 community members and government agency and community organization representatives. Of the ten people that responded, six cultural descendents, kūpuna or kama'āina participated in formal interviews for more in-depth contributions to the CIA; one interview is still pending approval. This community consultation indicates:

1. Waikīkī was once a place for fishing and cultivation of kalo lo'i of the chiefs, followed as a place for former royalty to relax and entertain, according to Coochie Cayan of SHPD. Cy Harris also notes that several heiau were located in Waikīkī, with the most famous heiau of O'ahu, Papa'ena'ena Heiau, located on the slope of Lē'ahi (Diamond Head).
2. A history of music and entertainment in Waikīkī, and the International Market Place in particular, continues to have a strong sense of attachment for community participants. Van Horn Diamond recalls listening in his youth to the Hawaiian musicians who played at the International Market Place, including Don Ho. He has fond memories of the group, "Hawaii Calls," which broadcast its radio show from the banyan tree inside the International Market Place. For Mr. Diamond, this music scene was, and continues to be, an integral part of the International Market Place. In addition, Sylvia Krewson-Reck remembers the Hawaiian music entertainers at Kūhiō Beach, and Anna Ka'olelo

Machado Cazimero performed the 'ukulele, guitar and the stand-up bass, as well sand, with the Kodak Hula Show at Sans Souci Beach.

3. The coastal waters of Waikīkī provided resources for community participants. In their youth, Mrs. Cazimero gathered limu līpe'epe'e, wana, and hā'uke'uke (urchin) for food and medicine, and caught 'upāpalu (cardinal fish), and Cy Harris gathered limu kohu (seaweed) and wāwae'iole (a moss).
4. The ocean waters of Waikīkī were also a place of relaxation for community participants. Ms. Krewson-Reck was an avid surfer, and she and other participants enjoyed the beaches with their families.
5. Most community participants and respondents support the Project. Clyde Nāmu'o of OHA suggests that native plant species traditionally found in the Project area should be considered in the landscaping design to encourage practical traditional plant uses and, if drought resistant, to reduce demands on irrigation water.
6. The main concern expressed by four community participants is the high likelihood of inadvertent discovery of burials or burial sites in the Project area. Mr. Harris. suggests that epidemics resulted in mass burials along the coastal regions. Mr. Clarence Medeiros, Jr., stresses the customary practice of burying family members within their pā hale (yard). Mr. Diamond indicates that burials have been uncovered to the east of the Project area at the former Moana Hotel cottages (current site of the Princess Ka'iulani Hotel) and along Kalākaua Avenue in close proximity to the International Market Place. Ms. Coochie Cayan of SHPD indicates human remains in adjacent parcels.
7. Should any burials be uncovered within the International Market Place, Mr. Diamond asserts that as much information of the remains and context must be understood as possible. He recommends legally extricating the remains to a proximate location in order to address them, and to ascertain the significance of the site of the remains. Depending on the findings, the human remains could be preserved in a memorial for "all past generations" within Waikīkī.

7.3 Impacts and Recommendation

Based on the information gathered for the cultural and historic background and community consultation detailed in this CIA report, the proposed Project may potentially impact Native Hawaiian burials. CSH identifies this potential impact and makes the following recommendations:

1. The International Market Place is located on Jaucas sand deposits, a preferred location for interment; one burial with a funerary object was uncovered in 1967 within the Project area (BPBM Oa-A5-16, Bishop Museum NAGPRA Inventory O'ahu Federal Register 1998), and several burials and burial concentrations have been uncovered in close proximity to the Project area. In addition, cultural layers in close proximity to the Project area indicate evidence of former habitation and cultivation.

Land-disturbing activities during construction may uncover presently undetected burials or other cultural finds. Personnel involved in the construction activities of the Project

should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials (or other cultural finds) be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies notified pursuant to applicable law.

2. The Queen Emma Land Company and The Taubman Company should consult with community members to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts be uncovered during construction or long-term maintenance for the Project.

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Appendix A Glossary

To highlight the various and complex meanings of Hawaiian words, the complete translations from Pukui and Elbert (1986) are used unless otherwise noted. In some cases, alternate translations may resonate stronger with Hawaiians today; these are placed prior to the Pukui and Elbert (1986) translations and marked with “(common).”

Diacritical markings used in the Hawaiian words are the ‘okina and the kahakō. The ‘okina, or glottal stop, is only found between two vowels or at the beginning of a word that starts with a vowel. A break in speech is created between the sounds of the two vowels. The pronunciation of the ‘okina is similar to saying “oh-oh.” The ‘okina is written as a backwards apostrophe. The kahakō is only found above a vowel. It stresses or elongates a vowel sound from one beat to two beats. The kahakō is written as a line above a vowel.

Hawaiian Word	English Translation
‘a‘awa	wrasse
āholehole	young stage of āhole, or flagtail
ahupua‘a	land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (pua‘a), or because a pig or other tribute was laid on the altar as tax to the chief
ala hele	pathway, route, road, way to go, itinerary, trail, highway, means of transportation
ali‘i	chief, chiefess, officer, ruler, monarch, peer, headman, noble, aristocrat, king, queen, commander
ao	light, day, daylight, dawn; to dawn, grow light; enlightened; to regain consciousness
‘āpana	piece, slice, portion, fragment, section, segment, installment, part, land parcel, lot, district, sector, ward, precinct
‘auwai	ditch, canal
hā‘uke‘uke	urchin
heiau	pre-Christian place of worship, shrine; some heiau were elaborately constructed stone platforms, others simple earth terraces

Hawaiian Word	English Translation
‘ili	land section, next in importance to an ahupua‘a and usually a subdivision of an ahupua‘a
ilina	grave, tomb, sepulcher, cemetery, mausoleum, plot in a cemetery
kahuna	priest, sorcerer, magician, wizard, minister, expert in any profession; kāhuna—plural of kahuna
kalo	taro
kama‘āina	Native-born, one born in a place, host; native plant; acquainted, familiar, Lit., land child.
kauwā	outcast, pariah, slave, untouchable, menial; a caste which lived apart and was drawn on for human sacrifices
kula	plain, field, open country, pasture
kuleana	Native Hawaiian land rights (common). Right, privilege, concern, responsibility, title, business, property, estate, portion, jurisdiction, authority, liability, interest, claim, ownership, tenure, affair, province
kupuna	elders (common). Grandparent, ancestor, relative or close friend of the grandparent's generation, grandaunt, granduncle; kūpuna—plural of kupuna
limu	seaweed
limu kohu	a variety of seaweed
limu līpe‘epe	A variety of seaweed
lo‘i	irrigated terrace, especially for taro, but also for rice; paddy
loko i‘a	fishpond (common)
maka‘āinana	commoners
makai	seaward
mana	supernatural or divine power

Hawaiian Word	English Translation
mana‘o	thought, idea, belief, opinion, theory, thesis, intention, meaning, suggestion, mind, desire, want; to think, estimate, anticipate, expect, suppose, mediate, deem, consider
manini	Reef surgeonfish
mele	song, anthem, or chant of any kind
moi	threadfish
moku	district, island, islet, section
mo‘olelo	story, tale, myth, history, tradition, literature, legend, journal, log, yarn, fable, essay, chronicle, record, article; minutes, as of a meeting (From mo‘o ‘ōlelo, succession of talk; all stories were oral, not written)
muliwai	river, river mouth
‘oama	young weke, or goatfish
‘ōlelo no‘eau	proverb, wise saying, traditional saying
oli	chant that was not danced to, especially with prolonged phrases chanted in one breath, often with a trill at the end of each phrase; to chant thru.
‘o‘opu	goby
pā hale	yard
pāpio	young stage of ulua, or crevalle, jack or pompano
pō	night, darkness, obscurity; the realm of the gods; pertaining to or of the gods, chaos, or hell; dark, obscure, benighted; formerly the period of 24 hours beginning with nightfall (the Hawaiian “day” began at nightfall)
po‘okanaka	classification of heiau used ceremoniously for human sacrifices (Thrum 1907)
‘upāpalu	Cardinal fish
wā	epoch, time period
wahi pana	storied place (common); legendary place

Hawaiian Word	English Translation
wana	sea urchin
wāwae'iole	a moss

DRAFT

Appendix B Common and Scientific Names for Plants and Animals Mentioned by Community Participants

Common Names		Possible Scientific Names		Source
Hawaiian	Other	Genus	Species	
hā'uke'uke	sea urchin	<i>Colobocentrotus</i>	<i>atratus</i>	Pukui and Elbert 1986
limu kohu	seaweed, algae	<i>Asparagopsis</i>	<i>taxiformis</i>	Abbott and Williamson 1974
limu līpe'epe'e	seaweed, algae	<i>Laurencia</i>	<i>parvipapillata</i>	Pukui and Elbert 1986
uhu	parrotfish	Multiple genera and species in the family Scaridae		Hoover 1993
'upāpalu	cardinal fish	<i>Apogon</i>	<i>spp.</i>	Pukui and Elbert 1986
wana	sea urchin	<i>Diadema</i>	<i>paucispinum</i>	Pukui and Elbert 1986
wāwae'iole	a moss	<i>Lycopodium</i>	<i>cernuum</i>	Pukui and Elbert 1986

Appendix C Authorization and Release Form

Cultural Surveys Hawai'i, Inc.
Archaeological and Cultural Impact Studies
Hallett H. Hammatt, Ph.D., President



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AUTHORIZATION AND RELEASE FORM

Cultural Surveys Hawai'i appreciates the generosity of the *kūpuna* and *kama'āina* who are sharing their knowledge of cultural and historic properties, and experiences of past and present cultural practices for the Cultural Impact Assessment for the *ahupua'a* of Waikīkī.

We understand our responsibility in respecting the wishes and concerns of the interviewees participating in our study. Here are the procedures we promise to follow:

1. You will have the opportunity to review the written transcript of our interview with you. At that time you may make any additions, deletions or corrections you wish.
2. You will be given a copy of the interview notes for your records.
3. You will be given a copy of this release form for your records.

For your protection, we need your written confirmation that:

1. You consent to the use of the complete transcript and/or interview quotes for reports on cultural sites and practices, historic documentation, and/or academic purposes.
2. You agree that the interview shall be made available to the public.

I, _____, agree to the procedures outlined above and, by my
(Please print your name here)
signature, give my consent and release for this interview to be used as specified.

(Signature)

(Date)

Appendix D Community Consultation Letter

Cultural Surveys Hawai'i, Inc.
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*Experience the revitalized International Market Place;
celebrate the history of the land, Kaluaokau, and its people;
and perpetuate the legacy of Queen Emma,
in the gathering place of Waikiki.*

August 17, 2011

Aloha mai e kāua,

At the request of the Queen Emma Land Company and The Taubman Company, Cultural Surveys Hawai'i, Inc. (CSH) is conducting a Cultural Impact Assessment for the proposed International Market Place Revitalization Project, Waikiki Ahupua'a, Honolulu (Kona) District, O'ahu Island, TMK [1] 2-6-022: 036, 037, 038, 039 & 043

The International Market Place Revitalization Project is located on a 5.98 acre site in the center of Waikiki (see attached maps). The project site is bounded and accessed by Kalakaua Avenue to the southwest in the makai direction, Kūhiō Avenue to the northeast in the mauka direction, Princess Ka'iulani Hotel and the 'Ohana East Hotel to the southeast in the Diamond Head direction, and The Waikiki Beachcomber, the Aqua Waikiki Wave Hotel, and Duke's Lane to the northwest in the 'Ewa direction.

The International Market Place Revitalization Project includes the replacement of the existing buildings and structures with a new three level retail center that features the following:

- Landscape and building elements that will convey a Hawaiian sense of place incorporating historical, cultural, and educational features and opportunities.
- Improved streetscape along Kalakaua and Kūhiō Avenues to enhance the pedestrian experience for local residents and visitors alike.
- Significant open space throughout the Market Place to maintain and enhance the inviting, park-like setting.
- Enhanced landscaped courtyards surrounding canopy trees and accommodating cultural programming.
- Retention and enhancement of the "exceptional" Banyan Tree near Kalakaua Avenue.
- Revitalized and redeveloped retail space to better serve the community—both kama'āina and visitors.
- Associated utility, parking, and infrastructure improvements.

The purpose of the Cultural Impact Assessment is to gather information about the Project area and its surroundings through research and interviews with individuals that are knowledgeable

Cultural Impact Assessment for International Market Place Revitalization Project

about this area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the planned Project. We are seeking your kōkua and guidance regarding the following aspects of our study:

- **General history as well as present and past land use of the Project area. Although the redevelopment will be within the boundaries as stated above, this study will include the entire ahupua'a of Waikīkī.**
- **Knowledge of cultural sites which may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials.**
- **Knowledge of traditional gathering practices in the Project area, both past and ongoing.**
- **Cultural associations of the Project area, such as mo'olelo and traditional uses.**
- **Referrals of kūpuna or elders and kama'āina who might be willing to share their cultural knowledge of the Project area and the surrounding ahupua'a.**
- **Due to the sensitive nature regarding past encounters with iwi kūpuna or ancestral remains discovered in Waikīkī, mana'o regarding iwi kūpuna will be greatly appreciated.**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the Project area.**

In advance, we appreciate your assistance in our research effort. Please don't hesitate to contact Joe Genz at jgenz@culturalsurvevs.com or by phone at (808) 262-9972.

Mahalo nui loa,

Joe Genz, PhD
Cultural Researcher
