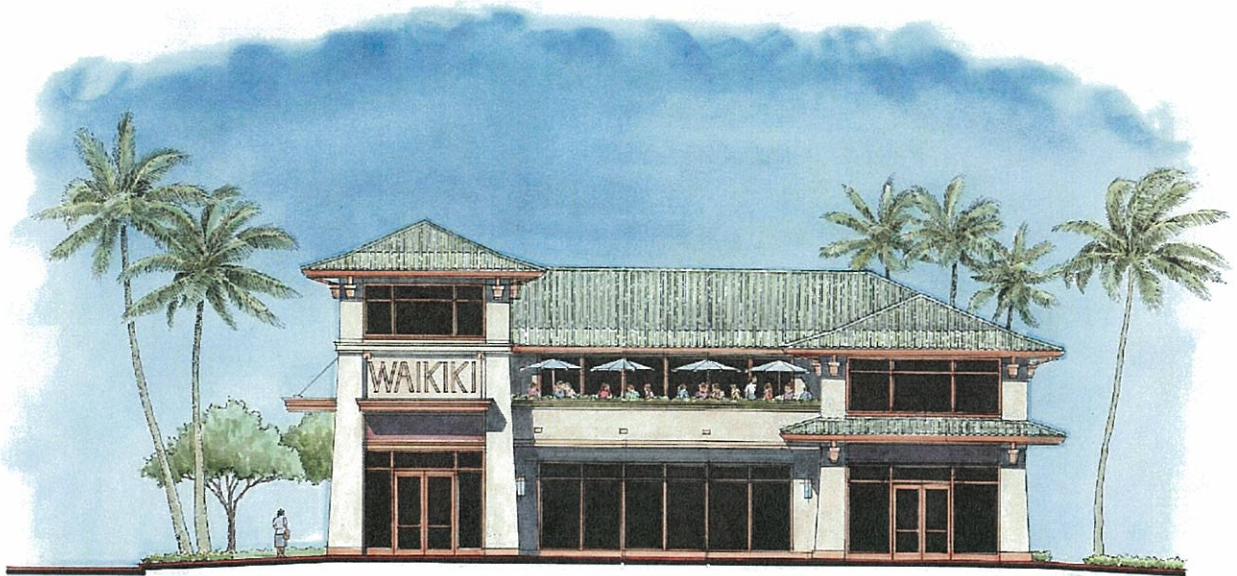

Draft Environmental Assessment
The 1944 Kalakaua Avenue LLC Project



Prepared For:

American Commercial Equities Three, LLC

Prepared By:

PATRICK SEGUIRANT ARCHITECT

Architecture Planning Land Use Consulting

February 2008

Draft Environmental Assessment
The 1944 Kalakaua Avenue LLC Project

TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058

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February 2008

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

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- Appendix A** November 15, 2007, approved Conditional Use Permit for Joint Development (2007/CUP-106)
- Appendix B** ALTA Survey
- Appendix C** October 1, 2007, approved Sewer Connection Application
- Appendix D** Project Drawings
- Appendix E** Hida, Okamoto & Associates, Inc.: Existing Utility Plan, Existing HECO Plan 1 & 2, Existing HTEL Plan.
- Appendix F** Cultural Surveys Hawaii, Inc. January 2008, "Interim Report – Cultural Impact Assessment for the 1944 Kalakaua Avenue Project, Waikiki Ahupuaa, Kona District, Oahu, TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, & 058."
- Appendix G** Cultural Surveys Hawaii, Inc. January 2008, "Archaeological Assessment for the 1944 Kalakaua Avenue Project, Waikiki Ahupuaa, Kona District, Oahu, TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, & 058."
- Appendix H** Phillip Rowell and Associates, December 21, 2007, "Traffic Impact Assessment Report, Proposed Retail Store, 1944 Kalakaua Avenue, Honolulu, Hawaii".

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PREFACE

This Draft Environmental Assessment (EA) / Anticipated Finding of No Significant Impact (FONSI) has been prepared pursuant to Chapter 343, Hawaii Revised Statutes (HRS), and Title 11, Chapter 200, Administrative Rules, Department of Health, State of Hawaii. The applicant, American Commercial Equities Three, LLC, proposes to construct a new commercial building on the corner of Kalakaua Avenue and Niu Street in Waikiki on the island of Oahu, Hawaii. Compliance with the provisions of Chapter 343, HRS is required because the project's location is within the Waikiki Special District. The accepting agency for this EA is the City and County of Honolulu, Department of Planning and Permitting (DPP), in conjunction with the processing of a Waikiki Special District Permit which is required for the proposed action.

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1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

1. INTRODUCTION

1.1 Project Summary

Type of Application: Environmental Assessment (EA)

Name of Action/Project: 1944 Kalakaua Avenue

Applicant/Developer: American Commercial Equities Three, LLC
23805 Stuart Ranch Road, #200
Malibu, CA 90265
Contact/Phone: Mr. Marvin Lotz 310-317-1443 ext 440

Architect: James Park, Architect
91-1011 Pololia Place
Ewa Beach, HI 96706
Phone: 808-368-4618

Approving Agency: City and County of Honolulu
Department of Planning and Permitting
650 South King Street
Honolulu, Hawaii 96813

Agent: Patrick Seguirant, Architect
91-1030 Kaihi Street
Ewa Beach, HI 96706
Phone: 808-683-4477

Tax Map Key and Existing Use:

TMK (1) 2-6-014: 001	Commercial, Local Motion
TMK (1) 2-6-014: 004	Commercial, car rental
TMK (1) 2-6-014: 006	Vacant
TMK (1) 2-6-014: 007	Vacant
TMK (1) 2-6-014: 008	Vacant
TMK (1) 2-6-014: 019	Vacant
TMK (1) 2-6-014: 058	Vacant

Land Area:

TMK (1) 2-6-014: 001	18,274	SF
TMK (1) 2-6-014: 004	7,510	SF
TMK (1) 2-6-014: 006	4,356	SF
TMK (1) 2-6-014: 007	2,394	SF
TMK (1) 2-6-014: 008	3,375	SF
TMK (1) 2-6-014: 019	5,000	SF
TMK (1) 2-6-014: 058	3,375	SF
TOTAL Land Area:	44,284	SF (1.01 acres)

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1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

Landowner:

TMK (1) 2-6-014: 001	1958 Kalakaua Avenue, LLC
TMK (1) 2-6-014: 004	Nihonkai Lease Company, Ltd
TMK (1) 2-6-014: 006	Nihonkai Lease Company, Ltd
TMK (1) 2-6-014: 007	Nihonkai Lease Company, Ltd
TMK (1) 2-6-014: 008	Nihonkai Lease Company, Ltd
TMK (1) 2-6-014: 019	Nihonkai Lease Company, Ltd
TMK (1) 2-6-014: 058	Nihonkai Lease Company, Ltd

Location:

TMK (1) 2-6-014: 001	1950, 1958 Kalakaua Avenue
TMK (1) 2-6-014: 004	1944 Kalakaua Avenue
TMK (1) 2-6-014: 006	413 Niu Street
TMK (1) 2-6-014: 007	N/A
TMK (1) 2-6-014: 008	425 Niu Street
TMK (1) 2-6-014: 019	420 Pau Street
TMK (1) 2-6-014: 058	421 Niu Street

Proposed Use: Construct a new two-story 14,300 square foot commercial building on TMK 2-6-014: 004 and 001. A Conditional Use Permit for a Joint Development Agreement between the applicant and 1958 Kalakaua Avenue, LLC for the seven subject parcels was approved by the Department of Planning and Permitting on November 15, 2007. The Joint Development Agreement is to be executed pending the applicant's purchase of six of the seven parcels. The seventh parcel, the existing Local Motion building, is owned by 1958 Kalakaua Avenue, LLC. An off-site parking request will be made to allow the parking to be located on TMK 2-6-014: 006, 007, 008, 019, and 058 for the new and existing commercial uses on TMK 2-6-014: 004 and 001.

State Land Use District: Urban

Development Plan: Primary Urban Center – District Commercial, and Medium and Higher Density Residential Mixed Use

Zoning:

TMK (1) 2-6-014: 001	Resort Commercial Precinct (RCP)
TMK (1) 2-6-014: 004	Resort Commercial Precinct (RCP)
TMK (1) 2-6-014: 006	Apartment Precinct (AP)
TMK (1) 2-6-014: 007	Apartment Precinct (AP)
TMK (1) 2-6-014: 008	Apartment Precinct (AP)
TMK (1) 2-6-014: 019	Apartment Precinct (AP)
TMK (1) 2-6-014: 058	Apartment Precinct (AP)

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- SMA:** The subject property is not located within the Special Management Area.
- Flood Zone:** FIRM AO, 2 foot depth.
- Special District:** The subject property is located within the Waikiki Special District.
- Action Requested:** The proposed project is located within the Waikiki Special District, which triggers the requirement for this environmental assessment. Request that this environmental assessment be processed in compliance with Chapter 343, Hawaii Revised Statutes and Chapter 200 of Title 11, Hawaii Administrative Rules – Environmental Impact Statement Rules.

Anticipated Determination Finding of No Significant Impact (FONSI)

1.2 Parties Consulted During the Pre-Consultation Period

State of Hawaii

Department of Land and Natural Resources
Department of Transportation
Office of Hawaiian Affairs

City and County of Honolulu

Department of Design and Construction
Department of Environmental Services
Department of Planning and Permitting
 Land Use Permits Division
 Traffic Review Branch
 Wastewater Branch
Department of Transportation Services

1.3 Permits and Approvals

The following is a preliminary list and is not an exhaustive summary: issuance of a FONSI for the HRS Chapter 343 Final EA; City and County of Honolulu Waikiki Special District Permit (Major); City and County of Honolulu Conditional Use Permits (minor) for Joint Development and Off-Site Parking; and ministerial permits including grading and building permits, sewer and water connection permits, and sidewalk permits.

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1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

2. SETTING AND DESCRIPTION OF PROPOSED ACTION

2.1 Description of the Property

American Commercial Equities Three, LLC, the applicant, proposes to construct a new commercial building on the corner of Kalakaua Avenue and Niu Street, near the existing Local Motion commercial building (Figure 1).

The applicant, American Commercial Equities Three, LLC, intends to acquire six parcels currently owned by the Nihonkai Lease Company, Ltd. and has entered into a contract to purchase the six parcels. The seventh parcel, the Local Motion building site, is owned by 1958 Kalakaua Avenue, LLC. See Table 1 for details. The project site, which consists of the seven contiguous parcels, totals 44,284 square feet (1.01 acres). Figure 2 identifies the project area's Tax Map Keys.

The project, called "1944 Kalakaua Avenue", consists of the construction of a new two-story 14,300 square foot commercial building on TMK 2-6-014: 004 and 001 next to the existing Local Motion building, which is located on TMK 2-6-014: 001. No changes are proposed to the Local Motion building. The project will expand and reconfigure Local Motion's existing at-grade parking lot to provide a minimum total of 30 stalls and 3 loading spaces. The expanded at-grade parking lot will service both the new and existing commercial buildings. The parking lot will be located on TMKs 2-6-014: 006, 007, 008, 019, and 058.

In anticipation of acquiring the six parcels, American Commercial Equities Three, LLC applied for a Conditional Use Permit for joint development of the six parcels, plus TMK 2-6-014: 001 owned by 1958 Kalakaua Avenue, LLC. On November, 15, 2007 the Department of Planning and Permitting approved the Conditional Use Permit for joint development of the seven parcels (2007/CUP-106) (see Appendix A). The Joint Development Agreement is to be executed pending the applicant's purchase of six of the parcels.

Once American Commercial Equities Three, LLC acquires title to the six parcels, the Joint Development Agreement document between American Commercial Equities Three, LLC and 1958 Kalakaua Avenue, LLC can be executed. The seven parcels will then be linked together, which means that the seven parcels will be treated as one zoning lot (see Condition #2 of 2007/CUP-106 in Appendix A).

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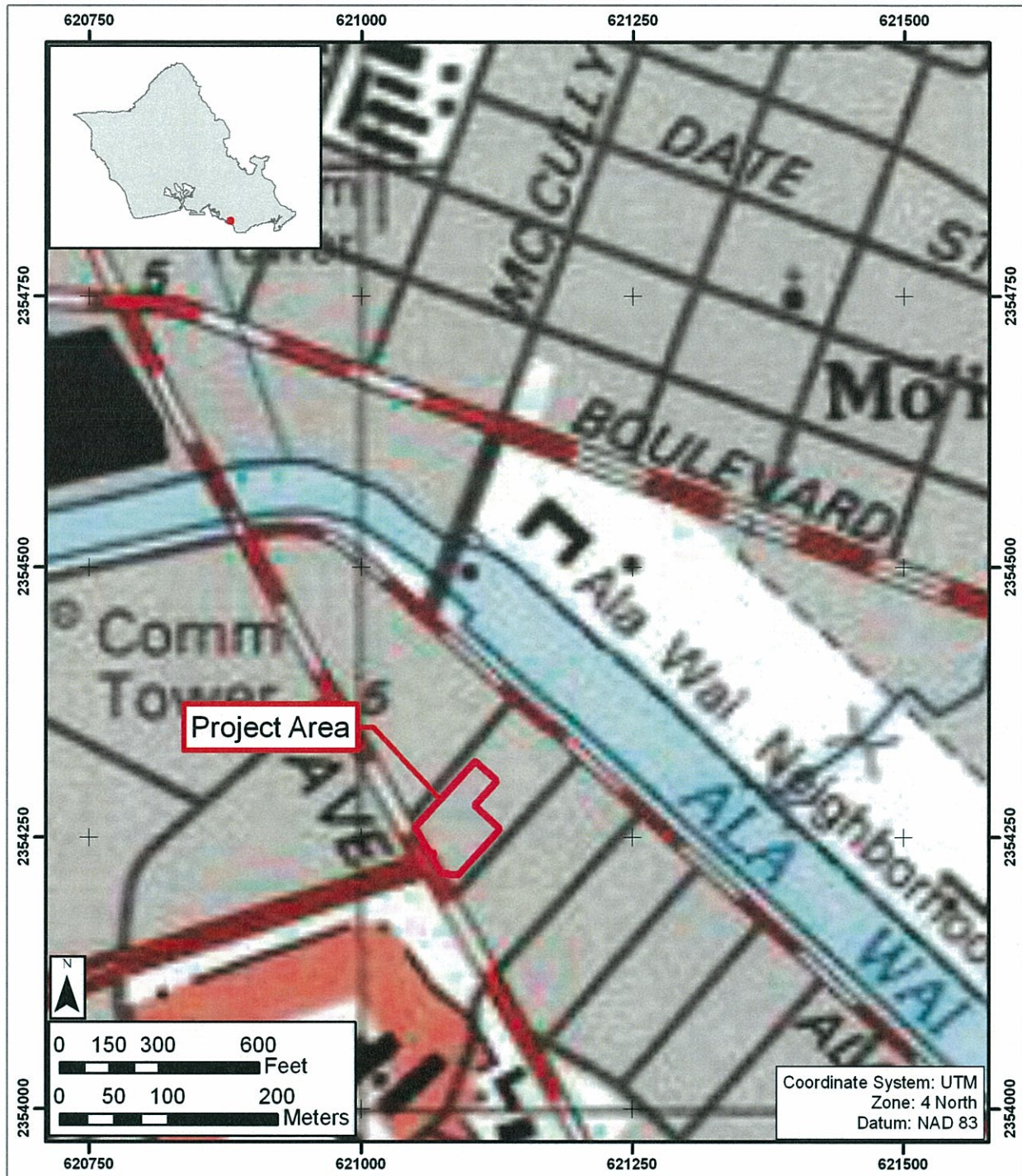


Figure 1. Location Map. U.S. Geological Survey (USGS) 7.5 Minute Series Topographic Map, Honolulu (1998) Quadrangle, showing the location of the project area (source: Cultural Surveys Hawaii)

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1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

Table 1 – 1944 Kalakaua Avenue LLC Project Land Area						
TMK (2-6-014:)	LOT NO.	LOT AREA (Sq. Ft.)	TMK AREA	ADDRESS	Zoning	FEE OWNER
1	1-A	18,274	18,274	1958 Kalakaua Avenue	Resort Commercial	1958 Kalakaua LLC
4	8-B-26	4,500	7,510	1944 Kalakaua Avenue	Resort Commercial	Nihonkai Lease Company, Ltd.
	8-B-27-A	2,537				
	8-B-27-B	473				
6	8-B-25-A	3,600	4,356	413 Niu Street	Apartment	Nihonkai Lease Company, Ltd.
	8-B-25-B-1	660				
	8-B-25-B-2	96				
7	8-B-24-B	2,250	2,394	(no street address in Posse	Apartment	Nihonkai Lease Company, Ltd.
	8-B-25-B-3	144				
8	8-B-23-A	3,375	3,375	425 Niu Street	Apartment	Nihonkai Lease Company, Ltd.
19	8-A-7	4,500	5,000	420 Pau Street	Apartment	Nihonkai Lease Company, Ltd.
	8-A-27-H	500				
58	8-B-23-B	1,125	3,375	421 Niu Street	Apartment	Nihonkai Lease Company, Ltd.
	8-B-24-A	2,250				
TOTAL LAND AREA (SF)			44,284	square feet		

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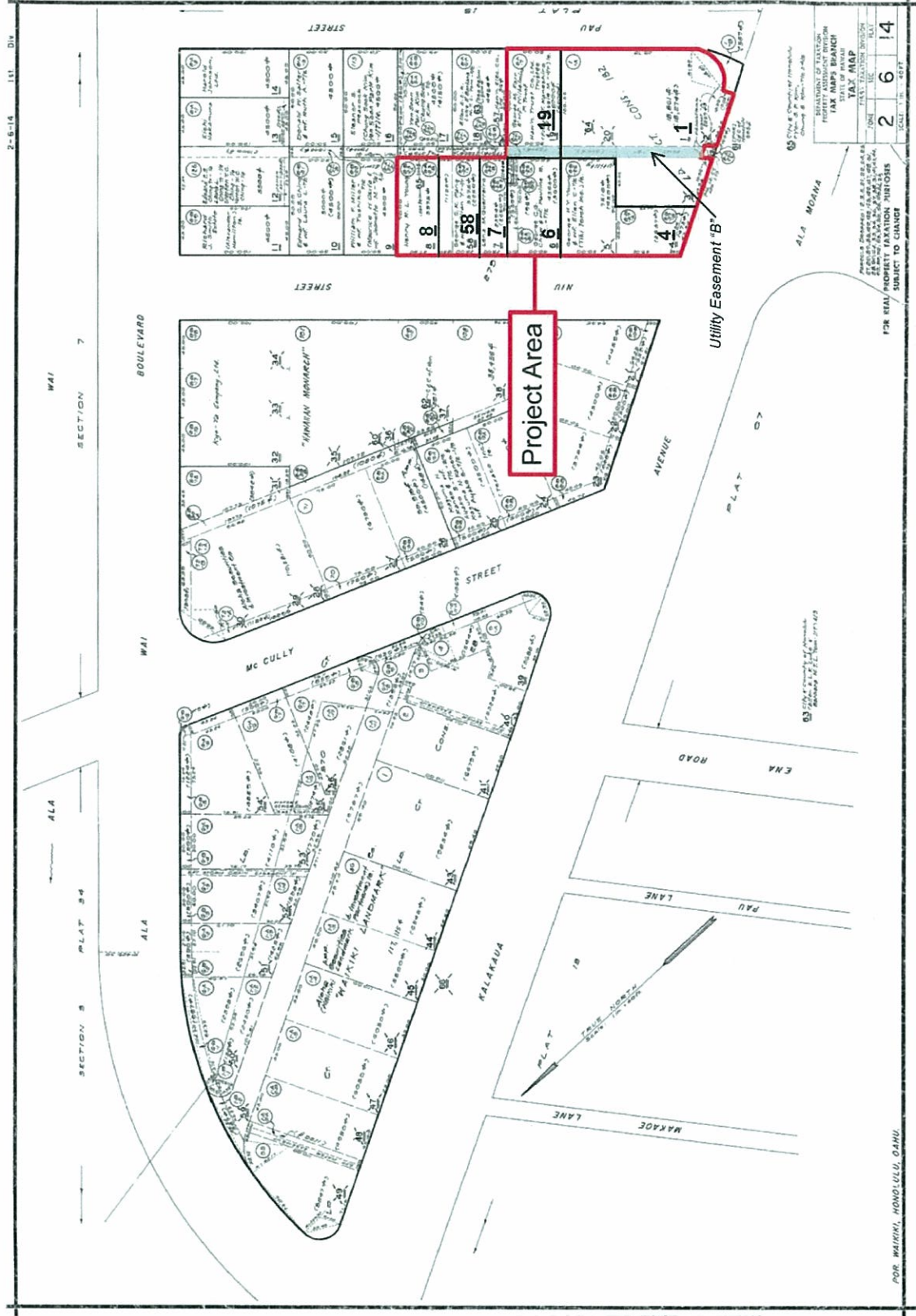


Figure 2. Tax Map Key [I] 2-6-014 shows the seven parcels that comprise the project area.

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2.2 Existing and Surrounding Uses

The existing uses on the seven parcels are identified in **Table 1** and illustrated in the aerial view in Figure 3 and photos of the existing site in Figure 4. An ALTA Survey for the project area is in Appendix B. Parcel 1 contains the Local Motion commercial building and parking lot, which has driveway access from Pau Street. The two-story Local Motion building has approximately 9,570 square feet of floor area containing retail and restaurant use. Local Motion's frontage along Kalakaua Avenue has a landscaped meandering sidewalk with canopy form trees, coco palms, shrubs, and ground cover between the street and the sidewalk with pedestrian access to street crossings. A car rental company, VIP Car Rentals, leases space on Parcel 4 on the corner of Kalakaua Avenue and Niu Street. The remaining parcels are vacant and have a chain link fence along the perimeter.

Surrounding uses in the area include various commercial and apartment properties: existing apartment buildings mauka of the project site, the old Jack In the Box and the Hawaiian Monarch across Niu Street; the Kioniana Apartments and Tony Romas across Pau Street; Fort DeRussy across Kalakaua Avenue to the southeast; and the Cheeseburger in Paradise across Kalakaua Avenue to the southwest.

The Primary Urban Center Development Plan designation for the project parcels is District Commercial, and Medium and Higher Density Residential Mixed Use. The zoning, as illustrated in Figure 5, is Resort Commercial Precinct and Apartment Precinct of the Waikiki Special District. The subject property is within the Waikiki Special District and within an area designated as "Waikiki Gateways" per the Waikiki Special District Urban Design Controls, Exhibit 21-9.15 of the LUO (Figure 6). The subject property is not within the Special Management Area.

2.3 Project Background and Project Description

2.3.1 Background

The proposed project, to be located next to the Local Motion building, will be an architectural gateway feature of Waikiki. As visitors and residents travel along Kalakaua Avenue and Ala Moana Boulevard, they are introduced to a mix of developed urban properties and landscaped open-spaces. A significant revitalization of the built environment has been taking place along Kalakaua Avenue over the last 10 years. The proposed 1944 Kalakaua Avenue project's architectural character, scale and landscaping will be designed to compliment and blend with the Local Motion building and existing landscaped site. As stated earlier, no changes are proposed for the Local Motion building.

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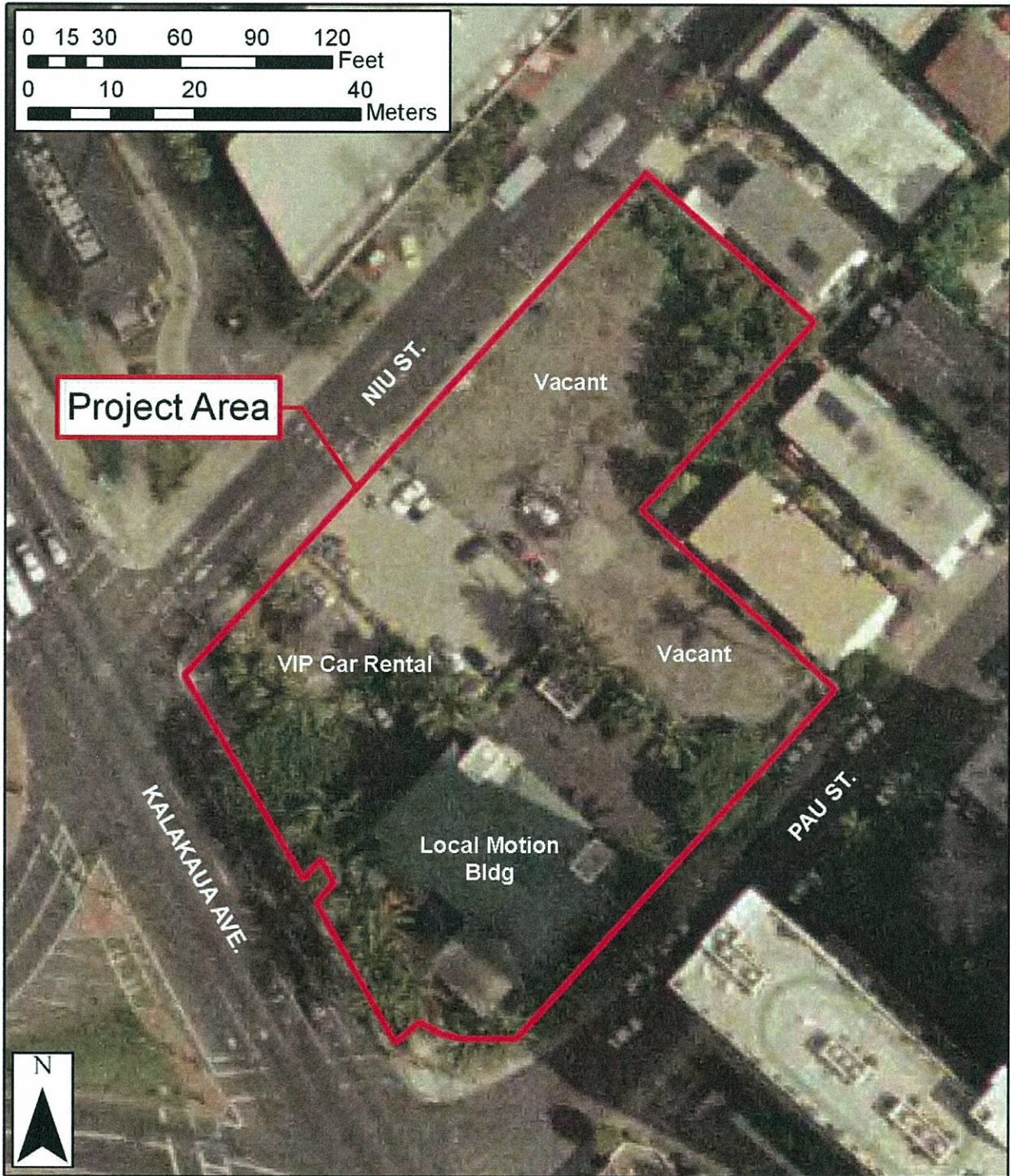


Figure 3. Aerial Photograph, showing the location of the project area (source: USGS Orthoimagery 2005) (Cultural Surveys Hawaii)

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View of the project site at the corner of Niu Street (right) and Kalakaua Avenue (foreground).



Fig 4. Project site from Fort DeRussy at corner of Ala Moana Boulevard and Kalakaua Ave.

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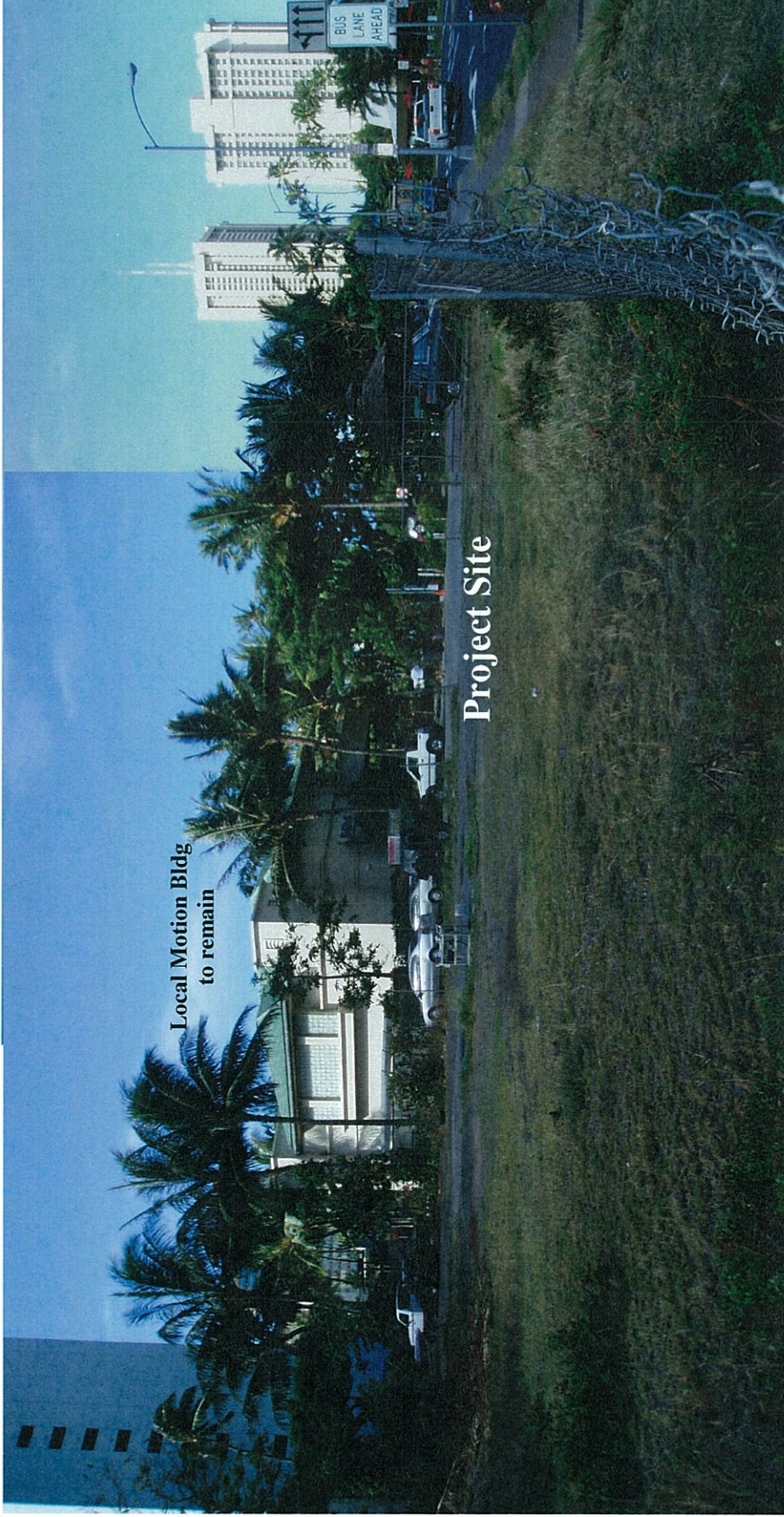


Figure 4. Views of project site along Niu Street looking towards Kalakaua Avenue.

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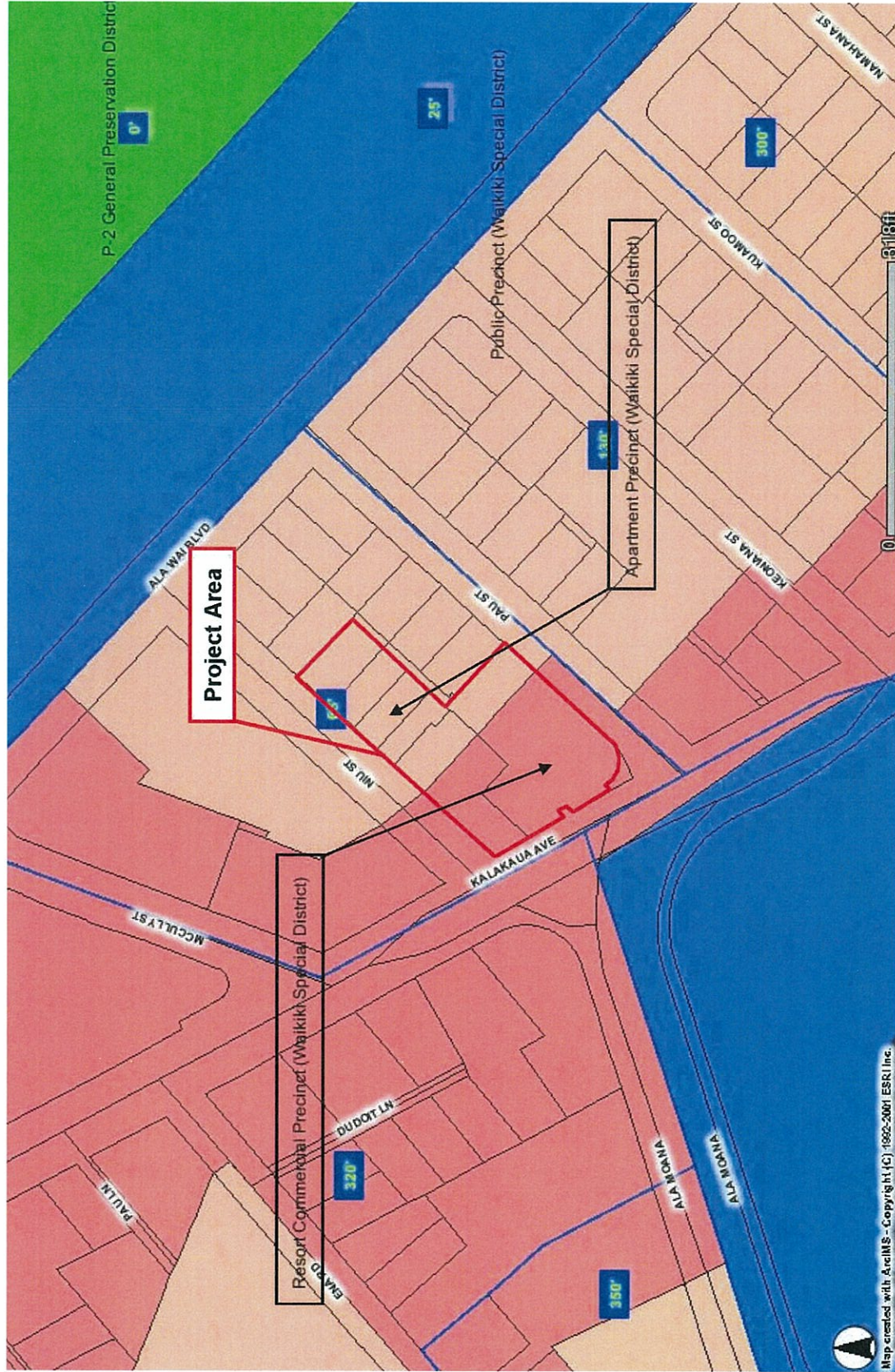


Figure 5. Zoning of the project area (source: Department of Planning and Permitting)

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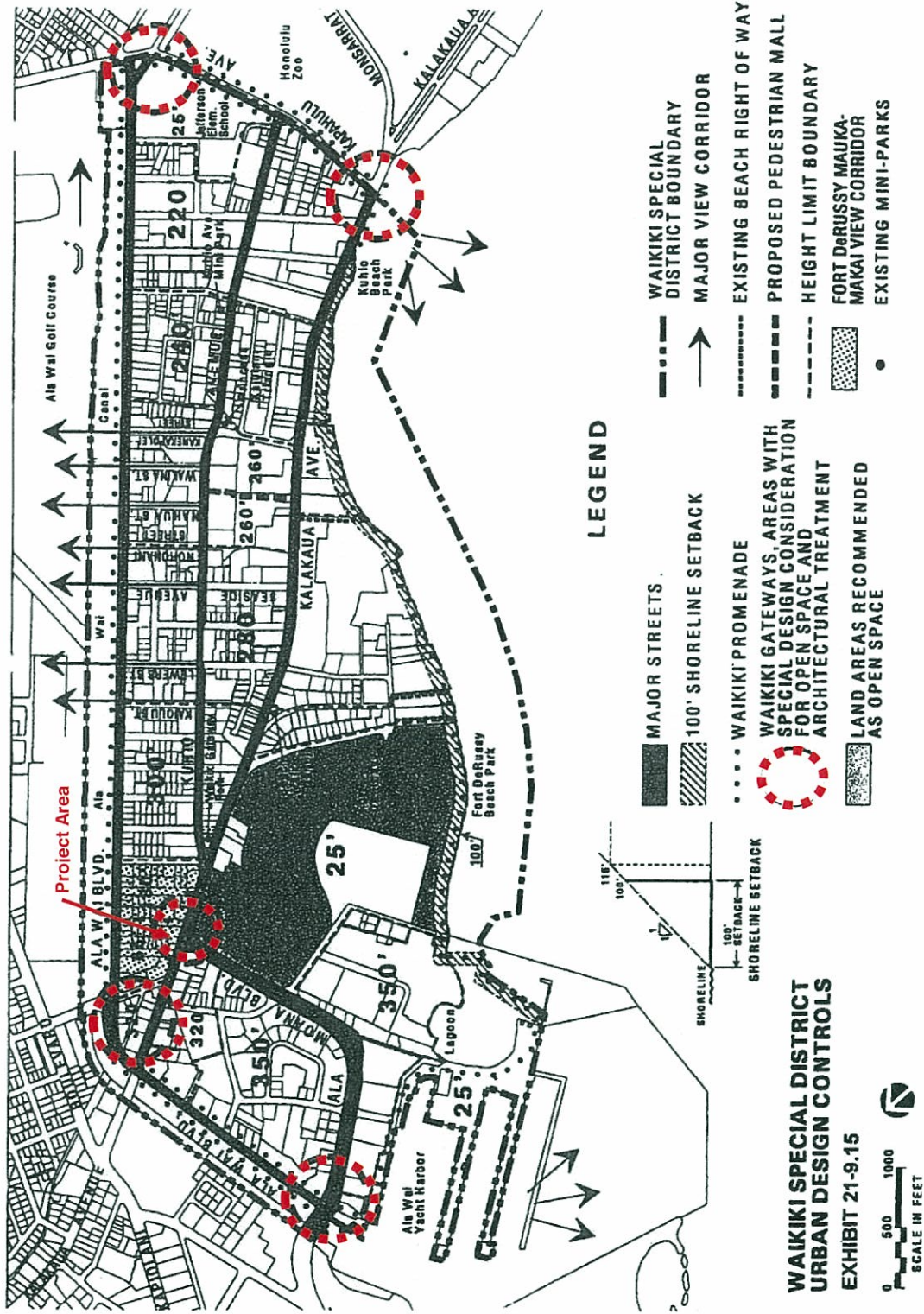


Figure 6. Waikiki Special District Urban Design Controls, Exhibit 21-9.15 of the Land Use Ordinance

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The seven project parcels, as outlined on Figure 2, will be jointly developed. The joint development provides greater flexibility to the applicant. The size and shape of Parcel 4 by itself poses inherent constraints. However, the developable area of the seven parcels together can be utilized so that key elements of a gateway experience can be provided along Kalakaua Avenue's frontage, including the continuation of Local Motion's meandering heavily landscaped pedestrian walkway and the provision of parking behind the commercial buildings so that a surface parking lot is not within gateway views along Kalakaua Avenue.

Another consideration is that Waikiki lacks sewer capacity for new development. The proposed project will use the existing sewer capacity associated with the undeveloped parcels. The joint development of the parcels was pursued so that the existing sewer capacity of the Apartment Precinct parcels, which will be used for parking, could be used towards the new building. The project does not pose any increase in demand for sewer capacity. As such, a sewer connection application was approved by the DPP on October 1, 2007. A copy is in Appendix C.

2.3.2. Project Description

The proposed new two-story 1944 Kalakaua Avenue commercial building will be developed on the corner of Kalakaua Avenue and Niu Street on Parcel 4. The new building will have a footprint of approximately 7,300 square feet and a total floor area of 14,300 square feet. The ground will be approximately 7,000 of retail space while the second floor will be approximately 7,300 square feet of restaurant space. Access to the project site will be provided by new two-way driveways on Niu Street and on Pau Street. The existing driveways on Kalakaua Avenue and Pau Street will be demolished and those areas will be restored.

A set of drawings for the project are in Appendix D.

The proposed project includes various improvements. All improvements will comply with the Waikiki Special Design District standards for building height and building setback, floor area ratio density and open space, as well as Land Use Ordinance (LUO) standards for parking and off-street loading areas. Improvements include:

1. New Commercial Building. The two-story 14,300 square foot building will be constructed on the corner of Kalakaua Avenue and Niu Street. The building will be constructed of steel, concrete and plaster similar to the existing Local Motion Building. The ground floor of the building will be predominantly clear glazed storefronts with the obvious structural building support system. The second floor will also have a large amount of clear glazing. However, eaves will be used to break up the two-story wall and offer shade and protection to the building and pedestrians. A double-hipped second floor

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roof will also be part of the building design to offer a human scale to the project and emphasize the clay roofing tiles to be used. Plaster will be used on the exterior wall surfaces to convey a sense of permanence.

The floor plate of the building is set back as far as possible towards the interior of the property to allow for the open space to be situated along the streets. This allows for a small plaza at the intersection of Kalakaua Avenue and Niu Street that leads to the main building entrance which serves as the architectural focal point. This additional setback, landscaping, and architectural focal element will enhance the project's contribution to this Waikiki Gateway.

2. Expanded Parking Lot. The existing Local Motion at-grade asphalt parking lot will be reconfigured and expanded. A minimum total of 30 parking stalls and 3 off-street loading stalls will be provided for the seven joint development parcels. Ingress and egress to the parking lot is proposed from both Niu Street and Pau Street. The parking lot will be landscaped with coco palms, canopy form trees, shrubs and groundcover, and will meet LUO standards for parking lot landscaping. A setback buffer area of 10 feet will be provided between the parking lot and the adjacent apartment buildings. Screening hedges and canopy form trees will be used to provide a visual buffer from the new parking area.
3. Vehicular Access: The site plan depicts two new driveways to access the site. The existing driveways on Pau Street, Niu Street and Kalakaua Avenue will be demolished, and the sidewalks and planter strip restored. Along Pau Street, a new two-way driveway would be provided and setback approximately 140 feet from the intersection of Kalakaua Avenue. Along Niu Street, a two-way driveway would also be provided and setback approximately 200 feet from the intersection of Kalakaua Avenue.
4. Utility Connections: Figure 7 depicts existing utilities within the project area. Appendix E contains existing utility plans. The seven lots that comprise the project area are currently served by water lines within Pau Street, Niu Street and Kalakaua Avenue. The new building will be served by existing water lines. Water meters not used for the project will be removed. A new reduced pressure principal backflow preventer will be installed for cross contamination prevention of the municipal water system. Preliminary estimated daily water demand is approximately 6,500 gallons per day (gpd): 4,000 gpd for the restaurant, 1,000 gpd for retail, and 1,500 gpd for landscape irrigation.

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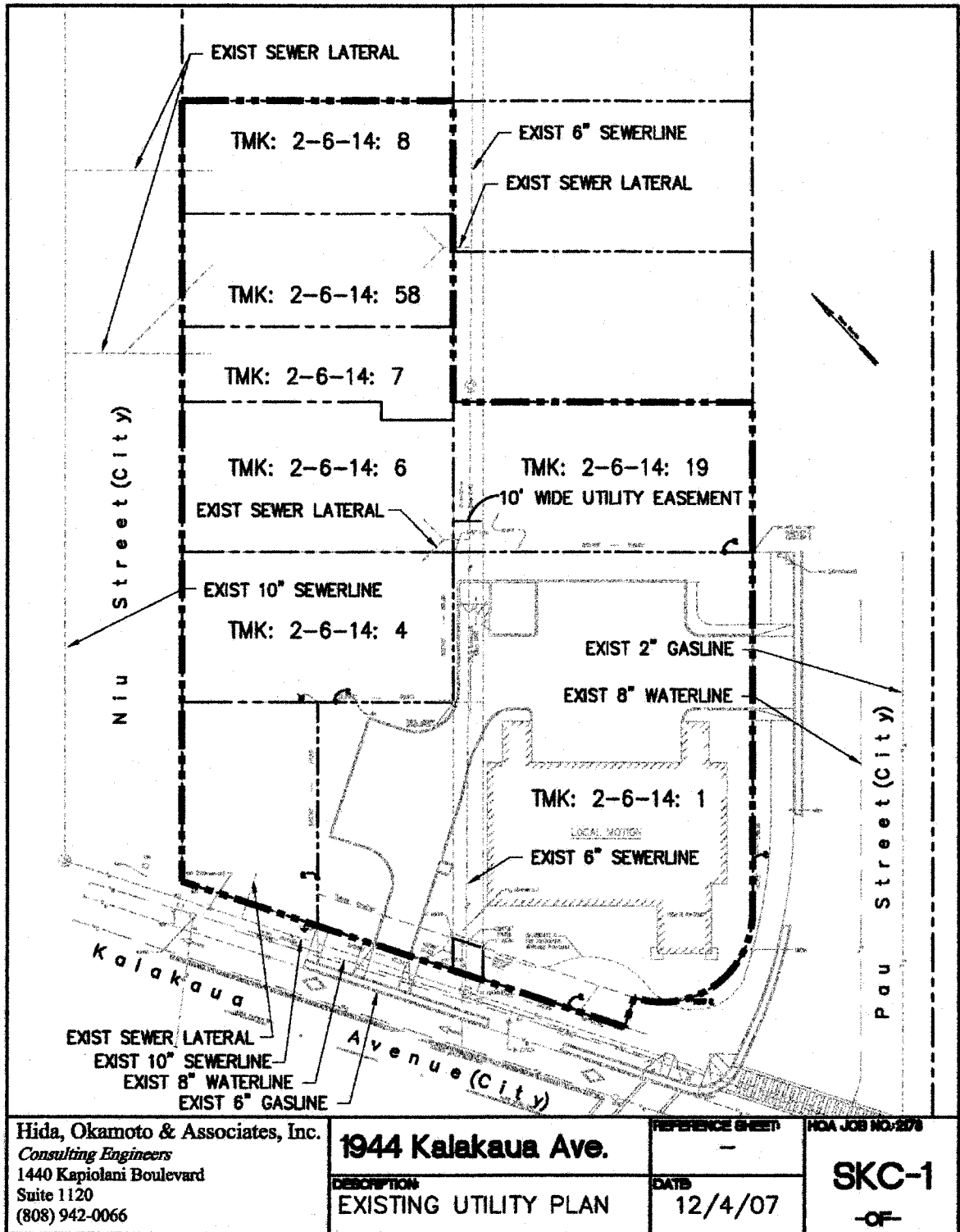


Figure 7. Existing Utility Plan. Source: Hida, Okamoto & Associates, Inc.

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The lots are currently serviced by an existing 6-inch sewer line that runs down the utility easement that is centrally located in the properties and by a 10-inch sewer line located in Niu Street. (Existing utility easement B is labeled on Figure 2.) Each lot has its own individual sewer lateral. One or more of these existing laterals will be utilized for the proposed development. The remaining unused sewer laterals will be cut and plugged at the main and abandoned in place.

On-site storm water runoff generated by the development of this site will not negatively impact the surrounding properties or street. Storm water management will include but not necessarily be limited to percolation into landscaped areas and the use of drywells and/or French drains to ensure that there will be no net increase in runoff from the previous land usage. A detailed drainage study will be provided at the time of construction plan development.

An existing 6-inch gas line is located within Kalakaua Avenue. If gas service is desired for the development, work will be coordinated with the Gas Company.

5. Kalakaua Avenue Landscaping. The landscaping theme in front of the Local Motion building along Kalakaua Avenue is proposed to be extended and continued in front of the new building. The new frontage will be landscaped with canopy form trees, coconut palms, shrubs and grassy mounds along a meandering sidewalk that provides for pedestrian crossings at the intersections. A 10-foot road widening designation exists along Kalakaua Avenue fronting these properties. Therefore, the applicant will seek a deferral of road widening improvements from the City.
6. Niu Street and Pau Street Landscaping. The existing landscaping pattern of these streets will be maintained. The sidewalk will be restored where existing driveways are proposed to be removed to improve pedestrian movement. Landscaping of the planter strip within the City rights-of-way will be grass. Trees and shrubs will be planted in the required front yards due to the lack of sufficient planter space adjacent to the roadway.
7. Gateway and View Corridor: The project is located in one of the designated “gateways” to Waikiki (Figure 6). Also, it is located in the Fort DeRussy mauka-makai view corridor. As such, the height of the building will be limited to the maximum 65 foot height limit imposed for this corridor. The applicant does not anticipate utilizing the full height limit. The proposed structure will be primarily two-stories with a height of approximately 45 feet. Additional height will be utilized for an architectural element used to emphasize the projects prominent location.

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Also, an articulated building façade will be provided along Niu Street and Kalakaua Avenue through the use of yard averaging. The use of yard averaging will provide building variation and pockets of landscaping to support the gateway concept.

8. **Sidewalks:** Existing sidewalks along Pau and Niu Streets will be utilized. Where existing driveways are to be abandoned, new sidewalks, curbs, gutters, and planter strips will be provided to match the existing roadway improvements. Along Kalakaua Avenue in front of the new building, a new meandering sidewalk and planter strip is proposed. It will match the character and link with the existing sidewalk and planter strip that front the Local Motion Building. New concrete sidewalk paving will match that of the Local Motion Building and adjoining sidewalks. Accessible sidewalks will be provided, as federally mandated within the City roadway, to street intersections and to building entrances. An easement for public access will be established for portions of the public sidewalk that extend into private property.

2.3.3. Proposed Front Yard, Open Space, Landscaped Space and Pedestrian Access

In accordance with the City and County of Honolulu's LUO and Waikiki Special District Design Guidelines, the building is to be setback an average of 20 feet from the Kalakaua Avenue road widening line. As allowed by the zoning code, portions of the building are proposed to encroach into the 20 foot required front yard, while other areas will set further back an equivalent amount of area.

The front yards will also comprise a meandering sidewalk. Because portions of this sidewalk are proposed to be both in the City right-of-way and in a private yard, a 9 foot wide easement establishing a public pedestrian access way will be needed. A similar easement exists fronting the Local Motion Building.

The required front yard for Niu Street and Pau Street is 15 feet. The front yard along Niu Street will be averaged also, similar to that used for Pau Street. There will be no reduction in the required yard area.

The LUO requirement for open space is 50 percent of the Apartment zoned lot area, which is 18,500 square feet. Thus, the 50 percent open space requirement equals 9,250 square feet. A majority of the open space area will be met on the Apartment zoned lots. However, some of this open space is proposed to be met on the Resort Commercial zoned lots. Since the project site is within a designated gateway to Waikiki, the promotion of additional open space in the gateway area on the Resort Commercial zoned lots is supported by the Waikiki Special District

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regulations. The required yards will be landscaped, except for necessary access ways and drives, as required by the zoning code.

2.3.4. Proposed Parking and Loading Areas

In accordance with the City and County of Honolulu's LUO, the ground floor level retail is exempt from any provisions for parking. Therefore, the required parking is determined by the total floor area above the ground floor.

The proposed second floor restaurant use parking requirements is one parking space per 800 square feet (SF), or the equivalent of $7,300 \text{ SF} / 800 \text{ SF} = 9.12$ parking spaces. Further, the existing upper level floor of the Local Motion Building is 5,057 square feet or the equivalent of $5,057 \text{ SF} / 800 = 6.32$ parking spaces. The total parking required for both buildings is 15 parking spaces. Approximately, 30 to 34 parking spaces will be proposed.

Local Motion Building second floor	$5,057 \text{ SF} / 800 \text{ SF}$	$= 6.32$ parking spaces
New building second floor	$7,300 \text{ SF} / 800 \text{ SF}$	$= 9.12$ parking spaces
Total Parking Requirement		$= 15.42$
		$= 15$ parking spaces required
		30 – 34 spaces to be provided

The total proposed floor area for the project site is approximately 23,866 square feet; which includes both the proposed new building and existing Local Motion building. As such, a total of 3 loading spaces are required. Two large spaces are required to be 12 feet x 35 feet in size and a third small loading space is required to be 8.5 feet x 19 feet in size. The project proposes to provide 3 loading spaces.

However, as part of the Waikiki Special District request, the applicant will request to provide one large loading space and two smaller loading spaces. Two large loading spaces are not needed for the small establishments proposed. The loading times between restaurants can be adequately managed to avoid conflicts. There is also sufficient space within the site to maneuver all loading vehicles and to accommodate all loading activity.

Landscaping of the parking areas will include the use of hedges, ground cover and trees. The types of trees will be rainbow shower, monkeypod, and/or Hong Kong orchid along with coco palms. The canopy trees will provide shade and are consistent with the Waikiki Special District Guidelines for plant materials. The parking lot will be screened from Niu Street and Pau Street by a hedge of the required height. Taller screening plant material will be used in the yards adjacent to the existing apartment buildings to mitigate visual impacts of the parking lot. This

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taller plant material will consist of areca or Macarthur palms which can grow to a height of at least 15 feet. The landscaped areas will have an automatic irrigation system.

2.3.5. Flood Hazard District Considerations

The subject property is in the flood hazard district AO with a base flood elevation of 2 feet above the adjoining grade. Therefore, the ground floor of the new building will be raised on a 24-inch podium above the existing grade. The flood hazard designation is discussed further in Section 3.5 of this EA

2.3.6. Demolition Work

Demolition work is anticipated to include the following:

- Demolition of car rental building,
- Demolition of concrete pad and asphalt parking lot associated with car rental building,
- Demolition of a portion of the existing parking lot at Local Motion, and
- Demolition of existing driveways that will no longer be used.

Since no physical changes are proposed for the Local Motion building, retail uses would continue to operate. However, existing establishments and tenants may change in the existing Local Motion building. Portions of the existing parking for Local Motion may need to be temporarily reconfigured and/or relocated to allow for the construction of the new building. These allowances, however, will be accommodated within the project site.

2.3.7. Construction Work

Current plans for the proposed new structure call for steel frame construction. Based on information derived from the investigation of soil conditions on the project site, a deep foundation system will be required that bears onto the existing dense coral formation found below grade. The deep foundation system may consist of either: (1) driven, pre-stressed, pre-cast concrete piles; (2) cast-in-place piles (caissons); or (3) micropiles.

Ties, beams and concrete piers would be poured on to support the walls and columns of the building. Due to the flood district requirements, compacted structural fill will be used to raise the lower level concrete floor slab to the required height. Upper floors will be constructed of a concrete filled metal decking. The exterior walls of the building would be steel framed with plaster and/or precast concrete finishes. Roof framing will also be of steel frame construction.

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Construction of the building will be accomplished using a pile driver to set the piles, a backhoe for trenching foundations, utilities, and parking areas, and a small crane or lifts for setting steel framing and other upper level elements in place.

2.3.8. Project Schedule and Costs

Construction of the facility would follow the environmental review and permitting processes. It is anticipated that site preparation could begin in late 2008 or early 2009. The duration of construction is anticipated to take approximately 18 months. Timeframes are preliminary and are subject to change. The estimated cost of construction is approximately \$4 million. Funding will come from private sources and no state or county funds will be used.

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3. DESCRIPTION OF THE ENVIRONMENT SETTING, POTENTIAL IMPACTS AND MITIGATION MEASURES

The following is a description of the existing environment, assessment of potential project impacts and proposed mitigation measures.

3.1 Climate

The climate of Oahu is relatively mild. It is characterized by consistent tradewinds, relatively constant temperatures, moderate humidity and infrequent severe storms. Northeasterly tradewinds prevail throughout the year with an average wind velocity of about 10-15 miles per hour. The mean temperature at the Honolulu International Airport ranges from 70 degrees Fahrenheit in the winter months to 85 degrees and above in the summer months.

Potential Impacts and Mitigative Measures

The proposed project will have no impacts on regional climate conditions.

3.2 Topography and Soils

Topography: The subject property and regional topography is relatively flat. All seven of the project site parcels have been previously developed.

Soils: Waikiki is generally underlain by calcareous sand and submerged coral ledges that formed during the various stands of the ocean. In certain areas, there are ancient lagoonal deposits characterized by gray, soft silts and clays. In certain areas of Waikiki, alluvial streams have cut through the underlying coral ledges. The project site is underlain by dense / very dense coral and coralline sediment.

According to the U.S. Department of Agriculture Soils Conservation Service study titled "Soil Survey of the Island of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii", the project site is located in an area designated as Fill Land, mixed (FL). Fill land "consists of areas filled with material from dredging, excavation from adjacent uplands, garbage, and bagasse and slurry from the sugar mill". The Fill Land portion on Oahu "occurs mostly near Pearl Harbor and in Honolulu, adjacent to the ocean. It consists of areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources." (USDA, 1972, Plate 63, page 31).

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Potential Impacts and Mitigative Measures

Development plans for the project have attempted to minimize ground disturbance. However, some components of the proposed project will involve excavation, filling and grading. Proposed activities will not significantly alter the topography of the project site. The ground floor of the new two-story building will be raised on a 24-inch podium and compacted fill above the existing grade. No expansive type soils were observed on the site or encountered during soils analysis efforts. Conventional slab-on-grade construction may be utilized.

Other minor excavation on-site will be limited to the superficial removal and replacement of existing pavement, sidewalks, landscaping and accommodating utility hookups. The new surface parking lot area will involve minor excavation, fill and grading. These areas will not generally require excavation to deeper levels. The topography of the area will not be significantly altered or impacted.

Based on information derived from the investigation of soil conditions on the project site, a deep foundation system will be required that bears onto the existing dense coral formation found below grade. The deep foundation system may consist of either: (1) driven, pre-stressed, pre-cast concrete piles; (2) cast-in-place piles (caissons); or (3) micropiles. Construction of the building will be accomplished using a pile driver to set the piles, a backhoe for trenching foundations, utilities, and parking areas, and a small crane or lifts for setting steel framing and other upper level elements in place.

The area of soil disturbance within the project site will not be greater than one acre. Thus a National Pollutant Discharge Elimination System permit is not required.

Construction-related activities will conform to the "Rules Relating to Soil Erosion Standards and Guidelines", including strict erosion control and dust control measures. Primary fugitive dust control methods that will be implemented include large plywood barriers around the perimeter of the site, regular water of exposed soil areas, good housekeeping practices on the job site, and prompt landscaping or paving of bare soils in areas where construction is completed. Ground cover plantings, landscaping and hardscape will be in place when construction is done thereby minimizing potential soil loss.

3.3 Surface Hydrology and Drainage

Rainfall in the Waikiki area is generally absorbed by the porous coral substrate, except for areas having a large amount of impervious surfaces. The general drainage pattern of the project site is toward the adjacent street frontages of Kalakaua Avenue, Pau Street and Niu Street and into the

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municipal storm drain system. There is no natural surface water or natural drainage ways within the project site.

Grading and drainage plans are being prepared. As stated previously, only minor grading and excavation are anticipated. Compacted materials and a concrete podium will be used to elevate the ground floor of the new building approximately 24 inches above grade.

Potential Impacts and Mitigative Measures

No short-term adverse impacts to surface waters are anticipated in relation to construction activities. Storm water runoff from the project site during site preparation and construction will be controlled in compliance with the City's "Rules Relating to Storm Drainage Standards". During construction, Best Management Practices will be employed such as silt fences, appropriately stockpiling materials on-site to prevent runoff, and building over or establishing landscaping as early as possible on disturbed soils to minimize the length of exposure.

No long-term adverse impacts to surface waters are anticipated as a result of the proposed project. Areas disturbed during construction will be built over, paved and landscaped to minimize erosion and sedimentation.

3.4 Waste Hazards

At the request of American Commercial Equities, a Phase 1 Environmental Site Assessment (ESA) was conducted in 2006 by Muranaka Environmental Consultants, Inc. for the Local Motion site at 1958 Kalakaua Avenue, Island of Oahu, Honolulu, Hawaii, which is TMK 2-6-14: 001. The reason for conducting the Phase 1 Environmental Site Assessment was because the property was being purchased by 1958 Kalakaua Avenue LLC.

The Phase 1 ESA was conducted to determine the potential presence of environmental impacts, petroleum products and other environmentally hazardous substances / wastes, and to identify potential sources of suspected contaminants at the Local Motion site property by a qualified environmental professional.

The Phase 1 ESA was conducted in accordance with the American Society of Testing and Materials (ASTM) Standard practice E1527-05 entitled, "Standard Practice for Environmental Site Assessments: Phase 1 Environmental Site Assessment Process".

Muranaka Environmental Consultants, Inc. concludes in their Phase 1 ESA report that there are no current recognized environmental conditions identified for the Local Motion site.

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In 1997 as part of a due diligence investigation, Dames and Moore was hired by to perform a limited Phase 2 Environmental Site Assessment to evaluate the potential for the presence of environmental impacts associated with historic land uses of the property at 1958 Kalakaua Avenue (the Local Motion site), which was developed as Jimmy's Chevron Service Station.

During Dames and Moore's investigation, two 60-gallon underground storage tanks (USTs) were identified at 1958 Kalakaua Avenue. Upon discovery, the USTs were found to be full of fluid. Dames and Moore was contracted to supervise the removal of the tanks and all impacts to soil and groundwater. During the removal of the USTs, one of the USTs ruptured and approximately 10 to 20 gallons of waste oil sludge was released. The released sludge was immediately recovered. After the USTs were removed, the excavation was over-excavated and groundwater in the excavation was skimmed to remediate the impacted soil and groundwater. The tanks, residual waste oil, sludge, and all impacted soil and ground water were disposed of properly. Dames and Moore was contracted to supervise the removal of the tanks and all impacts to soil and groundwater. Following Dames and Moore's work, their subsequent laboratory analyses results and site investigations, Dames and Moore recommend that a site closure status be granted by the State of Hawaii Department of Health.

Potential Impacts and Mitigative Measures

Muranaka Environmental Consultants, Inc. concludes in their Phase 1 ESA report that there are no current recognized environmental conditions identified for the Local Motion site. Appendix B of the Phase 1 ESA indicates that the facility status for the 1958 Kalakaua Avenue property is "site cleanup completed". No further mitigation measures or investigation are proposed.

3.5 Flood Hazard

The project site lies within the 100-year flood zone designated AO on the National Flood Insurance Rate Map #15003C0370, revised September 30, 2004 prepared by the Federal Emergency Management Agency (FEMA) Figure 8 depicts the flood hazard designation. Flooding in the AO designated zone is usually shallow and consists of sheet flow on sloping terrain with a base flood average of 1 to 3 feet. For the project site, the AO flood zone has an average flood depth of 2 feet.

Potential Impacts and Mitigative Measures

The ground floor elevation of the new building will be developed approximately two feet higher than the existing grade. The surface parking area will be constructed at grade. All new construction will be required to meet applicable building code standards. The project will comply with flood hazard requirements in accordance with current State and City and County of Honolulu standards.

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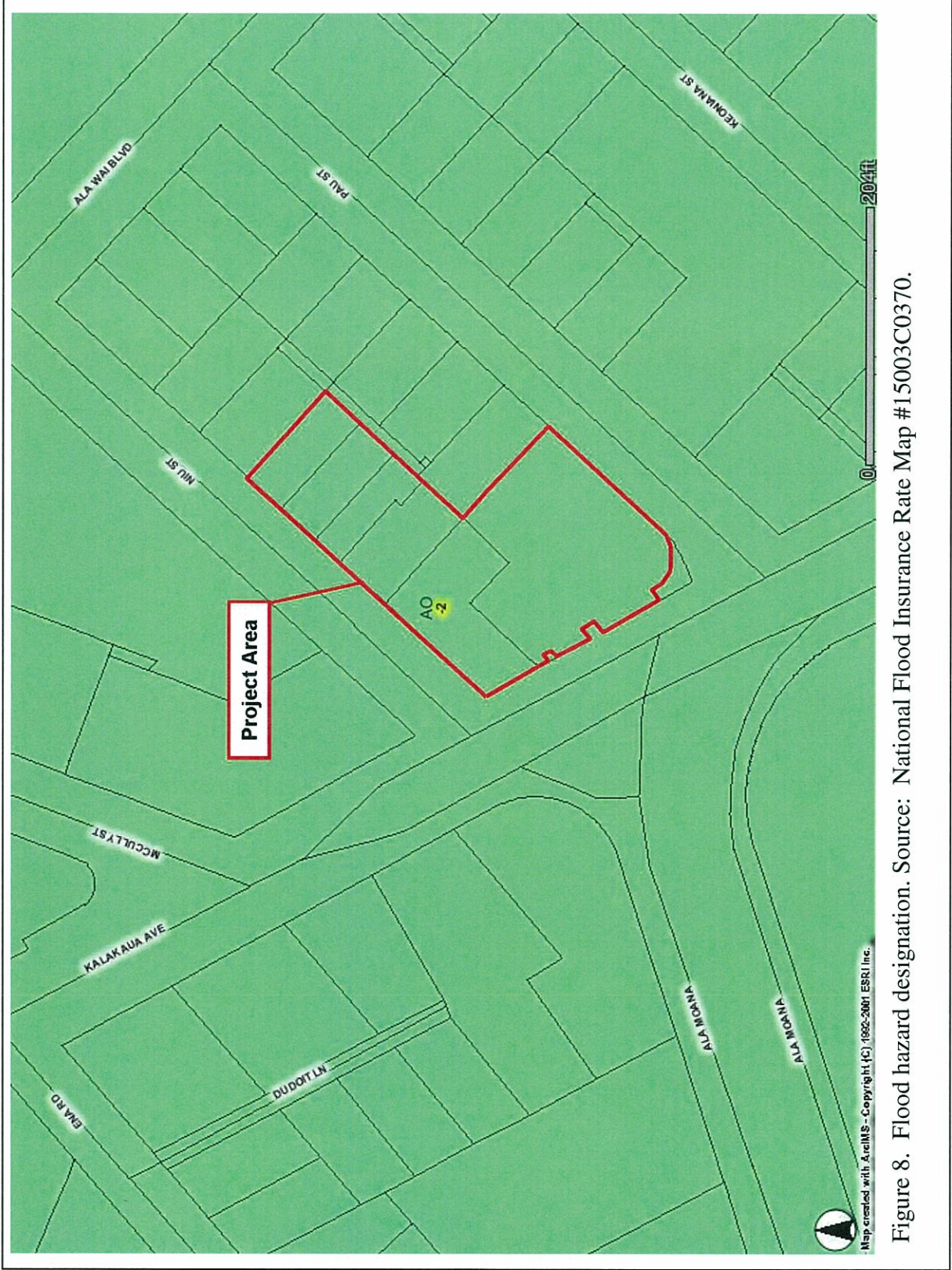


Figure 8. Flood hazard designation. Source: National Flood Insurance Rate Map #15003C0370.

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3.6 Flora and Fauna

The existing project site consists of the Local Motion building and parking lot, while the remainder of the property is mostly vacant and covered with patchy grass. The existing trees are located generally along the perimeter of the site.

A parital tree survey was conducted by certified arborist Carol Kwan in November 2007 as part of her monitoring during trenching activity. As part of her work, she assessed the condition of the trees along Kalakaua Avenue, and recommended their disposition within the proposed project. None are recognized as “exceptional trees” by the City and County of Honolulu. No threatened or endangered plant species are known to exist on the subject property.

The proposed landscaping for the project is the drawing labeled “SK-2 Planting Plan” in Appendix D. The Planting Plan calls for approximately 13 new palm trees, 17 new smaller trees and 7 new medium to large canopy trees. Six existing palm trees and 8 smaller canopy trees will be removed. The new plantings will be located along the perimeter of the property and in the new parking area.

Faunal species likely include typical domestic and feral cats, as well as rats and mice, which are common to urbanized areas are probably present. Avifaunal species observed in the area include species also common to urban areas such as doves, mynah, sparrow, cardinal and finches.

Potential Impacts and Mitigative Measures

The development of the project will not have any adverse impacts on the area’s vegetation or wildlife habitat. The project is not anticipated to result in any adverse impacts to native plant or animal species that are endangered, rare or threatened. Planned landscaping includes canopy form trees, coco palms, shrubs, and ground cover.

3.7 Noise

The project site is in an urban, high-density resort area. The existing ambient noise levels along Kalakaua Avenue in the vicinity of the project area are relatively high because it is near major intersections that lead into Waikiki. The primary noise sources in the project area are traffic noise levels due to the large volumes of traffic and heavy vehicles that use these primary thoroughfares. Sources of noise include not only typical automobiles but also delivery trucks, tour buses, and refuse haulers which all converge into Waikiki to service the urban, high-density resort area. Other sources of noise include emergency vehicles with sirens at all hours of the day or night.

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The State Department of Health (DOH) regulates noise from fixed mechanical equipment. Construction activities are regulated by DOH through the issuance of permits that allow excessive construction noise during limited time periods.

Potential Impacts and Mitigative Measures

Short-term construction noise will be generated during construction activity and the use of heavy machinery. Significant adverse impacts due to construction noise are not anticipated due to the temporary nature of the work. Project-related construction noise will and must comply with the State Department of Health Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control".

In the long term during the operational phase of the project, the new building will be air-conditioned so that will mitigate both noise impacts to those working inside and it will prevent noise from leaving the building. Any increase in noise levels that might result in the vicinity of the project site are not anticipated to exceed regulated noise levels. Long term operational noise, (after construction is complete and the new building is occupied) must also meet the State noise regulations.

3.8 Air Quality

According to the State Department of Health's 2002 Annual Summary of Hawaii Air Quality Data, "Air quality in the State of Hawaii continues to be one of the best in the nation and criteria pollutant level remain well below state and federal ambient air quality standards." The State of Hawaii continues to be well below federal standards on annual averages for particulates, sulfur dioxide and nitrogen dioxide and annual averages of daily maximum 1-hour values recorded for ozone and carbon monoxide. The State's averages have also been well below federal standards for more stringent State standards for carbon monoxide and nitrogen dioxide.

The air quality in the vicinity of the project site is primarily impacted by vehicular emissions from surrounding streets. According to the State Department of Health's Clean Air Branch, the Waikiki Air Monitoring Station located on Kalakaua Avenue reported that carbon monoxide levels have not exceeded State or Federal standards in the past several years.

Potential Impacts and Mitigative Measures

The proposed project will have short-term construction-related impacts on air quality, including the generation of dust and emissions from construction vehicles, equipment and commuting construction workers. The potential impacts of construction activities will be mitigated because the project must comply with the Hawaii Administrative Rules, Section 11-60-11.1 regarding

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“Air Pollution Control”, specifically Section 11.60.1-33 regarding fugitive dust and the prohibition of visible dust emissions at property boundaries.

Mitigation measures to address short-term impacts include minimizing movement of construction vehicles during peak traffic periods to avoid traffic congestion and its associated increase in vehicular emissions. Also, frequent watering of unpaved and disturbed areas on the project site will help control the generation of dust. Landscaping disturbed areas as soon as possible is yet another mitigation measure.

3.9 Views

The project site is adjacent to Kalakaua Avenue. Section 21-9.80-3 of the Land Use Ordinance enumerates the “prominent view corridors and historic properties” in the Waikiki Special District that are to be preserved, maintained and enhanced wherever possible. The portion of Kalakaua Avenue that fronts the project site is not identified as a significant public view corridor. None of the streets in the immediate vicinity of the project site are identified as significant public view corridors.

The project site is, however, within the Fort DeRussy view corridor. The proposed new building will comply with the Land Use Ordinance’s height and the height setback requirements and the design requirements for the Waikiki Special District. Further details regarding this are provided in Section 4.2.3. The architectural character and scale of the new building will be similar to the existing Local Motion building.

Potential Impacts and Mitigation Measures

The new building is designed to blend in with the existing architectural character and scale of the adjacent Local Motion building. The new building will comply with all applicable development standards of the Waikiki Special District Resort Commercial precinct within which the new building will be located. The new building will also comply with applicable LUO and Waikiki Special District regulations regarding height, density, open space and building setbacks.

3.10 Socio-Economic Characteristics

Population and Housing:

The 2000 Census reported the population of Oahu at 876,156. According to the City and County of Honolulu’s Department of Planning and Permitting’s demographic profile for various Oahu neighborhoods using the 2000 Census data, the subject property is located in Neighborhood Area 9: Waikiki, which had a population of 19,720.

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In comparison to Oahu as a whole, the Waikiki population is generally older; has a racial mix with proportionately more Caucasians and less Asians and Native Hawaiian or Pacific Islanders; much lower proportion of family households and an even lower proportion of household with children under 18; proportionately lower homeownership rates; and greater vacancy rates. See Table 2.

Economy:

According to 2000 Census data compiled by the City's Department of Planning and Permitting, median household income in 1999 for the Waikiki Neighborhood Area was \$32,547, which is lower than the median household income of \$51,280 for Oahu.

Potential Impacts and Mitigative Measures

The proposed project does not involve residential use. No impacts to the Waikiki population or housing inventory are anticipated. The proposed project's total estimated cost of construction is \$4 million in private funds. The project will have some positive short term construction related economic impacts. In the long-term, the 1944 Kalakaua Avenue project will create job opportunities associated with the retail and restaurant components of the development.

3.11 Public Services and Solid Waste

Police Services:

Waikiki is located in the Honolulu Police Department's District 6. There is a police substation located on Kuhio Beach along Kalakaua Avenue. In addition to the police, Waikiki is patrolled by a variety of volunteer citizen groups such as the Waikiki Citizens Patrol and Aloha Patrol .

Fire Services:

Waikiki is located within the Honolulu Fire Department's Battalion Two. Two fire stations serve Waikiki; one on Kapahulu Avenue and one on Date Street.

Medical Services:

Four of the state's major hospitals are located within an approximately five mile distance from the project site. These include Queen's Hospital, the Kaiser Permanent Honolulu Clinic, Straub Hospital, and Kapiolani Hospital for Women and Children. There are walk-in clinic within Waikiki such as the Straub Hospital's Doctor's on Call clinic at the Sheraton Princess Kaiulani Hotel.

Potential Impacts and Mitigative Measures

In terms of Police, Fire and Medical services, the proposed project is anticipated to have negligible impact on these facilities and services. The new building will be constructed to meet the City's fire codes and regulations. Refuse collection will be collected by a private company.

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Table 2: Demographic Characteristics: 2000

Subject	Neighborhood Area #9		Oahu	
	Number	Percent	Number	Percent
Total Population	19,720	100.0	876,156	100.0
AGE				
Under 5 Years	688	3.5	56,849	6.5
5-17 years	1,187	6.0	151,909	17.3
18-64 years	14,222	72.1	549,661	62.7
65 years and over	3,623	18.4	117,737	13.4
Median Age (years)	42.2		35.7	
RACE (alone or in combination with other races)				
White	10,005	50.7	308,838	35.2
Black or African American	605	3.1	29,764	3.4
American Indian and Alaska Native	292	1.5	15,921	1.8
Asian	8,876	45.0	539,384	61.6
Native Hawaiian and other Pacific Islander	1,725	8.7	189,292	21.6
Other	534	2.7	32,003	3.7
HOUSEHOLD (by type)				
Total Households	11,397	100.0	286,450	100.0
Family households (families)	4,087	35.9	205,672	71.8
With own children under 18 years	1,167	10.2	91,022	31.8
Married-couple family	3,129	27.5	156,195	54.5
With own children under 18 years	777	6.8	70,442	24.6
Female householder, no husband present	643	5.6	35,138	12.3
With own children under 18 years	293	2.6	15,235	5.3
Non-families	7,310	64.1	80,778	28.2
Living with non-relatives	1,475	12.9	18,815	6.6
Living alone and 65 years and over	1,503	13.2	20,021	7.0
Average persons per household	1.72	--	2.95	--
HOUSING OCCUPANCY AND TENURE				
Total Housing Units	18,370	100.0	315,988	100.0
Occupied Units	11,397	62.0	286,450	90.7
By owner	3,819	20.8	159,290	49.5
By renter	7,578	41.3	130,160	41.2
Vacant units	6,973	38.0	29,538	9.3
Available housing vacancy rate (%)	23.1	--	4.9	--
Homeownership rate (%)	33.5	--	54.6	--

Source: 2000 Census SF1 File; Planning Division, Honolulu Department of Planning and Permitting

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3.12 Utilities

Storm Drainage System

Storm water management will include but not necessarily be limited to percolation into landscaped areas and the use of drywells and/or French drains to ensure that there will be no net increase in runoff from the previous land usage. A detailed drainage study will be provided at the time of construction plan development. The proposed project will be required to comply with the City's "Rules Relating to Storm Drainage Standards".

Potential Impacts and Mitigative Measures

No significant impacts are anticipated on the municipal drainage system serving the project area. Drainage patterns and facilities will be design to minimize impacts on the municipal drainage systems.

Sanitary Sewer System

The lots are currently serviced by an existing 6-inch sewer line that runs down the utility easement that is centrally located in the properties and by a 10-inch sewer line located in Niu Street. Each lot has its own individual sewer lateral. One or more of these existing laterals will be utilized for the proposed development. The remaining unused sewer laterals will be cut and plugged at the main and abandoned in place.

Potential Impacts and Mitigative Measures

A sewer connection application was approved on October 10, 2007. The proposed project will utilize the available sewer capacity associated with the subject parcels. No upgrades or improvements are warranted. No impacts on the municipal wastewater system are anticipated.

Water System

The seven lots in the project area are currently served by water lines within Pau Street, Niu Street and Kalakaua Avenue. The new building will be served by existing water lines. Water meters not used for the project will be removed. A new reduced pressure principal backflow preventer will be installed for cross contamination prevention of the municipal water system. Preliminary estimated daily water demand is approximately 6,500 gallons per day (gpd): 4,000 gpd restaurant, 1,000 gpd retail, and 1,500 gpd landscape irrigation.

Potential Impacts and Mitigative Measures

The existing water lines are adequate to serve the new building. No impacts to the municipal water system are anticipated.

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3.13 Cultural Resources

A Cultural Impact Assessment (January 2008) was undertaken by Cultural Surveys Hawaii. The interim report of the cultural assessment is in Appendix F.

The proposed project requires compliance with the State of Hawai'i environmental review process under Hawai'i Revised Statutes (HRS) Chapter 343, which requires consideration of a proposed project's effect on traditional cultural practices. Through document research and cultural consultation efforts, a cultural impact assessment was conducted. This information provides an analysis of the proposed project's potential impacts to cultural practices per the Office of Environmental Quality Control's (OEQC) Guidelines for Assessing Cultural Impacts.

The scope of the cultural impact assessment included an examination of historical documents, Land Commission Awards, and historic maps 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. The scope also included a review of the existing archaeological information pertaining to the property; identification and description of the potential cultural resources, practices and beliefs associated with the parcel; and identification of present uses, if appropriate.

Although the research of the historical documentation is complete, Cultural Surveys Hawaii is still conducting interviews. Cultural Surveys Hawaii contacted with the State Historic Preservation Division, Office of Hawaiian Affairs, Island Burial Council, and members of other community organizations in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the study area and the surrounding vicinity. The names for potential community contacts were also provided by colleagues at Cultural Surveys Hawaii and from the researcher's familiarity with people who live in or around the study area. Some of the prospective community contacts were not available to be interviewed as part of this project. A discussion of the consultation process can be found in the "Section 4 Community Consultations" of the interim report which is in Appendix G. The findings of these interviews will be included in the Final EA.

Historic Documentation of the Project Area

The present project area is located on the mauka fringe of a portion of Waikiki that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds that extended between the present Saratoga Road and the grounds of Fort DeRussy to present Atkinson Drive and Ala Moana Shopping Center.

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Documentation indicates that the project area historically consisted of marshland. Historic documentation also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites.

An 1881 Hawaiian Government survey map by S.E. Bishop provides a detailed record of the physical landscape of Waikiki before the transformations of the 20th century. Drawn before the extensive drainage and landfilling of the Waikiki landscape, accomplished by the construction of the Ala Wai Canal in the 1920s, the 1881 map likely represents the project area as it had appeared in traditional Hawaiian times: a marsh environment surrounded by fishpond ponds and wetland fields (Figure 9). When the map was copied in 1922, additional material from subsequent government surveys was added, including locations of road corridors not present in 1881.

The project area was not intensively utilized until the mid-twentieth century when Waikiki became urbanized, following the draining and filling of the area initiated in the 1920's. By 1927 the project area was drained, filled in, and subdivided in preparation for development. A 1927 Sanborn Fire Insurance map indicates that the project area was still undeveloped, but has been subdivided and girded off (Figure 10). This suggests that the project area had been drained and filled in and was being prepared for development.

By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes. A 1956 Sanborn Fire Insurance map showing the project area reflects mid-twentieth century changes occurring within Waikiki (Figure 11). Multiple dwelling structures and apartments are now present in the northeastern half of the project area, while the southwestern half of the project area contains an auto repair shop, gas station, and restaurant.

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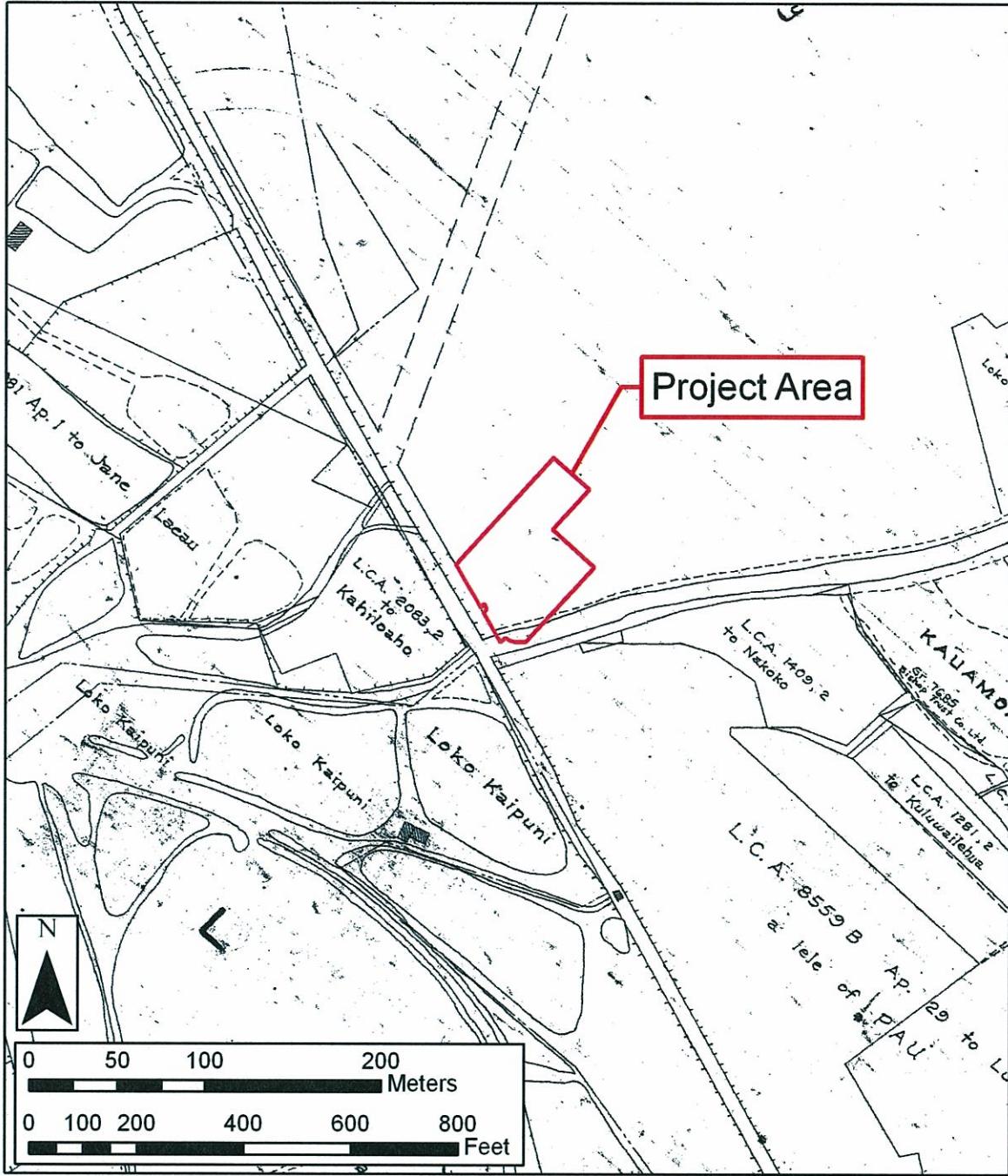


Figure 9. Portion of Registered Map 1398, a 1881 map by S.E. Bishop with location of present project area. (Source: Cultural Surveys Hawaii)

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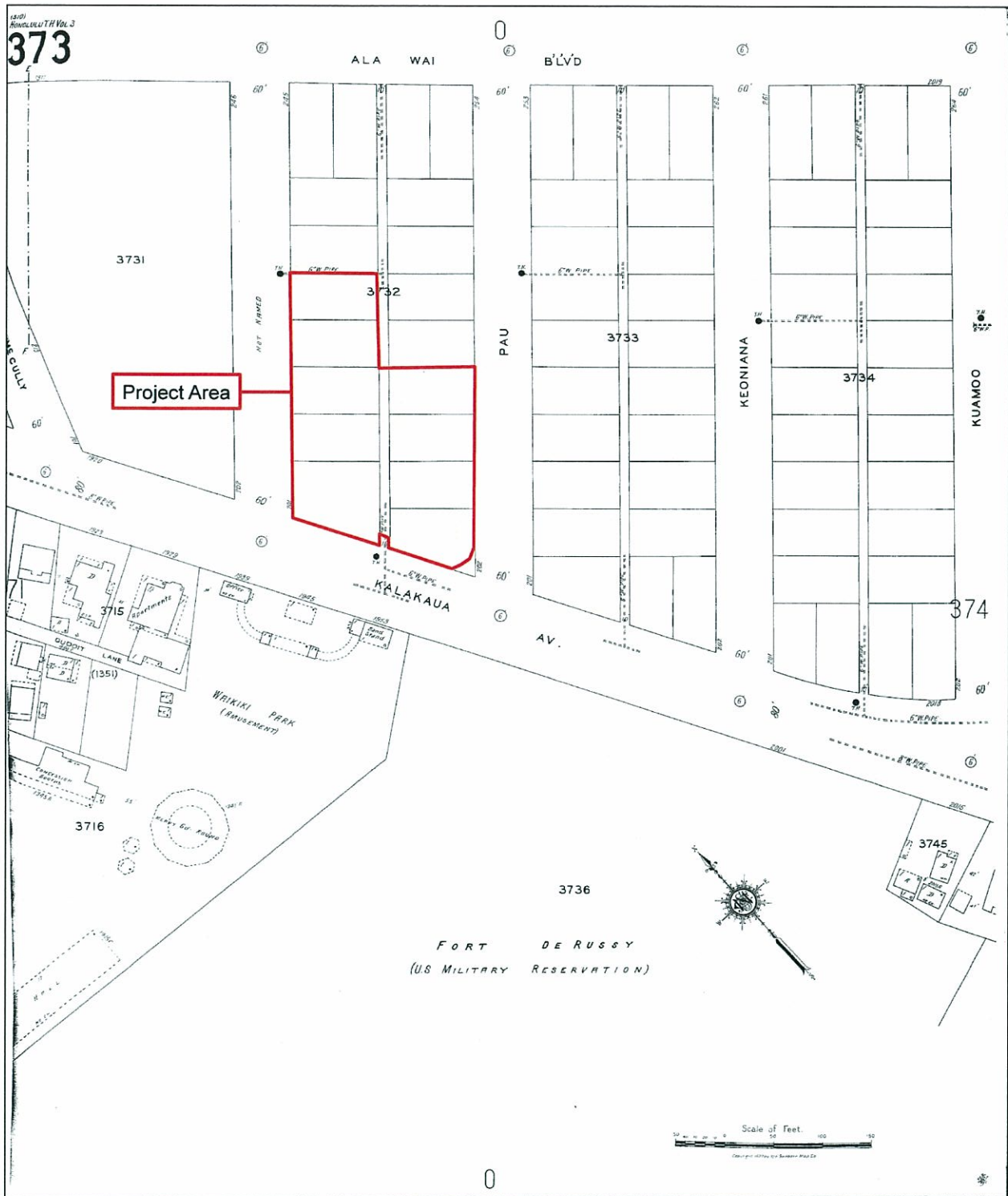


Figure 10. 1927 Sanborn Fire Insurance map of project area. (Source: Cultural Surveys Hawaii)

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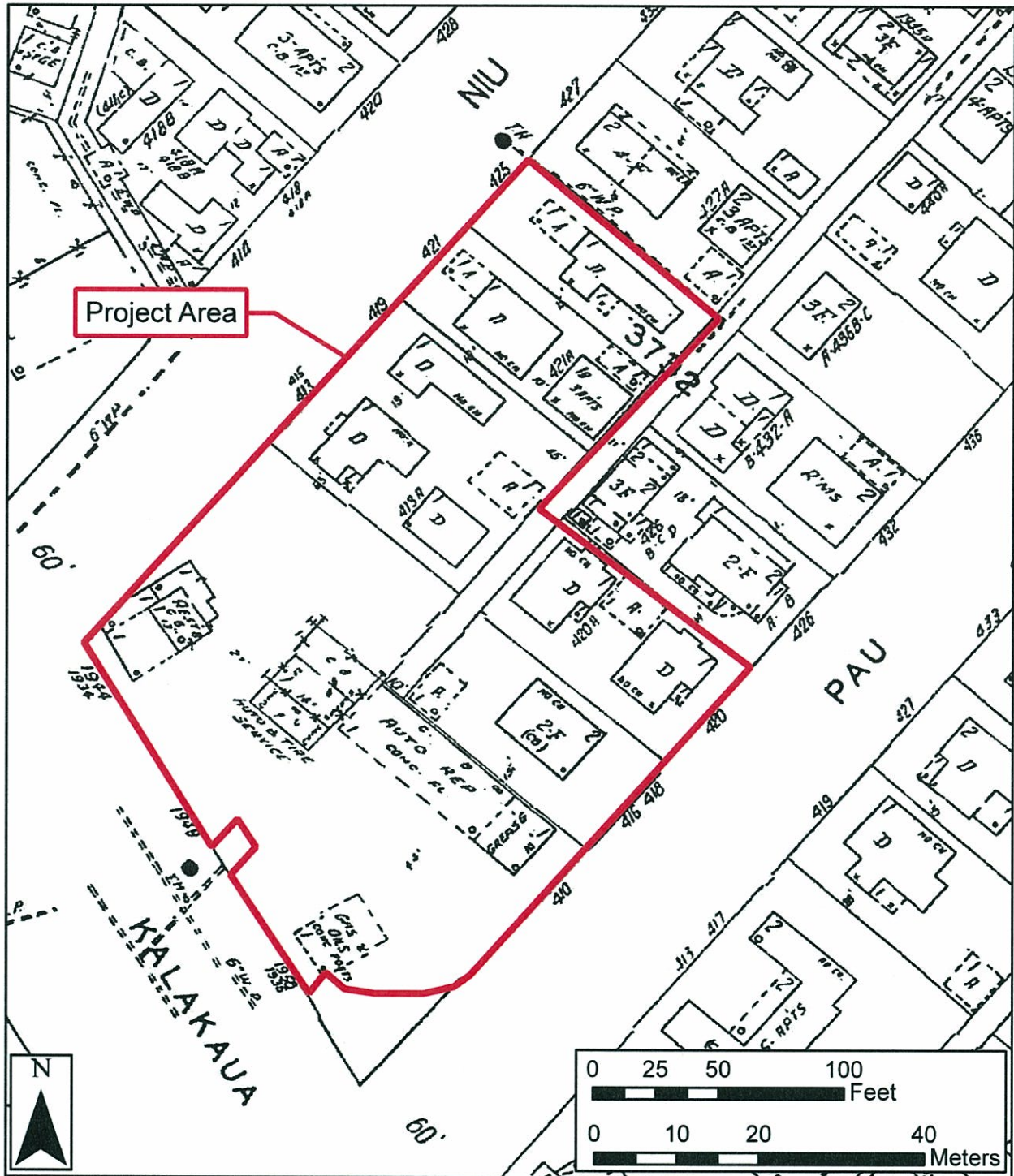


Figure 11. 1956 Sanborn Fire Insurance map of project area. (Source: Cultural Surveys Hawaii)

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Potential Impacts and Mitigative Measures

According to the Cultural Surveys Hawaii report, it is anticipated, based on historical research and previous archaeological projects that evidence of pre-contact and early post-contact aquaculture, habitation, agriculture, and possibly burial practices may be found in the project area if intact Jaucus sand deposits remain below nineteenth and twentieth century fill layers. Native Hawaiian burial practices were such that the potential for encountering human burials in sandy deposits within the current proposed project area does exist. Additionally, the present project area is located in the vicinity of the fishpond, Loko Kaipuni. Thus, remnant subsurface fishpond sediments could be encountered.

Cultural Surveys Hawaii reported that as of the date of the interim cultural impact study report, two state agencies provided comments directly to Cultural Surveys Hawaii regarding the proposed project; the Office of Hawaii Affairs (OHA) and The State Historic Preservation Division (SHPD). Responses from remaining cultural organizations, agencies and community members (e.g., cultural and lineal descendants of Waikiki and cultural practitioners) are pending. The SHPD and OHA provided to Cultural Surveys Hawaii the following information:

SHPD recommended that recognized cultural and lineal descendants from the Waikiki area be contacted about the proposed project, and offered to provide a list of descendants upon request. Cultural Surveys Hawaii is currently in the process of contacting descendants and will be working with SHPD to ensure that all descendants apposite to the project area have been notified.

OHA cautioned that the present project area is located in the vicinity (northeast) of the previous location of a *loko i'a* (fishpond), Loko Kaipuni. OHA commented that:

While the information in your letter indicated that the proposed project area is currently developed, there is a possibility that iwi kūpuna may be discovered during ground disturbance. Thus, OHA seeks assurances that if this project moves forward, should Native Hawaiian traditional, cultural, or burial sites be identified during ground disturbance, all work will immediately cease, and the appropriate agencies notified pursuant to applicable law.

Based on the above preliminary findings, Cultural Surveys Hawaii proposes no further cultural impact mitigation measures. It is recommended that as a precautionary measure, personnel involved in future development activities in the area should be informed of the possibility of inadvertent cultural finds, and should be made aware of the appropriate notification measures to

follow. The final results of the community consultations will be provided in the final cultural impact assessment report and in the Final EA.

3.14 Archaeological and Historic Resources

An archeological assessment (December 2007) was completed by Cultural Surveys Hawaii. The report is in Appendix G. The proposed project requires compliance with and review under state of Hawai'i historic preservation legislation Hawai'i Revised Statutes (HRS) Chapter 6E-42 and Hawai'i Administrative Rules (HAR) Chapter 13-13-275.

Cultural Surveys completed what began as an archaeological inventory survey investigation of the project area, per the requirements of HAR Chapter 13-13-276. Because no historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. The archaeological assessment report was prepared to support the proposed project's historic preservation review under HAR 13-13-275 and any other project-related historic preservation consultation.

The scope of work for the archeological inventory survey was developed and implemented to satisfy SHPD requirements. The scope of work was designed in accordance with State Historic Preservation Division rules governing standards for archaeological inventory surveys and reports (HAR 13-13-276). The scope of work later became an archaeological assessment because no historic properties were located within the project. Also, the scope of work for the archaeological inventory survey included full coordination with the State Historic Preservation Division (SHPD), and the City and County of Honolulu relating to archaeological matters.

A complete ground survey of the entire project area was completed for the purpose of historic property inventory. Based on available information, the proposed commercial building development will not impose adverse visual, auditory or other environmental impact to any known historic properties, including standing architecture, located outside the project area.

Research was conducted on the historic and archaeological background of the project area, including search of historic maps, written records, and Land Commission Award documents. This research focused on the specific area with general background on the ahupua'a, district and settlement patterns.

A 100 percent pedestrian inspection of the project area confirmed that all standing architecture was less than 50 years old and that there were no surface historic properties. Accordingly, the inventory survey focused on a program of subsurface testing to locate any buried cultural

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deposits that were potentially within the project area. For the report, historic is defined as anything older than 50 years and modern is defined as anything younger than 50 years.

Subsurface Testing

No subsurface historic properties were observed during the course of subsurface testing. A subsurface testing effort consisted of the excavation of 17 backhoe trenches (Figure 12). Trenches were distributed throughout the project area to provide representative coverage and assess the stratigraphy and potential for subsurface cultural resources within the project area. The test trenches generally measured 5 to 7 meters in length, 0.8 meters in width, and were excavated down to the water table (approximately 2 meters deep). Certain areas could not be tested due to the presence of subsurface concrete slabs and a utility easement that ran through the middle of the project area.

Based on backhoe testing results, the stratigraphy within the project area was largely as expected. In general the observed and documented stratigraphy consisted of varying fill layers, including historic fill associated with the draining and filling of Waikiki, overlying naturally occurring alluvial sediment. It is believed that the historic fill layers consist of dredge material collected during the construction of the Ala Wai Canal.

Two types of dredge material were observed; a thick layer of crushed coral fill overlying a thinner layer of pump dredge, consisting of wet clays containing abundant micro striations, which is indicative of pump dredge deposits. These observations agree with the USDA soil data for the project area and its vicinity. All excavations were backfilled after completion of stratigraphic documentation.

Potential Impacts and Mitigative Measures

While previous archaeological studies have documented subsurface cultural deposits and human burials – both pre-Contact Hawaiian and historic – in the vicinity of the project area, no subsurface historic properties were observed during the course of subsurface testing and no surface historic properties were identified during fieldwork.

The fieldwork results support the background research, which indicates that the project area consisted of marshland that was not intensively utilized until the mid-twentieth century when Waikiki became urbanized following the draining and filling of the area initiated in the 1920's.

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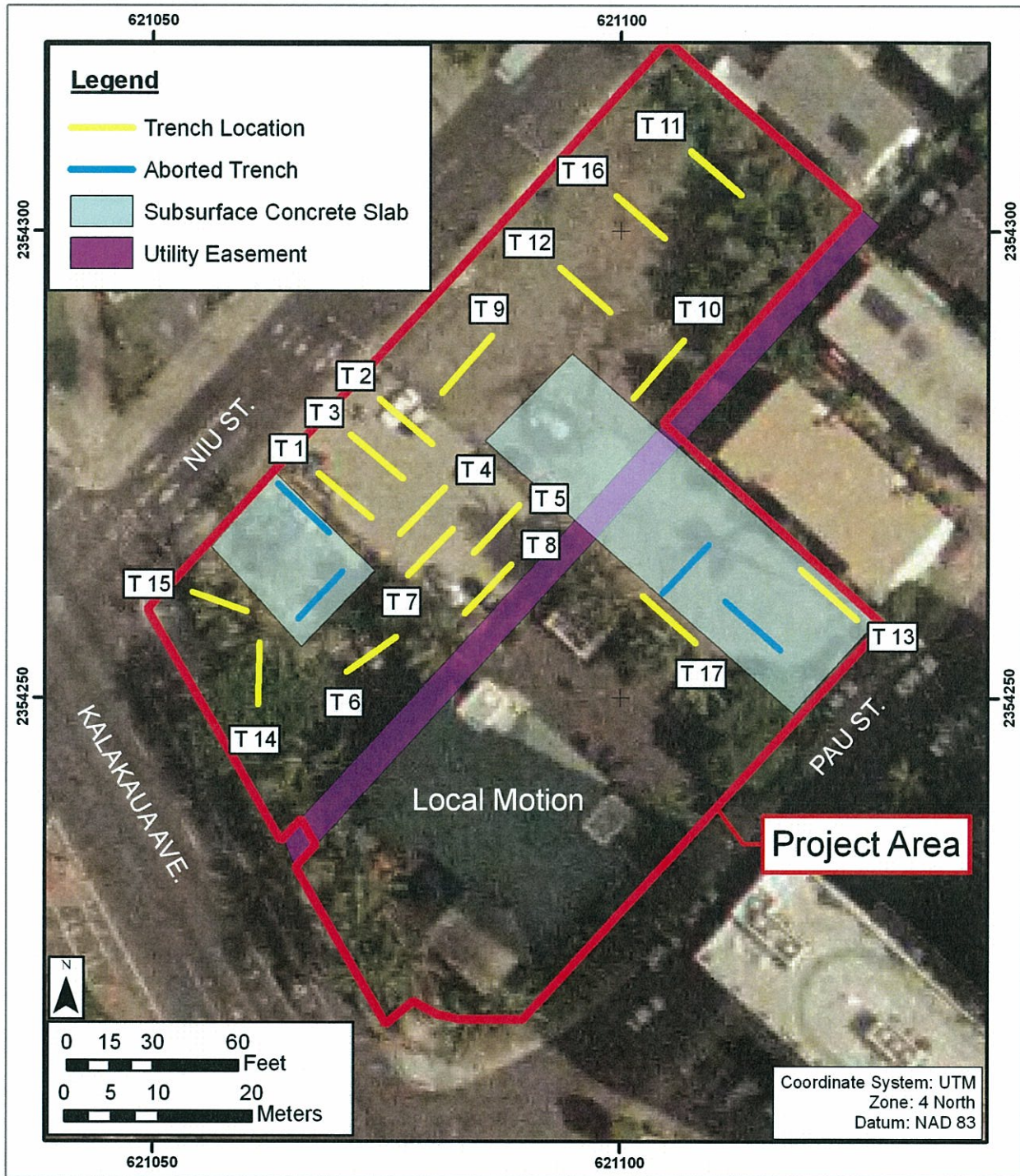


Figure 12. Aerial photograph showing the locations of Trenches 1-17. (Source: Cultural Surveys Hawaii)

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However, background research also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites. Due to the proximity of this traditional Hawaiian occupation, it is still possible that intact pre-Contact and early contact cultural deposits associated with Hawaiian habitation, agriculture, and burial interment are lying undisturbed beneath the fill layers within the project area.

It should be noted that typically cultural deposits associated with traditional Hawaiian habitation and burial interment are located in Jaucas sand deposits, which were not observed within the project area, thus while there is the potential to encounter these types of cultural deposits, it is unlikely.

Based on the current investigation, there are no historic properties recommended Hawai'i Register-eligible within the project's Area of Potential Effect. Accordingly, based on the available information, it is recommended that the proposed project will have no effect on significant (i.e. Hawai'i Register-eligible) historic properties. The proposed 1944 Kalakaua Avenue Project will not have an adverse impact to any historic properties and no further work is recommended for the project. In the unlikely event that previously unidentified subsurface historic properties are encountered by project construction, the project proponents should immediately stop work in the vicinity and contact SHPD's O'ahu Office [Tel. (808) 692-8015].

A project specific effect determination of "no historic properties affected" is warranted for the project. Final verification and acceptance of the Archaeological Assessment report and its findings is the responsibility of the State Historic Preservation Division.

3.15 Traffic Assessment

A Traffic Impact Assessment Report (TIAR) was prepared by Phillip Rowell and Associates (December 2007) and is included as Appendix H.

Existing Conditions

The project area is boarded by Kalakaua Avenue, Niu Street and Pau Street, which are all City and County of Honolulu public streets. Kalakaua Avenue provides four eastbound lanes and one westbound lane which is for buses only. Pau Street is a two-lane one-way northbound street. Niu Street is a two-lane one-way southbound street. The intersections of Kalakaua Avenue at Niu Street and Kalakaua Avenue at Pau Street are both signalized.

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The "study area" of the TIAR, which was defined based on information provided by the project architect and discussions with the Traffic Review Branch of the Department of Planning, includes the following intersections:

- Kalakaua Avenue at Niu Street
- Kalakaua Avenue at Pau Street

Existing traffic volumes at the two study intersections were obtained from traffic counts performed on Thursday November 8, 2007 and Friday November 9, 2007. The intersection configurations and right-of-way controls were verified at the time of the surveys. Existing traffic operating conditions of the study intersections were determined using the methodology described in the 2000 *Highway Capacity Manual*.

"Level-of-Service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of-Service (LOS) is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

There are six levels-of-service, A through F, which relate to the driving conditions from best to worst, respectively. In general, LOS A represents free-flow conditions with no congestion. LOS F, on the other hand, represents severe congestion with stop-and-go conditions. Level-of-service D is typically considered acceptable for peak hour conditions in urban areas.

Existing Level-of-Service Analysis

The level-of service analysis concluded that both of the study intersections operate at Level-of-Service B, during both the AM and PM peak periods. All lane groups operate at Level-of-Service B, or better, during the morning peak hour and Level-of-Service C, or better, during the afternoon peak hour. These conclusions are consistent with conditions observed during the traffic counts.

2010 Background Traffic Projections

For purposes of the TIAR's analysis, the year 2010 was used as the horizon year. This does not necessarily represent the project completion date. It represents a date for which future background traffic projections were estimated. The 2010 background traffic projections are defined as future background traffic conditions without the proposed project. Background traffic projections are estimated by superimposing traffic generated by other planned development projects in the area onto the existing background traffic projections previously discussed. The following planned development projects were identified:

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1. Allure Waikiki
2. The Grand Waikikian
3. Trump International Hotel and Tower
4. Outrigger Hotels Reconstruction

Future Traffic Volumes - Project Trip Generation

Future traffic volumes generated by the proposed “1944 Kalakaua Avenue LLC” project were estimated using the procedures described in the *Trip Generation Handbook* and data provided in *Trip Generation*. This method used trip generation rates to estimate the number of trips that the project will generate during the peak hours of the project and along the adjacent streets.

While it is understood that restaurant and retail uses in Waikiki have a significant proportion of pedestrian traffic, no discount for pedestrian traffic was assumed. Therefore, the estimate of project-generated vehicular traffic is conservative in that the estimates are higher than the actual vehicular traffic that is anticipated because visitors staying in Waikiki would be able to walk to the project site.

Potential Impacts and Mitigative Measures

Future 2010 background traffic plus project traffic projections were estimated by superimposing the peak hourly traffic generated by the proposed project onto the 2010 background (without the project) peak hour traffic projections. This assumes that the peak hourly trips generated by the project coincide with the peak hour of the adjacent street. This represents a worse-case condition.

Based on the criteria recommended by the Institute of Transportation Engineers, a traffic impact study would not typically be warranted because the project will generate only 39 inbound trips per hour during the afternoon peak hour, which is less than the 100 trips per hour generally required to warrant a traffic impact analysis.

Although the proposed project generates relatively few inbound trips, the following analysis was undertaken: (1.) the changes in peak hourly traffic volumes at the two study intersections, and (2.) the changes in level-of-service at the two study intersections were analyzed to identify any potential operational deficiencies for 2010 background traffic conditions including the project.

Project's Share of Total Intersection Approach Volumes

In 2010 with background traffic plus the project traffic, the project-generated traffic will represent a small percentage – between just 0.5 % to 1.5 % – of the total traffic using the study intersections. See Table 4 of the Traffic Impact Assessment Report in Appendix I.

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Level of Service Analysis with the Project Plus 2010 Background Traffic

In 2010 with background traffic, the two study intersections will operate at Level-of-Service B during both AM and PM peak periods – with and without project-generated traffic. Level-of-Service D is generally considered to be the minimum acceptable peak hour level-of-service for urban intersections. Accordingly, the levels-of-service of all movements at the study intersections are acceptable and mitigation measures are not required.

Construction-related Traffic

Construction-related traffic will cause short term temporary impacts. During construction, efforts will be made to minimize the impacts of construction traffic on the adjacent street network. Typical mitigation measures include:

- Limit deliveries of construction materials to off-peak periods.
- Prohibit on-street parking by construction workers.
- Do not allow closure of any traffic lanes at any time along Kalakaua Avenue as this will not only impede traffic operations but would also adversely affect the operation of the westbound bus lane.

Widening Along Kalakaua Avenue

The level-of-service analysis concluded that the two Kalakaua Avenue intersections adjacent to the project area currently operate at Level-of-Service B during the AM and PM peak periods. This is a high level-of-service considering the area. Accordingly, there is no capacity-related benefit to be gained from widening Kalakaua Avenue at this time. Given this conclusion and considering the negative impacts of construction activity associated with widening Kalakaua Avenue on traffic and the adjacent dedicated bus lane, it is recommended that widening be deferred until justified by traffic capacity considerations.

Conclusions

The proposed project will generate 6 inbound and 12 outbound trips during the morning peak hour. During the afternoon peak hour, the project will generate 39 inbound and 23 outbound trips. These are considered conservative estimates of the peak hour traffic that the project will generate. An analysis of the 2010 future traffic volumes at the study intersections estimates that project-generated traffic will represent 1.5% or less of the peak hour traffic using the two study intersections. The level-of-service analysis of the anticipated 2010 traffic conditions at the study intersections concludes that both intersections will operate at Level-of-Service B during both AM and PM peak periods. Based on the analysis and conclusions of the TIAR, mitigation measures are not recommended or required.

4. RELATIONSHIP TO LAND USE, POLICIES AND CONTROLS

This section discusses State and City and County of Honolulu land use controls, plans and policies relating to the proposed project.

4.1 Hawaii State Land Use District

The Hawaii State Land Use Law, contained in Chapter 205, Hawaii Revised Statutes, classifies all land in the State into four land use districts: Urban, Agricultural, Conservation, and Rural. The project site is located within the State Urban district which includes “lands characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses.”

Discussion

The proposed project is consistent with the State Urban classification.

4.2 City and County of Honolulu

4.2.1. Primary Urban Center Development Plan

The City and County of Honolulu’s Primary Urban Center (PUC) Development Plan, approved by the Council in 2004, is one of eight regional plans covering the Island of Oahu. As mandated by the City Charter, the plans set forth City policy to guide zoning, land use and public investment in a manner that is consistent with and supports the General Plan of the City and County of Honolulu.

The PUC Development Plan Land Use Map designates the project site “District Commercial” and “Medium and Higher Density Residential/Mixed Use”. These designations are a mix of commercial and more intense residential uses. The PUC Development Plan states:

“District Commercial areas...refer to a wide variety of commercial uses and related activities intended to serve district-, region-, and/or island wide populations. Uses typically include major office buildings, shopping centers, professional and business service, municipal service and commercial activities located long major streets.....”

Medium and Higher-Density Residential/Mixed Use “... designation refers to a broad range of medium and higher –density residential uses that vary in density

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from 13 to 140 units per acre.The integration or close location of residential buildings with office and retail services or recreation and community facilities should be encouraged as mixed-use is an essential component of this designation.”

Discussion

The proposed project is consistent with the PUC Development Plan Land Use Map designations for the project site. The proposed commercial building will be located along a major street. The interior portion of the project site, while designated for mixed use, will be developed as a parking area to provide a buffer between the commercial building and the existing residential areas mauka of the site.

4.2.2. Land Use Ordinance, Waikiki Special District

The project site is located within the Waikiki Special District. The District has its own zoning precincts with associated land use and design standards that are generally more stringent than those applicable under standard zoning designations for other areas on Oahu not in a special district.

The District was established in 1976 to preserve and enhance the character of Waikiki, and to maintain a balance in Waikiki’s mix of resort, commercial, residential, and recreational uses. In February 1996, the City Planning Department published the “Waikiki Planning and Program Guide” to provide an overview of recent efforts toward the continued improvement and enhancement of Waikiki. Among its recommendations were amendments to the WSD to promote renovation, replacement, and enhancement in the resort districts and to promote a Hawaiian sense of place and preserve views and unique Hawaiian features.

The portion of the project along Kalakaua Avenue is in the Waikiki Special District “Resort Commercial Precinct”. The interior portion of the project is in the Waikiki Special District “Apartment Precinct” (Figure 5).

Discussion

The proposed project is consistent with the Waikiki Special District precinct designations. The applicant will submit a Waikiki Special District Permit for the proposed project following the environmental review process.

4.2.3. Land Use Ordinance, Waikiki Special District Design Guidelines

The proposed project must meet the Waikiki Special District “General Requirement and Design Controls” Section 21-9.80-4 of the Land Use Ordinance. The Waikiki Special District Design Guidelines states that, “All structures, opens spaces, landscape elements and other improvements within the district shall conform to the guidelines.....”

Discussion

The following describes the project’s compliance with the Waikiki Special District design controls and design guidelines. The proposed improvements will comply with the objectives enumerated in Section 9.80-1 of the City and County of Honolulu, Land Use Ordinance.

Building Design:

The two-story 14,300 square foot building will be constructed on the corner of Kalakaua Avenue and Niu Street. The building will be constructed of steel, concrete and plaster similar to the existing Local Motion Building. The ground floor of the building will be predominantly clear glazed storefronts with the obvious structural building support system. The second floor will also have a large amount of clear glazing. However, eaves will be used to break up the two-story wall and offer shade and protection to the building and pedestrians. A double-hipped second floor roof will also be part of the building design to offer a human scale to the project and emphasize the clay roofing tiles to be used. Plaster will be used on the exterior wall surfaces to convey a sense of permanence.

The floor plate of the building is set back as far as possible towards the interior of the property to allow for the open space to be situated along the streets. This allows for a small plaza at the intersection of Kalakaua Avenue and Niu Street that leads to the main building entrance which serves as the architectural focal point. This additional setback, landscaping, and architectural focal element will enhance the project’s contribution to this Waikiki Gateway.

Use, Floor Area, and Open Space:::

The proposed commercial uses are allowed within the Resort Commercial Precinct. The parking for the project is allowed in the Apartment Precinct with a Conditional Use Permit (CUP). Although a joint development permit has been processed for all parcels in the project, a CUP for off-site parking is needed because commercial uses are not permitted “by right” in the Apartment Precinct. The parking will meet the criteria established for off-site parking facilities.

The floor area ratio (FAR) permitted for the Resort Commercial properties is 3.5. The combined area of the commercial zoned parcels is 25,784 square feet. Therefore, the maximum permitted

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floor area for the existing and proposed building is 90,244 square feet. The total proposed floor area for the project site is approximately 23,866 square feet, well below that allowed by the zoning code. An FAR of 3.5 is allowed by using ½ the abutting right-of-way and open space bonus to expand the base FAR of 1.75. By using such bonus, a maximum FAR of 4.77 is achievable. However, the LUO limits the maximum FAR to 3.5, and this limits the maximum permitted floor area. Please note that only the commercial zoned lot area is being used for this calculation since the commercial uses proposed are not common to both zoning districts. A description of how this was derived is enumerated below.

The total area for half the abutting rights-of-way is 16,434 square feet (see SK-3), and the open space proposed on the Resort Commercial parcels is 9,830 square feet (see SK-3). Thus the maximum permitted floor area is as follows:

$(\text{Lot Area} + \frac{1}{2} \text{ abutting rights-of-way}) \times \text{FAR} = \text{Floor Area Permitted} + \text{Open Space Bonus} = \text{Permitted Floor Area}$

$(25,784 \text{ sf} + 16,434 \text{ sf}) \times 1.75 = 73,882 \text{ sf} + (9,830 \text{ sf} \times 5) = 123,032 \text{ sf}$; this equals an FAR of 4.77.

The required open space is 9,250 square feet (half the area of the apartment zoned lots). The combined open space provided on all lots is 9,830 square feet.

Ground Level Features:

The building façade along Niu Street and Kalakaua Avenue will be devoted to window displays. The façade will also be articulated through the use of yard averaging. This allows the building to step back in certain areas to embrace the pedestrian and landscape elements. At grade parking will not be located along Kalakaua Avenue but be located as far back on the property as possible. Street frontages of the exposed parking areas will be generously landscaped and screened to prevent undesirable views from the street, as well as, from above.

Outdoor Lighting:

Outdoor lighting will be subdued and selected to prevent excess glare and light spilling onto adjoining properties and rights-of-way.

Landscaping:

Kalakaua Avenue Landscaping. The landscaping theme in front of the Local Motion building along Kalakaua Avenue is proposed to be extended and continued in front of the new building. The new frontage will be landscaped with canopy form trees, coconut palms, shrubs and grassy mounds along a meandering sidewalk that provides for pedestrian crossings at the intersections. A 10-foot road widening designation exists along Kalakaua Avenue fronting these properties. Therefore, the applicant will seek a deferral of road widening improvements from the City.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

Niu Street and Pau Street Landscaping. The existing landscaping pattern of these streets will be maintained. The sidewalk will be restored where existing driveways are proposed to be removed to improve pedestrian movement. Landscaping of the planter strip within the City rights-of-way will be grass. Trees and shrubs will be planted in the required front yards due to the lack of sufficient planter space adjacent to the roadway.

Gateway and View Corridor:

The project is located in one of the designated “gateways” to Waikiki (Figure 6). Also, it is located in the Fort DeRussy mauka-makai view corridor. As such, the height of the building will be limited to the maximum 65 foot height limit imposed for this corridor. The applicant does not anticipate utilizing the full height limit. The proposed structure will be primarily two-stories with a height of approximately 45 feet. Additional height will be utilized for an architectural element used to emphasize the projects prominent location. Further, although no open space is required for Resort Commercial Precinct parcels, open space above and beyond the required yards will be provided. Also, an articulated building façade will be provided along Niu Street and Kalakaua Avenue through the use of yard averaging. The use of yard averaging will provide building variation and pockets of landscaping to support the gateway concept.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

5. DETERMINATION AND COMPLIANCE

- A. State – Finding of No Significant Impact
(Chapter 343, HRS and Title 11, Chapter 200, HAR)**
- B. Applicant**
American Commercial Equities Three, LLC
- C. Accepting Authority**
City and County of Honolulu, Department of Planning and Permitting
- D. Determination and Reasons Supporting Determination**

Potential impacts have been evaluated and are addressed in terms of how the proposed project relates to the thirteen significance criteria outlined in Chapter 343, Hawaii Revised Statutes and Section 11-200-12, State Administrative Rules, Contents of Environmental Assessments, the project will not result in significant adverse effects on the natural or human environment. A Finding of No Significant Impact (FONSI) is anticipated. This determination is based on the assessment of the project in relation to the thirteen significance criteria below:

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

The subject property does not contain any significant flora or fauna. No known cultural resources are located on the property. No impacts to natural or cultural resources are anticipated due to the proposed project.

2. Curtail the range of beneficial uses of the environment;

The proposed project is consistent with the City and County's zoning ordinance and the Waikiki Special District precinct designations, guidelines and design controls. The proposed project will not curtail the beneficial uses of the environment. The proposed project involves the development of a vacant area designated as a gateway to Waikiki.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

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

The proposed project does not conflict with long-term environmental policies or goals or guidelines of the State of Hawaii. The project's potential impacts are primarily short-term temporary impacts associated with construction of the new building. These can be mitigated through adherence to standard construction mitigation, following State and County Rules and Regulations for construction practices and by implementing Best Management Practices.

4. Substantially affect the economic welfare, social welfare, and cultural practices of the community or State;

The proposed project would provide short-term economic benefits in the form of construction jobs, and provide long-term employment associated with the operation of the development. The proposed project will benefit the social welfare of the area by developing a vacant area designated as a gateway to Waikiki. No known cultural practices of the community or State will be impacted by the proposed project.

5. Substantially affect public health;

There are no public health concerns relating to the construction of the proposed facility. Operation of the restaurant will have to comply with applicable State DOH requirements for dining establishments.

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

There are no anticipated secondary impacts to population or public facilities. The proposed facility does not significantly impact public services or public facilities.

7. Involve a substantial degradation of environmental quality;

Construction activities associated with the proposed project are anticipated to result in short-term impacts to noise levels, air quality, water quality and traffic in the immediate vicinity of the project site. Mitigation measures will be implemented during construction in order to minimize impacts. The proposed project is consistent with the property's zoning designation. No long-term degradation of environmental quality is anticipated.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

8. Is individually limited but cumulatively has considerable effects upon the environment or involves a commitment for larger actions;

No cumulative effects are anticipated. The proposed project involves only the development of the new building and the associated parking area. No changes are proposed for the existing Local Motion building.

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

The project site has been previously disturbed and developed. There are no known endangered, threatened, or rare plants or animal species at or near the subject property.

10. Detrimentially affect air or water quality or ambient noise levels;

Construction activities associated with the proposed project are anticipated to result in short-term impacts to noise levels, air quality, water quality and traffic in the immediate vicinity of the project site. Mitigation measures will be implemented during construction in order to minimize impacts. Operation of the proposed facility will have no significant long-term impacts on air or water quality or ambient noise levels in the vicinity.

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

The project site lies within the 100-year flood zone designated AO on the National Flood Insurance Rate Map #15003C0370, revised September 30, 2004 prepared by the Federal Flooding in the AO designated zone is usually shallow and consists of sheet flow on sloping terrain with a base flood average of 1 to 3 feet. For the project site, the AO flood zone has an average flood depth of 2 feet.

12. Substantially affect scenic vistas and view planes identified in county or state plans or studies; or

The proposed project is intended to enhance the property which is designated as a gateway to Waikiki and is within the Fort DeRussy View Corridor. The new building will be located on a prominent corner of Waikiki. The objective of the proposed design is to blend the style of the structure and the ground level landscaping to be compatible with the existing Local Motion building. None of the streets in the vicinity of the project site are identified as major public view corridors.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

13. Require substantial energy consumption.

Construction and occupation of the proposed facility will not require a substantial increase in energy consumption.

6. ALTERNATIVES TO THE PROPOSED ACTION

6.1 No Action Alternative

In the No Action Alternative, the proposed 1944 Kalakaua Avenue project would not be constructed. The mostly vacant project site, which is in an area designated as one of just five “Waikiki Gateways”, would not be improved and visually and aesthetically enhanced, in particular the pedestrian experience at this end of Waikiki. The objective of the proposed design is to blend the style of the structure and the ground level landscaping to be compatible with the existing Local Motion building. The proposed development will enhance the area with a new building, new sidewalks, new landscaping and the removal of driveway access from Kalakaua Avenue. The vacant interior lots, which will be developed as a parking area to serve the commercial establishments, will be landscaped and maintained.

6.2 Alternative Designs

Multi-Family Units

Some alternative designs that were considered for the property included the potential development of multifamily units on the apartment precinct zoned parcels. However, the limited sewer capacity of the Waikiki area precludes the development of residential units in excess of what previously existed. Through the research of demolition permit records it was determined that approximately 27 dwellings occupied parcels 6, 7, 8, 19 and 58. The limited sewer capacity in this area of Waikiki would allow a maximum of 27 units to be constructed, essentially a one-for-one replacement. This limited development of residential units is not financially feasible, and is not a preferred alternative.

Right-of-Way Improvement on Kalakaua Avenue

Further, an alternative right-of-way improvement on Kalakaua Avenue fronting the proposed new commercial building was also considered. This alternative would implement the improvements associated with the designated 10 foot Kalakaua Avenue road widening. This scenario is shown in SK-4 which is included in the set of drawings found in Appendix D

This alternative, however, may be difficult and undesirable to implement. It may be difficult to implement for several reasons, first, the project is required to raise the ground floor elevation 2 feet above the adjoining grade to comply with flood hazard district regulations. Implementing the 10-foot road widening improvement will make it more difficult to make the approach from the road way to the building accessible. By reducing the horizontal distance to create a gradual slope for a ramp, a more formal ramp and/or stair to the building would need to be constructed.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

If a ramp were proposed in the required yard it may also require the processing of zoning waiver. Second, the project boundary jogs at the location of the sewer easement within the road widening setback. The project does not own this portion of land (Lot 8-A-27-L) and thus does not feel it can commit road widening improvements over it.

Moreover, if the practical barriers to implement the road widening could be overcome it would make for a less aesthetic solution. This City standard sidewalk solution for this area would be to provide curbs, gutters, and a widened sidewalk. The sidewalk would be concrete. This implementation would significantly reduce the amount of landscaping fronting the project. It may not be the best aesthetic solution for this portion of Waikiki designated as a Gateway. The preferred alternative is to provide a meandering sidewalk with landscaping along the curb as was allowed for the Local Motion Building. This also provides a landscape buffer between pedestrians and vehicles on Kalakaua Avenue. The meandering sidewalk concept is more consistent with the Waikiki Special District regulations relative to creating a more pleasant pedestrian experience and tropical landscape environment.

In order to implement the preferred alternative, the applicant hopes to defer the road widening improvements. This would be similar to what was granted for the Local Motion Building.

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

7. PERMITS AND APPROVALS

The following is a preliminary list of permits, approvals and reviews that are required prior to construction of the proposed project. The following is not an exhaustive list:

<u>Permit</u>	<u>Responsible Agency</u>
Waikiki Special District	Dept of Planning and Permitting
Conditional Use Permit	Dept of Planning and Permitting
- Joint Development	
- Off-site Parking	
Grading Permit, Building Permit	
Drain Connection	Dept of Planning and Permitting
Sewer Connection	Dept of Planning and Permitting

DRAFT ENVIRONMENTAL ASSESSMENT

1944 Kalakaua Avenue Project, TMK (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058, Waikiki, Oahu, Hawaii

8. CONSULTATION

8.1 Parties Consulted During the Pre-EA Consultation Period

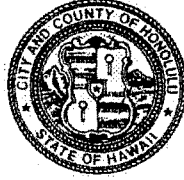
The following agencies were contacted during the preparation of the Draft EA. Comment letters received during the pre-consultation process and response letters immediately follow.

	Pre-Consultation Notice	Pre-Consultation Comment Letter
<u>State of Hawaii</u>		
Department of Land and Natural Resources		
Historic Preservation Division	X	
Department of Transportation	X	X
Office of Hawaiian Affairs	X	
 <u>City and County of Honolulu</u>		
Department of Design and Construction	X	X
Department of Environmental Services	X	
Department of Planning and Permitting	X	
Land Use Permits Division	X	
Traffic Review Branch	X	
Wastewater Branch	X	
Department of Transportation Services	X	X

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU

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

MUFI HANNEMANN
MAYOR



EUGENE C. LEE, P.E.
DIRECTOR
CRAIG I. NISHIMURA, P.E.
DEPUTY DIRECTOR

September 26, 2007

Mr. Patrick Seguirant, Architect
91-1030 Kaihi Street
Ewa Beach, Hawaii 96706


Dear Mr. Seguirant:

Subject: Proposed "1944 Kalakaua Avenue, LLC" Commercial Project
TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058
Kalakaua Avenue – Waikiki
Honolulu, Hawaii

Thank you for giving us the opportunity to comment on the above pre-consultation process for the preparation of the Draft Environmental Assessment.

The Department of Design and Construction does not have any comments to offer at this time.

Very truly yours,


Eugene C. Lee, P.E.
Director

ECL:lt (227311)

Architecture Planning Land Use Consulting

91-1030 Kaimi Street
Ewa Beach, HI 96706
Phone (808) 683-4477
Fax (808) 689-3883
sequirant@newhawaii.net

February 4, 2008

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

RE: Pre-Consultation prior to the Draft Environmental Assessment
Proposed "19944 Kalakaua Avenue, LLC" Commercial Project
TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058
Kalakaua Avenue – Waikiki
Honolulu, Hawaii

Dear Mr. Lee:

Thank you for taking the time to review the proposed project during the pre-consultation process of the Draft Environmental Assessment.

We acknowledge that the Department of Design and Construction does not have any comments to offer at the time of your pre-consultation review per your September 26, 2007 letter.

A copy of the Draft Environmental Assessment will be sent to your Department for review and comment.

Sincerely,


Patrick Sequiran, Architect

LINDA LINGLE
GOVERNOR



BARRY FUKUNAGA
DIRECTOR

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

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

IN REPLY REFER TO:

STP 8.2628

September 26, 2007

Mr. Patrick Seguirant
Patrick Seguirant Architect
91-1030 Kaihi Street
Ewa Beach, Hawaii 96706

Dear Mr. Seguirant:


Subject: Draft Environmental Assessment Pre-Assessment Consultation
For Proposed "1944 Kalakaua Avenue, LLC" Commercial Project
TMK: 2-6-014: 001, 004, 006, 007, 008, 019, 058

Thank you for your notification on the proposed commercial project. We have the following initial comments:

1. We are interested in the collective impact from the number of hotel-condominium-commercial projects already underway or planned in the Waikiki-Ala Moana area that can contribute traffic on and around the eastern end of Ala Moana Boulevard (State Route 92). The subject proposed commercial project is located in this area of interest.
2. We understand that a traffic assessment (TA) will be prepared as part of the Draft EA. The TA should cover the proposed project's impact and the project's contribution to the future cumulative traffic expected in the area, including any recommended mitigation measures.
3. We request that four (4) copies of the Draft EA be provided to our Department for further review and comments by our departmental and divisional staff.

Your early consultation and the opportunity offered to provide our comments are appreciated.

Very truly yours,

for

BARRY FUKUNAGA
Director of Transportation

Architecture Planning Land Use Consulting

91-1030 Kal'hi Street
Ewa Beach, HI 96706
Phone (808) 683-4477
Fax (808) 689-3660
seguirant@hawaiiantel.net

February 4, 2008

Mr. Brennon Morioka, Interim Director
State of Hawaii
Department of Transportation
869 Punchbowl Street
Honolulu, HI 96813-5097

RE: Pre-Consultation prior to the Draft Environmental Assessment
Proposed "19944 Kalakaua Avenue, LLC" Commercial Project
TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058
Kalakaua Avenue – Waikiki
Honolulu, Hawaii

Dear Mr. Morioka:

Thank you for your September 26, 2007 letter containing comments on the subject project as part of the pre-consultation process for the Draft Environmental Assessment (EA). Responses are provided below in the order of your comments. The Draft EA will contain site plans and drawings of the new project.

1. As you are aware, the Draft EA will contain a Traffic Assessment report which will assess the collective impact from a number of projects already underway or planned in the Waikiki-Ala Moana area.
2. The Traffic Assessment report will address the proposed project's impact and the project's contribution to the future cumulative traffic expected in the area, including any potential recommended mitigation measures.
3. Four copies of the Draft EA will be provided to your Department.

Thank you for reviewing the proposed project. Your Department will receive the Draft EA for further comment and review.

Sincerely,


Patrick Seguirant Architect

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET 3RD FLOOR
HONOLULU, HAWAII 96813

Phone: (808) 768-6305 • Fax: (808) 528-4730 • Internet: www.honolulu.gov

MUFI HANNEMANN
MAYOR



MELVIN N. KAKU
DIRECTOR

RICHARD F. TORRES
DEPUTY DIRECTOR

TP9/07-227582R

October 30, 2007

Mr. Patrick Seguirant, Architect
91-1030 Kaihi Street
Ewa Beach, Hawaii 96706

Dear Mr. Seguirant:

Subject: 1944 Kalakaua Avenue, LLC Commercial Project

Thank you for your September 13, 2007 letter, requesting our pre-consultation comments on the subject project.

We have the following comments for your consideration as you prepare the draft environmental assessment (EA):

1. Loading and unloading facilities must be designed to accommodate all loading/unloading activities, including maneuvering, completely on-site.
2. All driveways should be located on Niu Street as far away as possible from Kalakaua Avenue.
3. The proposed project will affect bus and paratransit operations. Therefore, the Public Transit Division (Phone: 768-8371) and Oahu Transit Services, Inc. (Bus Operations-Art Akana at Phone: 852-6030 and Paratransit Operations-John Black at Phone: 454-5041) must be notified of the scope of work, location, proposed closure of any street, traffic lane, or bus stop, and duration of project two weeks prior to commencing construction.

We look forward to reviewing the draft EA. Should you have any questions regarding these comments, please contact Ms. Faith Miyamoto of the Transportation Planning Division at 768-8350.

Sincerely,

A handwritten signature in black ink, appearing to read "Melvin N. Kaku", written over a horizontal line.

MELVIN N. KAKU
Director

Architecture Planning Land Use Consulting

91-1030 Kaihi Street
Ewa Beach, HI 96706
Phone (808) 883-4477
Fax (808) 689-3663
seguirant@hawaiiantel.net

February 4, 2008

Mr. Wayne Yoshioka, Director
City and County of Honolulu
Department of Transportation Services
650 South King Street, 3rd Floor
Honolulu, HI 96813

RE: Pre-Consultation prior to the Draft Environmental Assessment
Proposed "19944 Kalakaua Avenue, LLC" Commercial Project
TMKs: (1) 2-6-014: 001, 004, 006, 007, 008, 019, 058
Kalakaua Avenue – Waikiki
Honolulu, Hawaii

Dear Mr. Yoshioka:

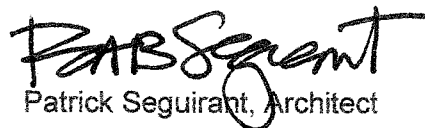
Thank you for your October 30, 2007 letter containing comments on the subject project as part of the pre-consultation process for the Draft Environmental Assessment (EA). Responses are provided below in the order of your comments. The Draft EA will contain site plans and drawings of the new project.

1. Loading and unloading facilities will be designed to accommodate all loading and unloading activities, including maneuvering, completely on site.
2. The existing driveways on Niu Street and Kalakaua Avenue will be demolished, and the sidewalks and planter strip restored. All existing driveways on Pau Street, except for one, will be demolished and the sidewalks restored. The restored two-way driveway on Pau Street would be setback approximately 140 feet from the intersection of Kalakaua Avenue. A new two-way driveway on Niu Street would be constructed and setback approximately 200 feet from the intersection of Kalakaua Avenue.
3. Impacts to bus and par transit operations would be short-term and temporary during a portion of the construction period. The Public Transit Division and the Oahu Transit Services, Inc. will be notified of the scope of work, location, proposed closure of any street, traffic lane or bus stop, and duration of the project two week prior to commencement of construction.

Letter to Mr. Wayne Yoshioka
Department of Transportation Services
February 4, 2008
Page 2 of 2

Thank you for your review. A copy of the Draft Environmental Assessment will be sent to your Department for review and comment.

Sincerely,

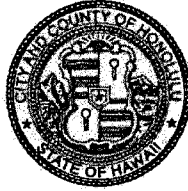

Patrick Seguirant, Architect

Appendix A

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
TELEPHONE: (808) 768-8000 • FAX: (808) 527-6743
INTERNET: www.honolulu.gov • DEPT. WEB SITE: www.honoluluodpp.org

MUFI HANNEMANN
MAYOR



HENRY ENG, FAICP
DIRECTOR

DAVID K. TANOUE
DEPUTY DIRECTOR

2007/CUP-106(sn)

MINOR PERMIT CONDITIONAL USE PERMIT – JOINT DEVELOPMENT	
File Number:	2007/CUP-106
Applicant:	American Commercial Equities Three, LLC
Landowner:	Nihonkai Lease Company, Ltd (Parcels 4, 6, 7, 8, 19 and 58) 1958 Kalakaua Avenue, LLC (Parcel 1)
Location:	1944, 1950 and 1958 Kalakaua Avenue; 413, 421 and 425 Niu Street; 420 Pau Street
Tax Map Keys:	2-6-14: 1, 4, 6, 7, 8, 19 and 58
Zoning:	Apartment Precinct and Resort Commercial Precinct
Date Received:	September 18, 2007
Date Accepted:	October 2, 2007

This Conditional Use Permit (Minor) application for joint development is **APPROVED**, subject to the following conditions:

1. Prior to submittal of a building permit application, the applicant shall:
 - a. Submit a certified copy of the deed transferring fee ownership of Parcels 4, 6, 7, 8, 19 and 58 to American Commercial Equities Three, LLC;
 - b. Submit a revised and executed joint development agreement for review and approval by the Director of Planning and Permitting. See attached marked-up copy. The submitted agreement shall include exhibits describing the lots to be jointly developed as they are recorded with the Bureau of Conveyances and/or Land Court of the State of Hawaii; and
 - c. File the approved agreement with the Bureau of Conveyances and/or Assistant Registrar of the Land Court of the State of Hawaii, as appropriate. Proof of such filing shall be in the form of a copy certified by the appropriate agency and shall be submitted to the Department of Planning and Permitting.

(NOTE: DO NOT RECORD THE JOINT DEVELOPMENT AGREEMENT PRIOR TO REVIEW AND APPROVAL BY THE DIRECTOR OF PLANNING AND PERMITTING.)

2. All lots or parcels identified in of the approved joint development agreement shall be considered to be one (1) zoning lot.
3. This application has only been reviewed and approved pursuant to the provisions of Section 21-5.380, and development shall comply with all other provisions of the Land Use Ordinance.
4. Approval of this Conditional Use Permit shall not be construed as approval of any building/sign permit application; such applications are reviewed separately and shall comply with applicable codes and regulations.
5. This approval may be revoked by the Director of Planning and Permitting when there is a breach of any of the conditions stated above; provided that, for good cause, the Director may amend the above conditions.

The joint development of the multiple subdivision lots, identified as Parcels 1, 4, 6, 7, 8, 19 and 58, is necessary to permit the applicant to develop a commercial building over the lots. The proposed joint development is permitted as a conditional use in the Apartment Precinct and Resort Commercial Precinct with an approved Conditional Use Permit (Minor), and will be required to conform to the requirements of the Land Use Ordinance. The site is suitable for the proposed joint development considering size, shape, location, topography, infrastructure, and natural features, and will result in more efficient use of the land. The proposed joint development will not alter the character of the surrounding area in a manner substantially limiting, impairing or precluding the use of surrounding properties for the principal uses permitted in the underlying zoning district. And, by facilitating orderly development of the site in accordance with adopted land use policies, the joint development, at its proposed location, provides a service or facility which will contribute to the general welfare of the community-at-large and the surrounding neighborhood.

Any party (to the case) wishing to appeal the Director's action must submit a written petition to the Zoning Board of Appeals (ZBA) within 30 calendar days from the date of mailing or personal service of the Director's written decision (Zoning Board of Appeals Rules Relating to Procedure for Appeals, Rule 22-2, Mandatory Appeal Filing Deadline). Essentially, the Zoning Board of Appeals' rules require that a petitioner show that the Director based his action on an erroneous finding of a material fact and/or that the Director acted in an arbitrary or capricious manner, or manifestly abused his discretion. Generally, the ZBA can only consider the evidence previously presented to the Director of Planning and Permitting. The filing fee for appeals to the ZBA is \$200 (payable to the City and County of Honolulu).

Failure to comply with ZBA Rules Chapter 22, Procedure for Appeals, may result in the dismissal of the appeal. Copies of the ZBA rules are available at the Department of Planning and Permitting. Appeals should be addressed to:

Zoning Board of Appeals
c/o Department of Planning and Permitting
650 South King Street
Honolulu, Hawaii 96813

Should you have any questions, please contact Sharon Nishiura of our staff at 768-8031.

Attachment

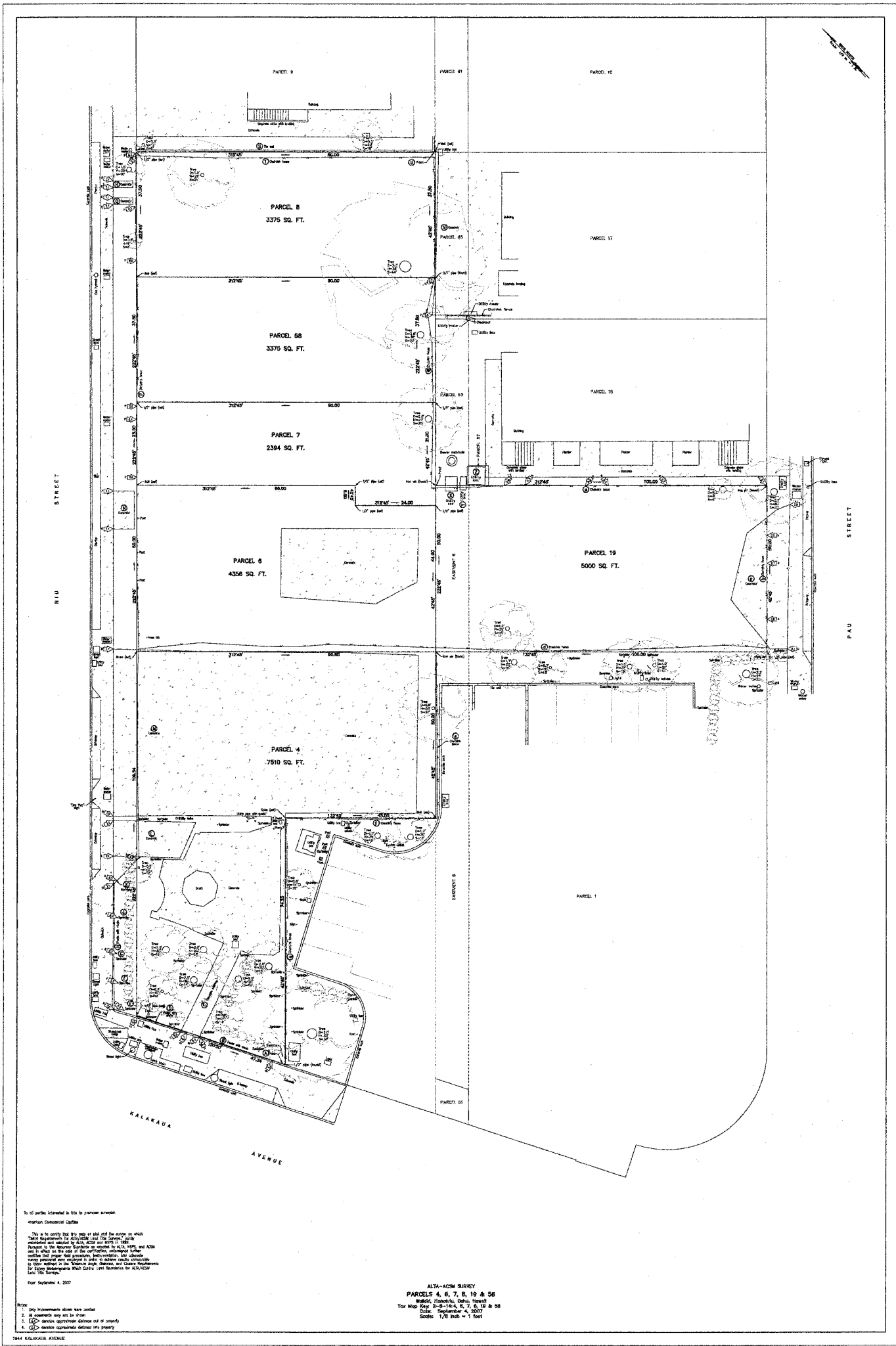
Doc. 580188

THIS COPY, WHEN SIGNED BELOW, IS NOTIFICATION OF THE ACTION TAKEN.

Anthony X. Qing Fox Director November 15, 2007
SIGNATURE TITLE DATE

The above approval does not constitute approval of any other required permits, such as building or sign permits.

Appendix B



to of parties concerned in this to previous surveys
 American Commercial Co. Inc.

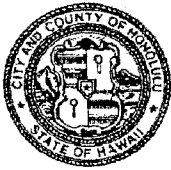
This is to certify that this map and all the maps on which
 these requirements for ALTA/ACSM and the Survey, and
 conditions are subject to ALTA and ACSM and
 Report to the American Surveyors as approved by ALTA, ACSM and ACSM
 and to offer this map as a survey for the
 include that proper field procedures, instrumentation, and standards
 were followed and employed in order to achieve results comparable
 to those achieved in the National Accuracy Demonstration and Quality Requirements
 for the Surveyors which define the Standards for ALTA/ACSM

Date: September 4, 2007

- NOTE:
1. Only measurements shown have control
 2. All measurements may not be shown
 3. (Symbol) denotes approximate distance and is unverified
 4. (Symbol) denotes approximately distance and is unverified

ALTA-ACSM SURVEY
 PARCELS 4, 5, 7, 8, 10 & 58
 WAILUKU, HONOLULU, OAHU, HAWAII
 For Map Key 2-5-14-4, 6, 7, 8, 10 & 58
 Date: September 4, 2007
 Scale: 1/8 inch = 1 foot

Appendix C



DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET * HONOLULU, HAWAII 96813
 Phone: (808) 768-8209 * Fax: (808) 523-4210

SEWER CONNECTION APPLICATION

APPLICATION NO.: **2007/SCA-0662** STATUS: **Approved with conditions**
 DATE RECEIVED: **09/25/2007** IWDP APP. NO.:
 PROJECT NAME: **1944 Kalakaua Avenue Development / Commercial
 Retail/Restaurant**

LOCATION:

Zone	Section	Plat	Parcel		
2	6	014	001	1950 KALAKAUA AVE	18,861 Sq. Ft.
2	6	014	004	1944 KALAKAUA AVE	7,510 Sq. Ft.
2	6	014	006	413 NIU ST	4,356 Sq. Ft.
2	6	014	019	420 PAU ST	5,000 Sq. Ft.

SPECIFIC LOCATION: **1944 Kalakaua Ave**

APPLICANT: **Hida, Okamoto & Associates, Inc., Glen B. Lukec**
 1440 Kapiolani Blvd. Suite 1120
 Honolulu, HI 96814

DEVELOPMENT TYPE: **Retail** SEWER CONNECTION WORK DESIRED: **Existing**

OTHER USES: **Restaurant-190 seats/day (7,000 S.F.)**

NON-RESIDENTIAL AREA: **14,300.00 s.f.**

APPROXIMATE DATE OF CONNECTION:

PROPOSED UNITS

EXISTING UNITS

UNITS TO BE DEMOLISHED

No. of New Units:

No. of Existing Units:

No. of Units to be Demolished:

- Studios:
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

- Studios:
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

- Studios:
- 1-Bedroom:
- 2-Bedroom:
- 3-Bedroom:
- 4-Bedroom:
- 5-Bedroom:
- 6-Bedroom:

REMARKS Also included are TMK:2-6-014:07, 08 & 058. Approval is conditioned that sewage flow from this project shall not exceed 6,400 gallons/day. An acknowledgment letter from owner/developer shall be required and forwarded to our office for our records.

APPROVAL DATE: **10/01/2007**

Valid 2-years after approval date. Construction plans shall be completed and approved within this 2-year period. Construction shall commence within 1-year after approval of plans.

EXPIRATION DATE: **09/30/2009**

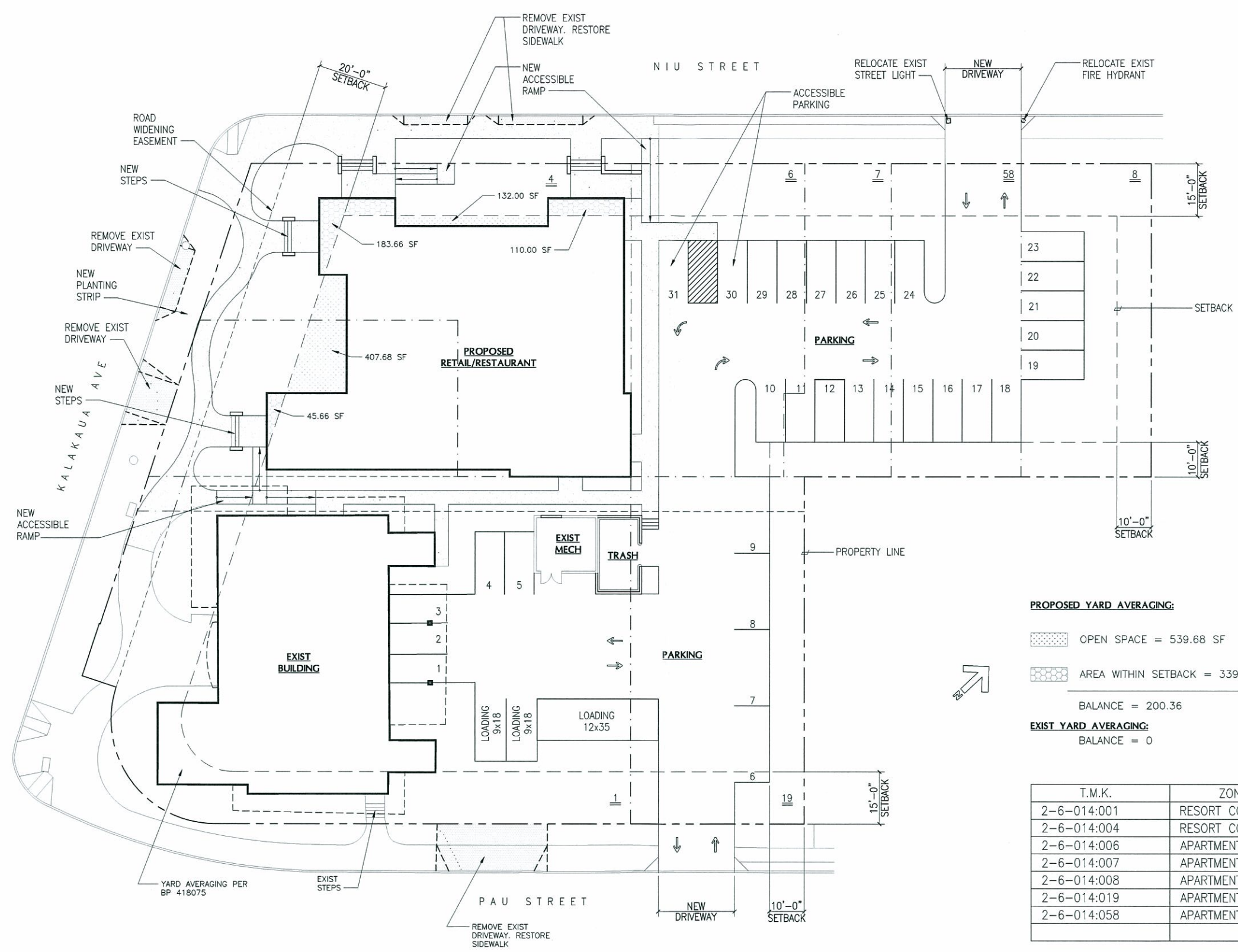
** Applicable WSFC shall be collected at the prevailing rate in accordance with ROH 1990, Chapter 14, Sections 14-10.3, 14-10.4, 14-10.5 and Appendix 14-D.*

REVIEWED BY: **Arturo Saavedra Jr.**

Site Development Division Wastewater Branch

Appendix D





PROPOSED YARD AVERAGING:

OPEN SPACE = 539.68 SF

AREA WITHIN SETBACK = 339.32 SF

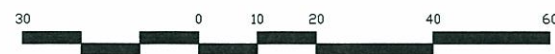
BALANCE = 200.36

EXIST YARD AVERAGING:

BALANCE = 0

T.M.K.	ZONING	LOT AREA (SF)
2-6-014:001	RESORT COMMERCIAL	18,274
2-6-014:004	RESORT COMMERCIAL	7,510
2-6-014:006	APARTMENT	4,356
2-6-014:007	APARTMENT	2,394
2-6-014:008	APARTMENT	3,375
2-6-014:019	APARTMENT	5,000
2-6-014:058	APARTMENT	3,375
TOTAL=		44,284

A1 SITE PLAN
SCALE: 1/16"=1'-0"

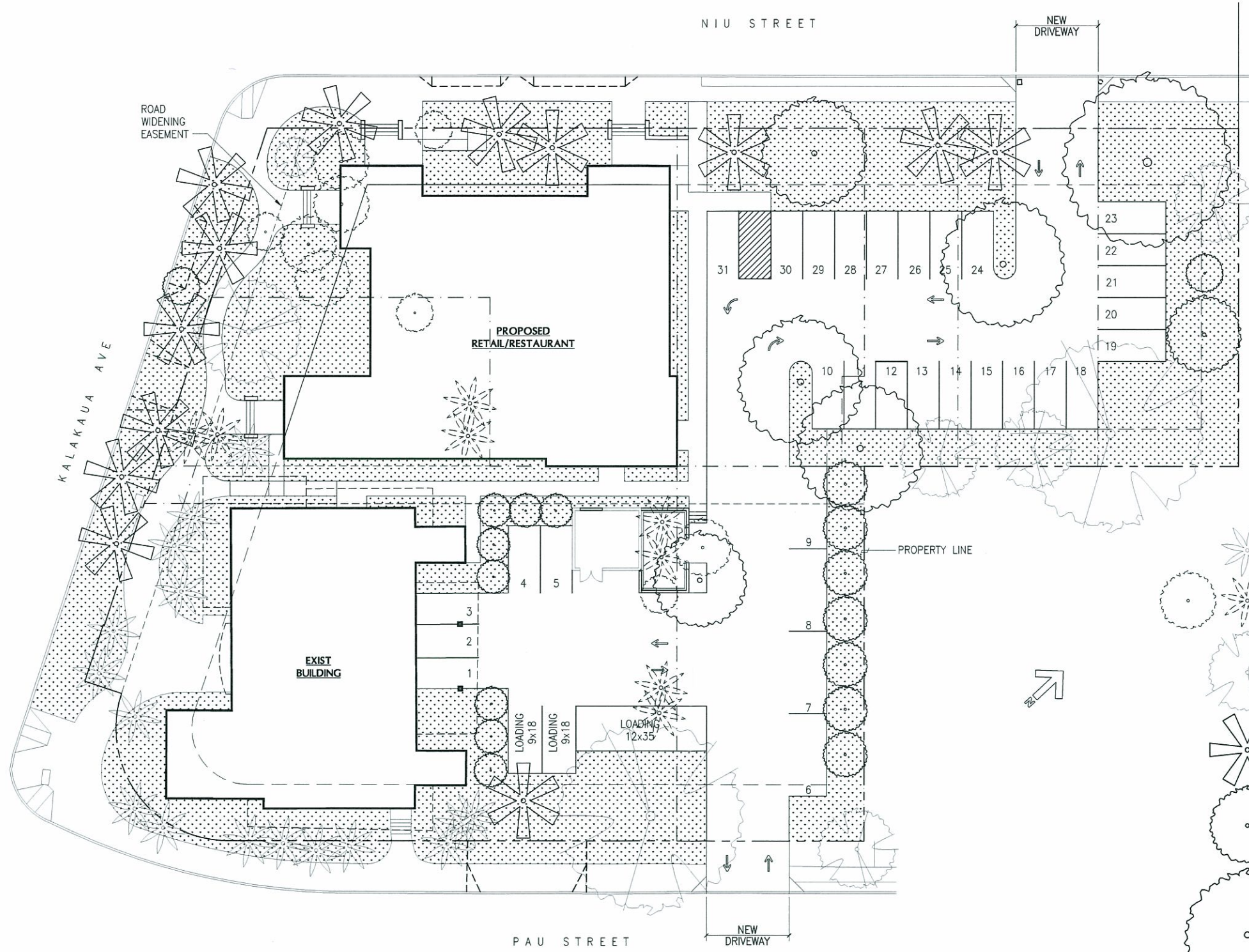


PROJECT NAME: **1944 Kalakaua**
 ADDRESS: **1944 Kalakaua Ave**
 Honolulu, HI
 T.M.K. **VARIOUS**
 LOT AREA: **44,284 SF**
 ZONING: **VARIOUS**







SITE PLAN

This work was prepared by me or under my direct supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. I am duly Licensed in the State of Hawaii as a Professional Engineer in the disciplines of Architecture, Surveying, and Landscape Architecture.

DESIGNED BY:	JHP
DRAWN BY:	AGD
DATE:	JANUARY 21, 2008
SHEET NO.:	SK-1



LEGEND:

-  EXIST PALM TREES
-  EXIST TREE TO BE REMOVED
-  EXIST CANOPY TREE
-  NEW PALM TREE
-  NEW CANOPY TREE (SMALL)
-  NEW CANOPY TREE (LARGE)

A1 PLANTING PLAN
SCALE: 1/16"=1'-0"

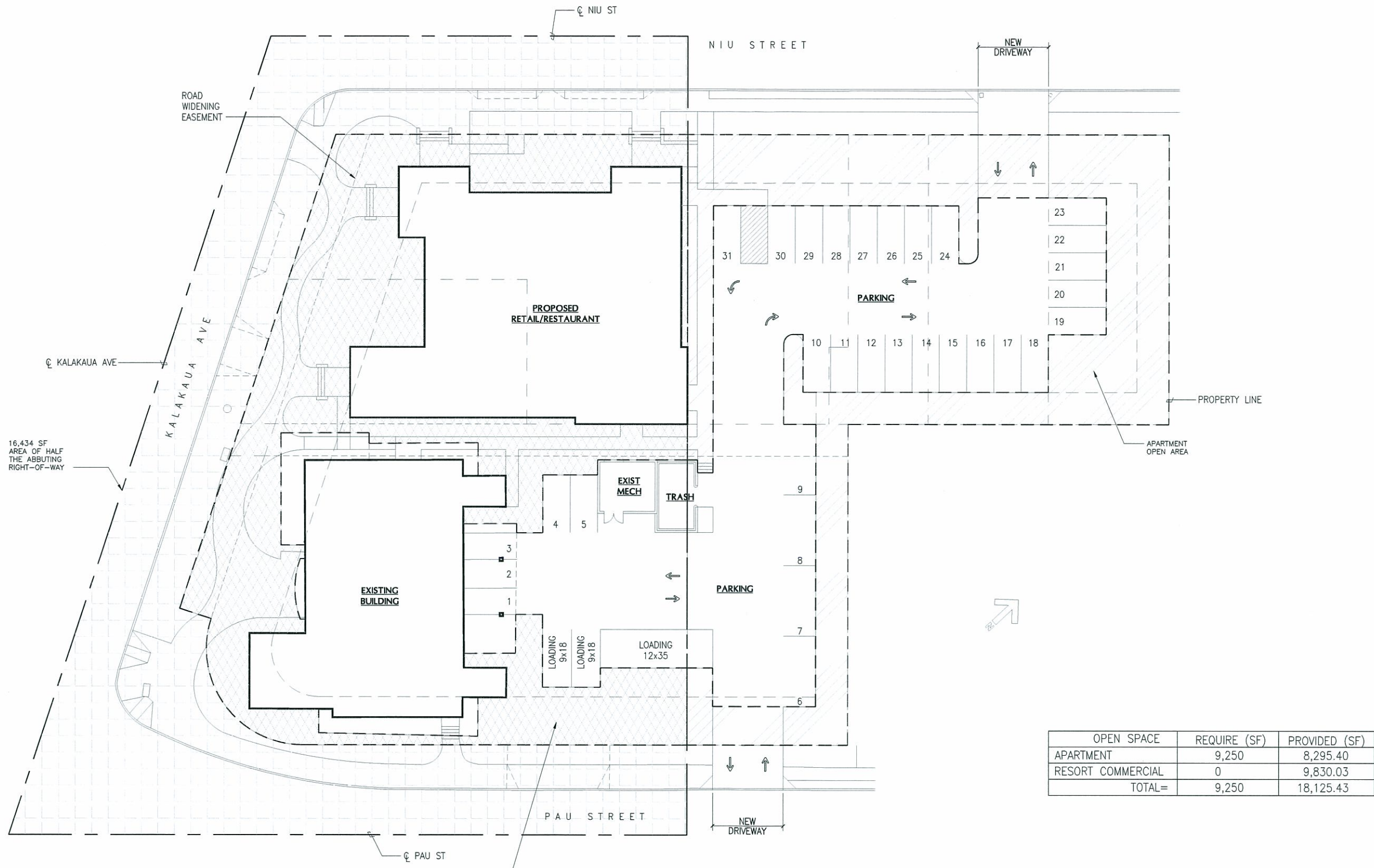


PROJECT NAME: **1944 Kalakaua**
 ADDRESS: **1944 Kalakaua Ave**
 Honolulu, HI
 T.M.K.: **VARIOUS**
 LOT AREA: **44,284 SF**
 ZONING: **VARIOUS**

PLANTING PLAN

This work was prepared by me or under my direct supervision and I am a duly licensed professional engineer in the State of Hawaii. I am a member of the Hawaii State Board of Professional Engineers, Architects, Surveyors, and Landscape Architects.

DESIGNED BY:	JHP
DRAWN BY:	AGD
DATE:	JANUARY 21, 2008
SHEET NO.:	SK-2



16,434 SF
AREA OF HALF
THE ABBUTTING
RIGHT-OF-WAY

OPEN SPACE	REQUIRE (SF)	PROVIDED (SF)
APARTMENT	9,250	8,295.40
RESORT COMMERCIAL	0	9,830.03
TOTAL=	9,250	18,125.43

A1 OPEN SPACE
SCALE: 1/16"=1'-0"

PROJECT NAME: **1944 Kalakaua**
 ADDRESS: **1944 Kalakaua Ave**
 Honolulu, HI
 T.M.K. **VARIOUS**
 LOT AREA: **44,284 SF**
 ZONING: **VARIOUS**

OPEN SPACE

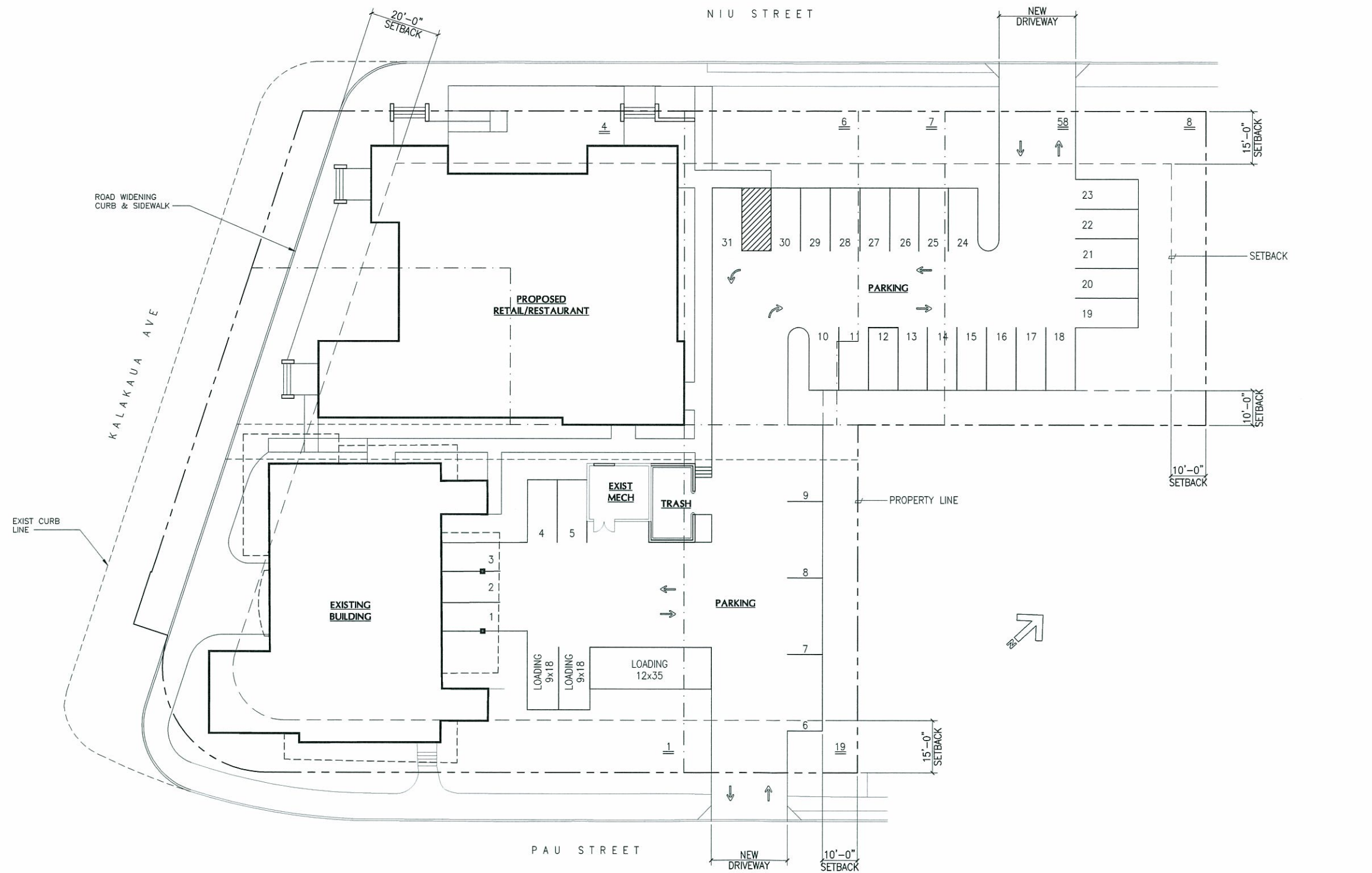
This work was prepared by me or under my supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. I am duly Licensed in the State of Hawaii as a Professional Engineer in the disciplines of Mechanical, Electrical, and Landscape Architecture.

DATE	REVISION

DESIGNED BY:
JHP
 DRAWN BY:
AGD
 DATE:
JANUARY 21, 2008

SHEET NO:

SK-3



A1 SITE PLAN W/ ROAD WIDENED
SCALE: 1/16"=1'-0"



PROJECT NAME: **1944 Kalakaua**
 ADDRESS: **1944 Kalakaua Ave**
 Honolulu, HI
 T.M.K.: **VARIOUS**
 LOT AREA: **44,871 SF**
 ZONING: **VARIOUS**

SITE PLAN

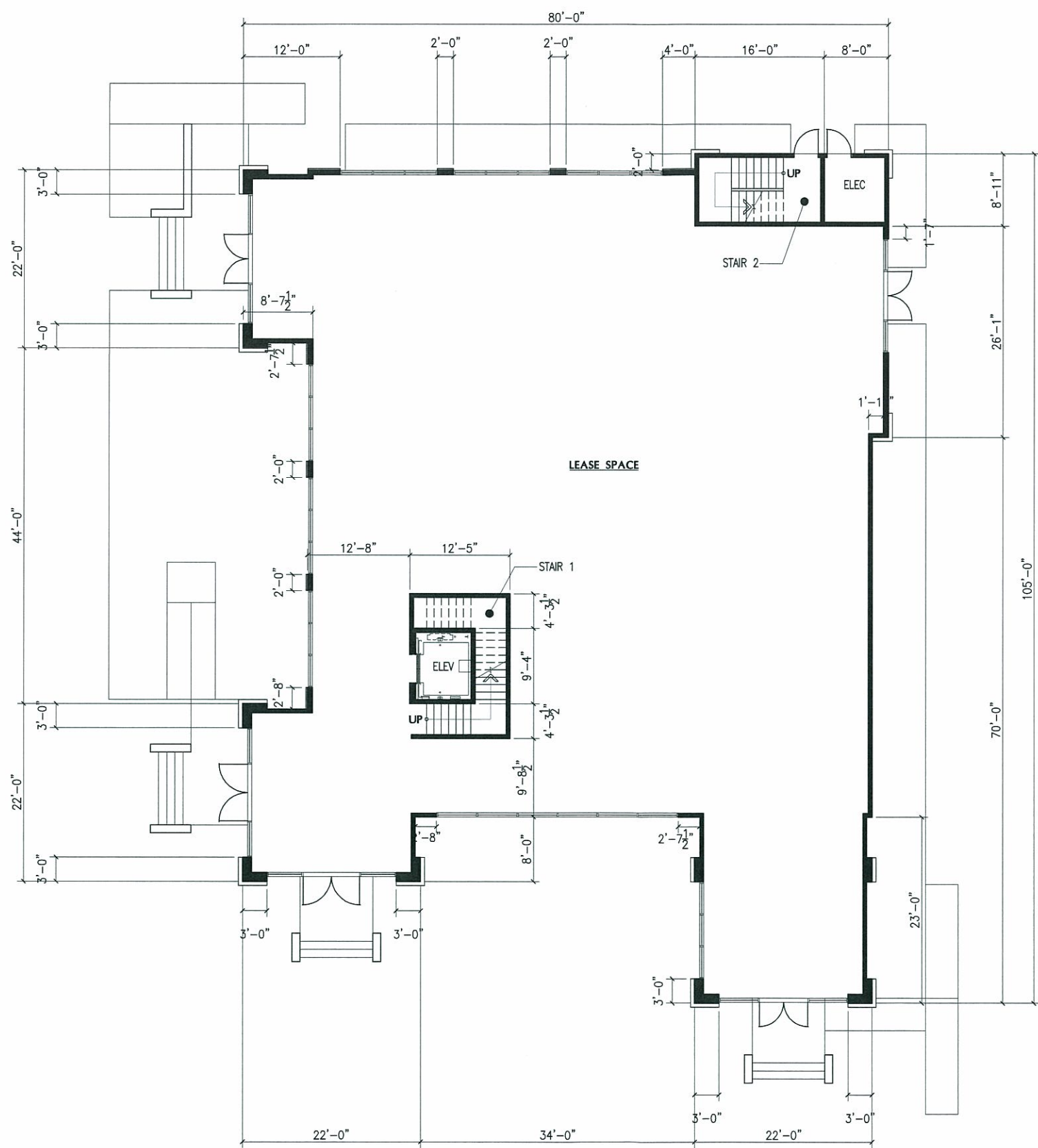
This work was prepared by me or under my supervision and I am a duly Licensed Professional Engineer, Professional Architect, Professional Surveyor, and Landscape Architect.

DESIGNED BY:
JHP

DRAWN BY:
AGD

DATE:
JANUARY 21, 2008

SHEET NO:
SK-4



A1 GROUND FLOOR PLAN
SCALE: 1/8"=1'-0"

This work was prepared by me or under my supervision and I am a duly licensed Professional Engineer in the State of Hawaii. I am not providing any warranty, express or implied, for this work. I am not responsible for any errors or omissions in this work. I am not responsible for any consequences resulting from the use of this work. I am not responsible for any damages, personal injury, or property damage, which may result from the use of this work.

REVISION	DATE

DESIGNED BY:
JHP

DRAWN BY:
AGD

DATE:
JANUARY 21, 2008

SHEET NO:

SK-5

GROUND FLOOR PLAN

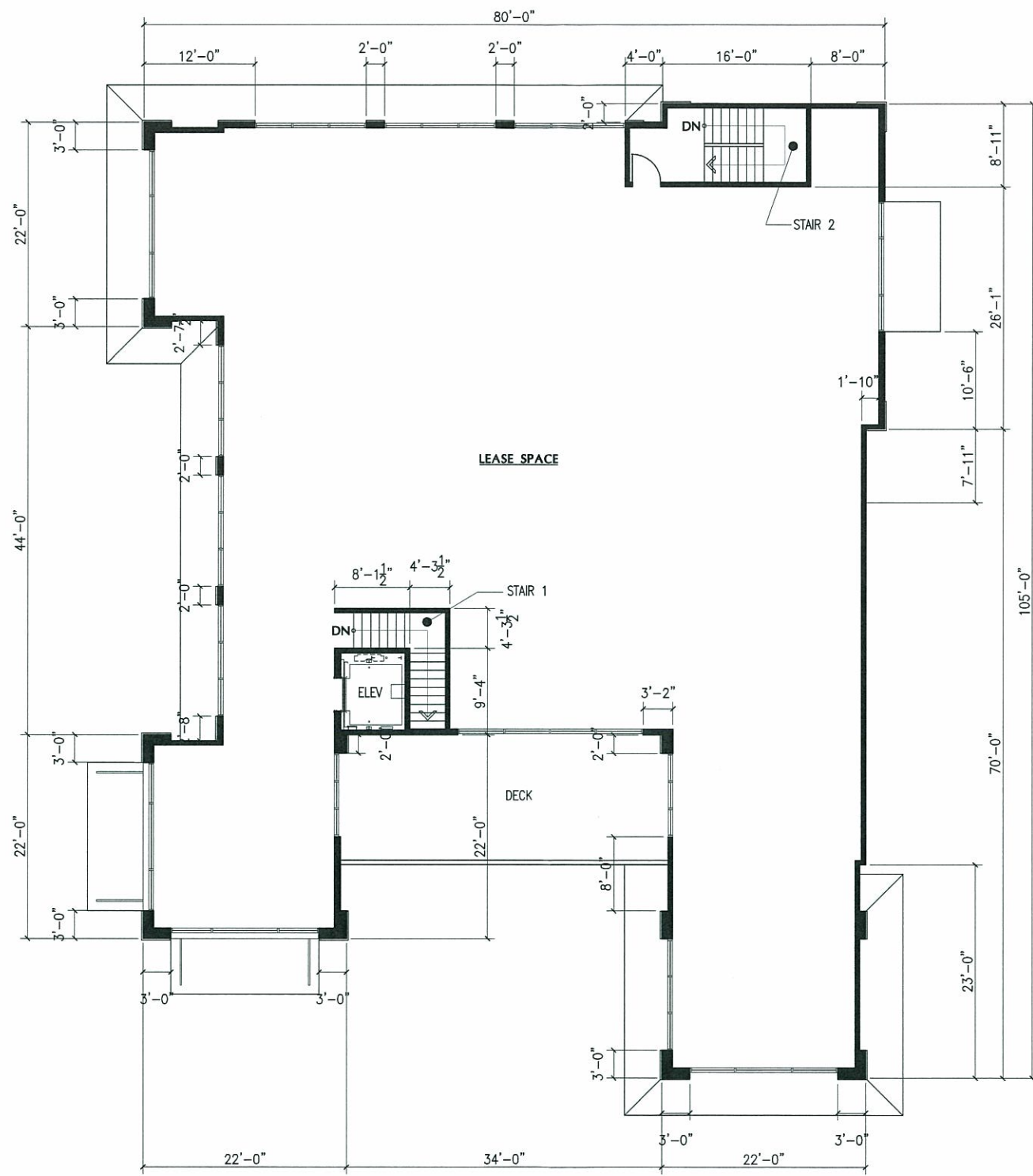
PROJECT NAME: **1944 Kalakaua**

ADDRESS: **1944 Kalakaua Ave
Honolulu, HI**

T.M.K.: **VARIOUS**

LOT AREA: **44,871 SF**

ZONING: **VARIOUS**



A2 SECOND FLOOR PLAN
SCALE: 1/8"=1'-0"

This work was prepared by me or under my supervision and I am a duly Licensed Professional Architect in the State of Hawaii. I am not providing any professional services in any other state or jurisdiction. I am not providing any professional services in any other state or jurisdiction.

Signature

DATE:

REVISION:

DESIGNED BY:
JHP

DRAWN BY:
AGD

DATE:
JANUARY 21, 2008

SHEET NO:

SK-6

PROJECT NAME: **1944 Kalakaua**

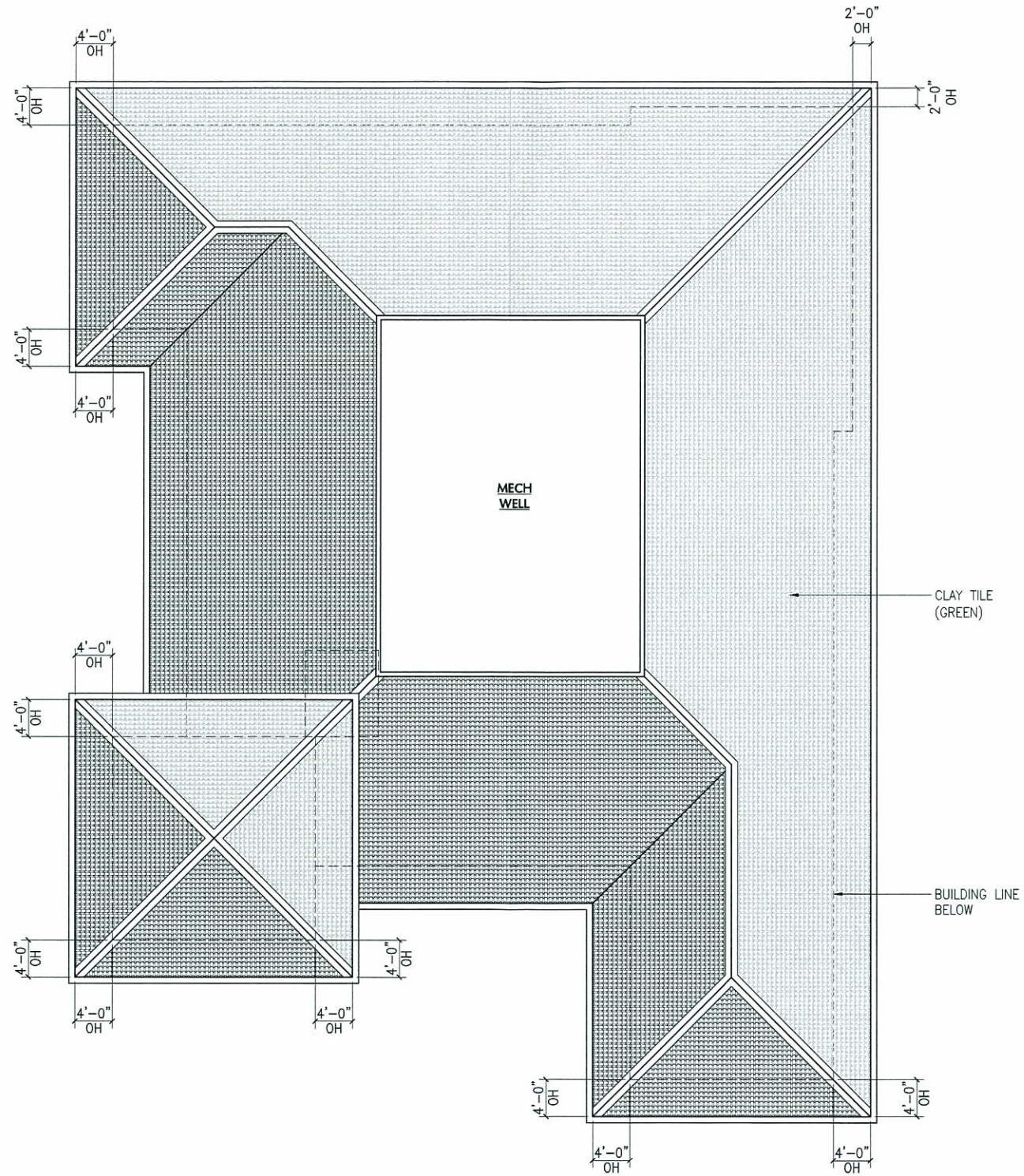
ADDRESS: **1944 Kalakaua Ave
Honolulu, HI**

T.M.K. **VARIOUS**

LOT AREA: **44,871 SF**

ZONING: **VARIOUS**

SECOND FLOOR PLAN



A2 ROOF PLAN
SCALE: 1/8"=1'-0"

PROJECT NAME: **1944 Kalakaua**

ADDRESS: **1944 Kalakaua Ave
Honolulu, HI**

T.M.K.: **VARIOUS**

LOT AREA: **44,871 SF**

ZONING: **VARIOUS**

ROOF PLAN

This work was prepared by me or under my supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. I am duly Licensed in Chapter 16-115 of the Hawaii State Constitution. I am duly Licensed in the Administrative Rules "Professional Engineers", "Architects, Surveyors, and Landscape Architects".

Signature

REVISION:	DATE:
△	
△	
△	
△	
△	

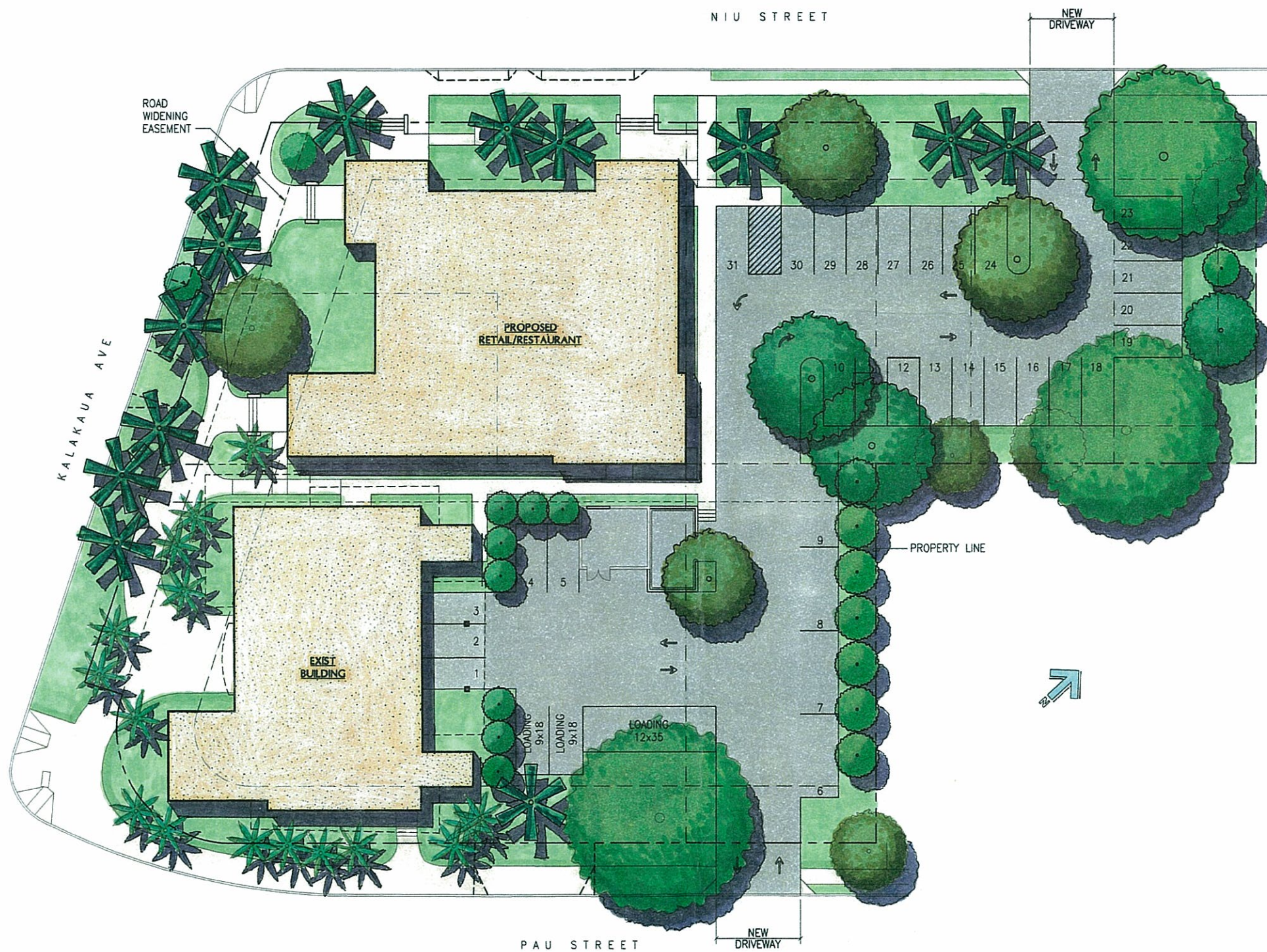
DESIGNED BY:
JHP

DRAWN BY:
AGD

DATE:
JABUARY 21, 2008

SHEET NO:

SK-7



A1 SITE RENDERING
SCALE: 1/16"=1'-0"



This work was prepared by me and I warrant its accuracy and I will be under my obligation to correct any errors. I am not a professional engineer, architect, or landscape architect. I am a draftsman and I am not licensed as such. I am not responsible for any errors or omissions in this work. I am not a professional engineer, architect, or landscape architect. I am a draftsman and I am not licensed as such. I am not responsible for any errors or omissions in this work.

DESIGNED BY:
JHP
DRAWN BY:
AGD
DATE:
JANUARY 21, 2008

SHEET NO:

PROJECT NAME: **1944 Kalakaua**
ADDRESS: **1944 Kalakaua Ave**
Honolulu, HI
T.M.K.: **VARIOUS**
LOT AREA: **44,871 SF**
ZONING: **VARIOUS**

SITE RENDERING

SK-8

SK-8



A1 FRONT ELEVATION
SCALE: 1/8"=1'-0"

FRONT ELEVATION

This work was prepared by me or under my supervision and I am a duly Licensed Professional Architect in the State of Hawaii. I am not providing any professional services in any other state or jurisdiction. I am not providing any professional services in any other state or jurisdiction. I am not providing any professional services in any other state or jurisdiction.

Signature

DATE:

REVISION:

DESIGNED BY:
JHP

DRAWN BY:
AGD

DATE:
JANUARY 21, 2008

SHEET NO:

SK-9

PROJECT NAME: **1944 Kalakaua**
ADDRESS: **1944 Kalakaua Ave**
Honolulu, HI
T.M.K.: **VARIOUS**
LOT AREA: **44,871 SF**
ZONING: **VARIOUS**



A1 SIDE ELEVATION
SCALE: 1/8"=1'-0"



PROJECT NAME: **1944 Kalakaua**
 ADDRESS: **1944 Kalakaua Ave
 Honolulu, HI**
 T.M.K.: **VARIOUS**
 LOT AREA: **44,871 SF**
 ZONING: **VARIOUS**

SIDE ELEVATION

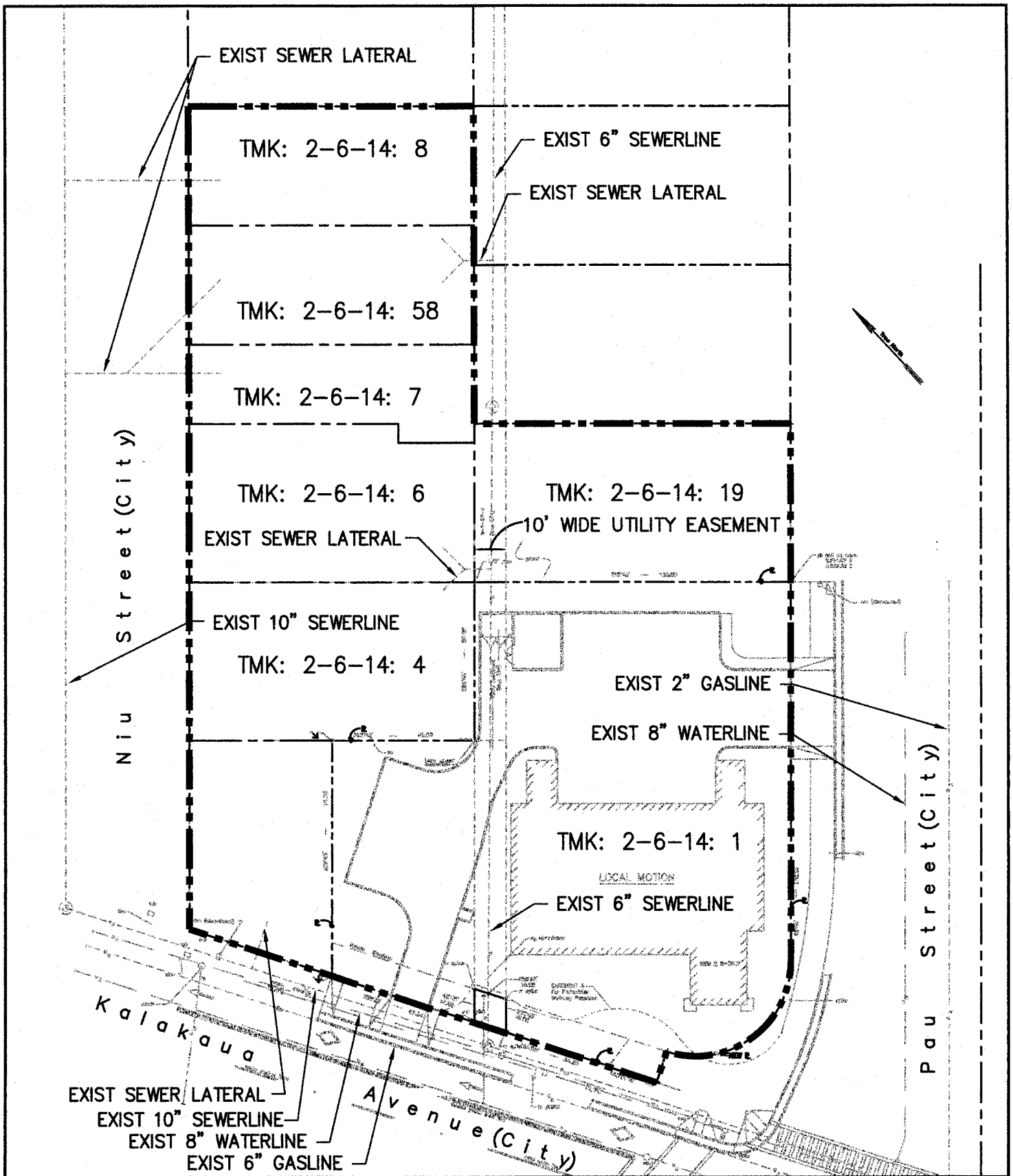
This work was prepared by me or under my supervision and I am a duly Licensed Professional Engineer in the State of Hawaii. I am duly Licensed in the State of Hawaii under License No. 16-115. I am duly Licensed in the State of Hawaii under License No. 16-115. I am duly Licensed in the State of Hawaii under License No. 16-115. I am duly Licensed in the State of Hawaii under License No. 16-115.

REVISION	DATE

DESIGNED BY:
JHP
 DRAWN BY:
AGD
 DATE:
JABUARY 21, 2008

SHEET NO:
SK-10

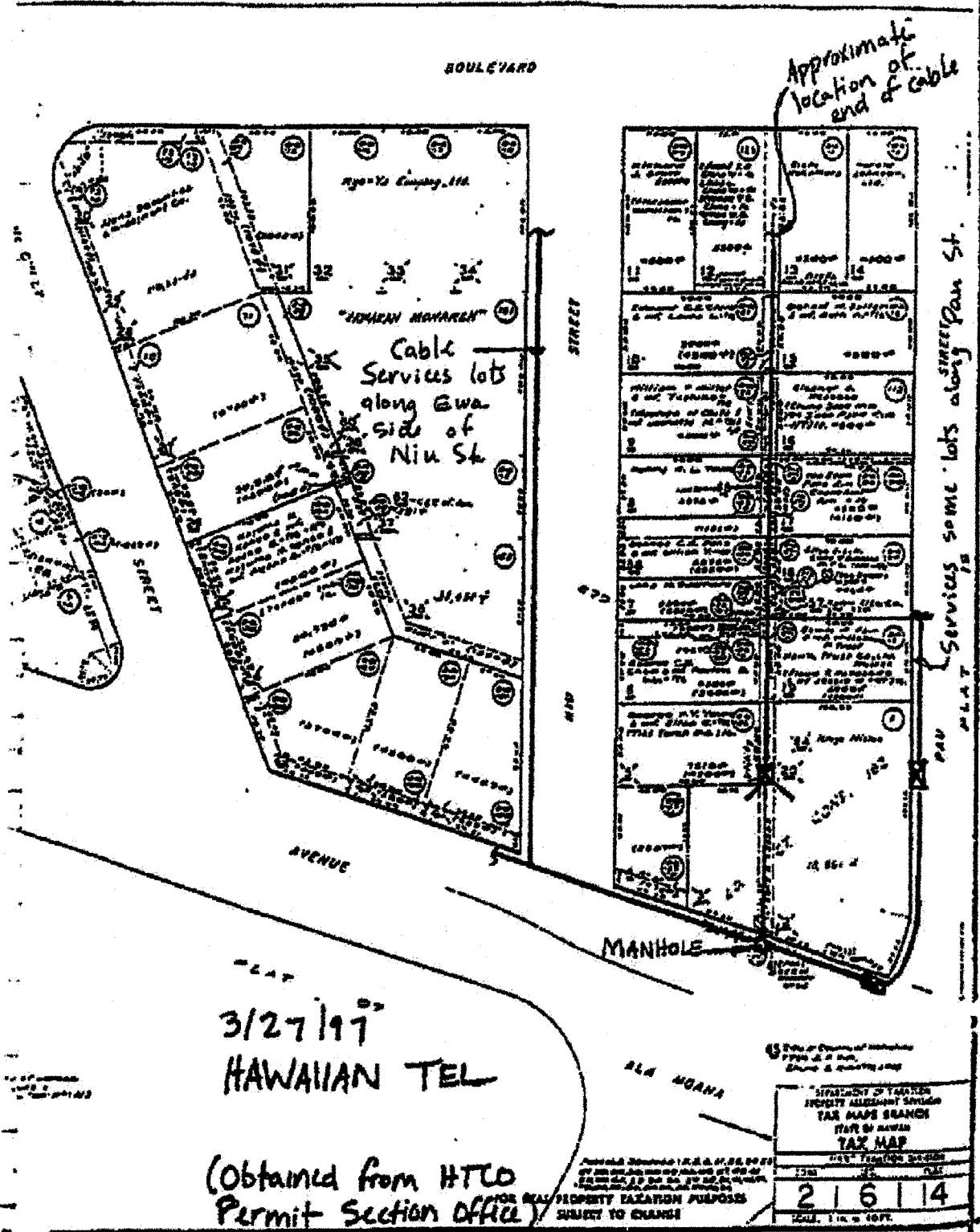
Appendix E



<p>Hida, Okamoto & Associates, Inc. Consulting Engineers 1440 Kapiolani Boulevard Suite 1120 (808) 942-0066</p>	<p>1944 Kalakaua Ave.</p> <p>DESCRIPTION EXISTING UTILITY PLAN</p>	<p>REFERENCE SHEET -</p> <p>DATE 12/4/07</p>	<p>HOA JOB NO: 2178</p> <p>SKC-1</p> <p>-OF-</p>
---	--	--	---

DOCUMENT CAPTURED AS RECEIVED

SECTION 7



Hida, Okamoto & Associates, Inc.
 Consulting Engineers
 1440 Kapiolani Boulevard
 Suite 1120
 (808) 942-0066

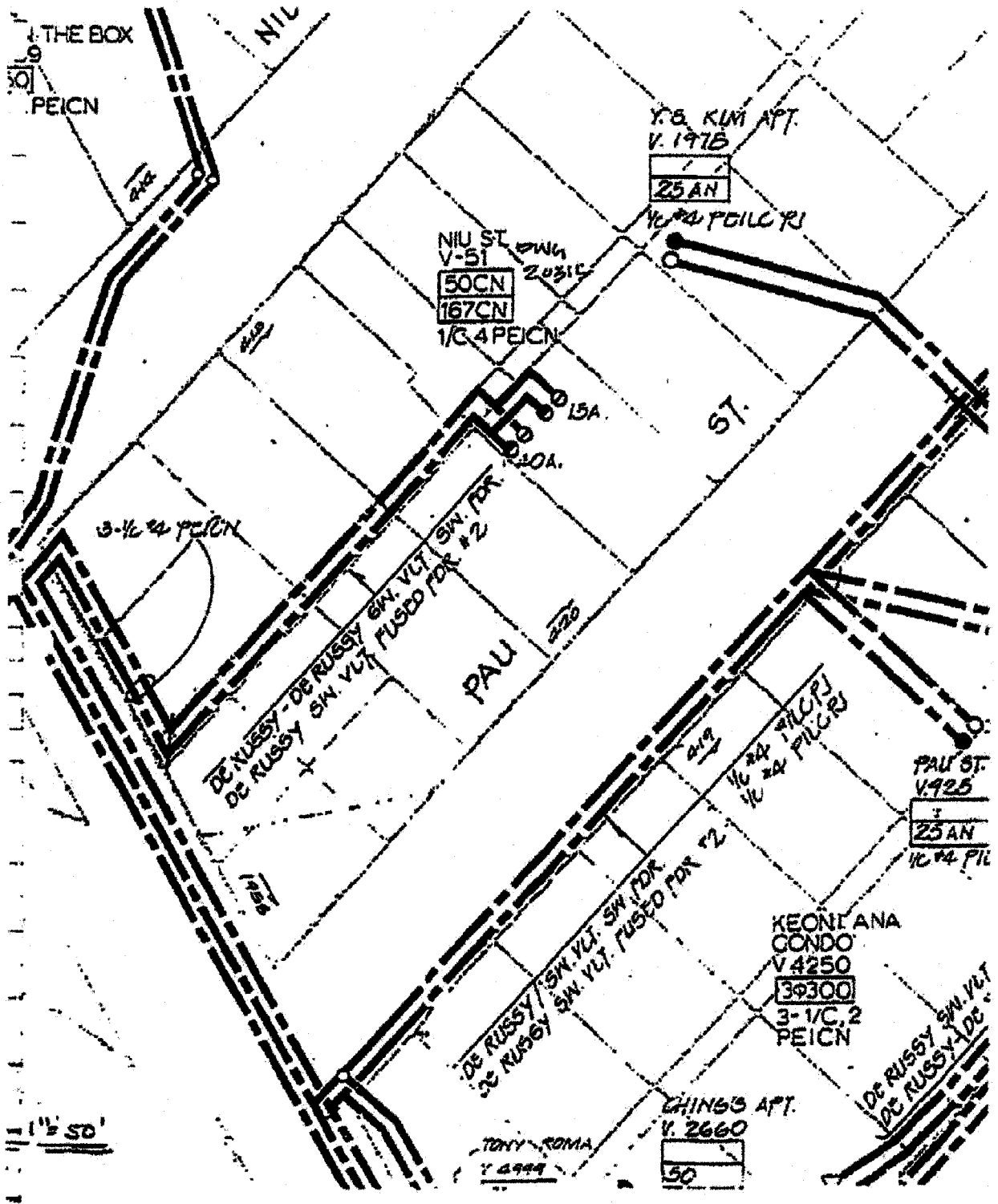
1944 Kalakaua Ave.

DESCRIPTION:
 EXISTING HTEL PLAN

REFERENCE SHEET:
 -
 DATE:
 12/4/07

HOA JOB NO: 2078
SKC-2
 -OF-

DOCUMENT CAPTURED AS RECEIVED



Hida, Okamoto & Associates, Inc.
 Consulting Engineers
 1440 Kapiolani Boulevard
 Suite 1120
 (808) 942-0066

1944 Kalakaua Ave.

DESCRIPTION
 EXISTING HECO PLAN 1

REFERENCE SHEET:

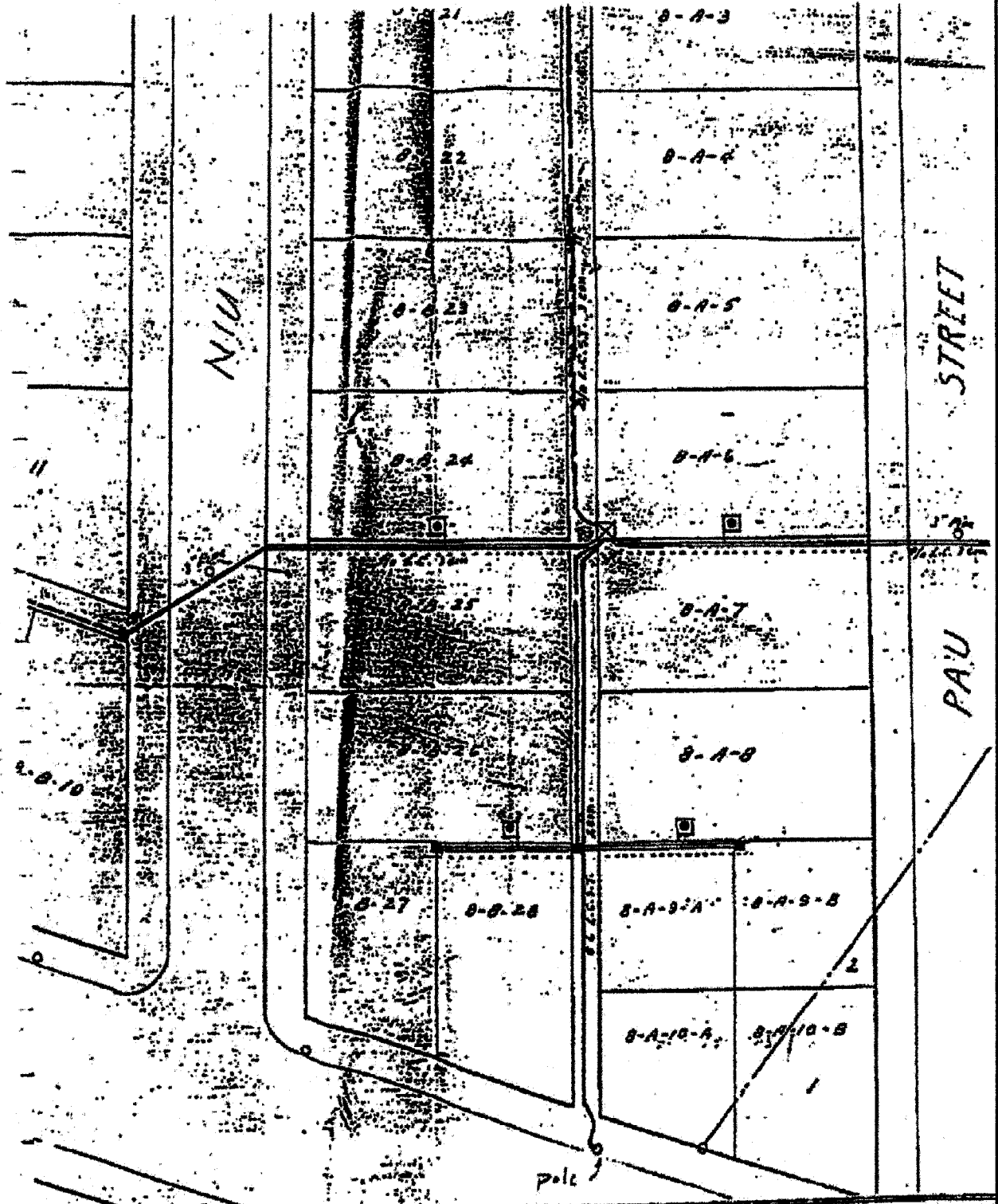
DATE
 12/4/07

HOA JOB NO.: 2178

SKC-3

-OF-

DOCUMENT CAPTURED AS RECEIVED



Hida, Okamoto & Associates, Inc.
Consulting Engineers
1440 Kapiolani Boulevard
Suite 1120
(808) 942-0066

1944 Kalakaua Ave.

DESCRIPTION
EXISTING HECO PLAN 2

REFERENCE SHEET:

-

DATE
12/4/07

HOA JOB NO: 2178

SKC-4

-OF-

Appendix F

INTERIM REPORT

**Cultural Impact Assessment for the 1944 Kalākaua
Avenue**

Project, Waikīkī Ahupua‘a, Kona District, O‘ahu

TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058

**Prepared for
Patrick Sequirant**

**Prepared by
Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.
Kailua, Hawai‘i
(Job Code: WAIKIKI 16)**

January 2008

O‘ahu Office
P.O. Box 1114
Kailua, Hawai‘i 96734
Ph.: (808) 262-9972
Fax: (808) 262-4950

www.culturalsurveys.com

Maui Office
16 S. Market Street, Suite 2N
Wailuku, Hawai‘i 96793
Ph: (808) 242-9882
Fax: (808) 244-1994

Management Summary

Reference	Cultural Impact Assessment for the 1944 Kalākaua Avenue Project, Waikīkī Ahupua'a, Kona District, O'ahu, TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058 (Hammatt 2007)
Date	January 2008
Project Number (s)	Cultural Surveys Hawai'i job code: WAIKIKI 16
Project Location	The project area is located approximately 80 m (262 ft) southwest of the Ala Wai Canal, and is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast and Niu Street to the northwest. It is depicted on the 1998 U.S. Geological Survey (USGS) 7.5 Minute Series topographic map, Honolulu Quadrangle.
Land Jurisdiction	Private, Nihonkai and 1958 Kalakaua LLC
Agencies	State of Hawai'i Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD); State of Hawai'i Department of Health / Office of Environmental Quality Control (DOH / OEQC)
Project Description	The proposed project involves the construction of a new commercial building along Kalākaua Avenue. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.
Project Acreage	Approximately 1 acre
Area of Potential Effect (APE) and Survey Acreage	For the current cultural impact assessment, the project's Area of Potential Effect (APE) is the same as the project area, i.e., the approximately 1-acre footprint of the proposed 1944 Kalākaua Avenue project. While this investigation focused on the project APE, the study area included the entire <i>ahupua'a</i> of Waikīkī.
Document Purpose	At the request of Patrick Squirant, CSH undertook this <i>preliminary</i> cultural impact assessment. 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. Through document research and cultural consultation efforts this document provides information pertinent to the assessment of the proposed project's impacts to cultural practices (per the OEQC's Guidelines for Assessing Cultural Impacts). 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-42 and Hawai'i Administrative Rules Chapter 13-284. <i>This interim report presents incipient research conducted for the cultural impact assessment and, in and of itself, does not satisfy Chapter 343 requirements regarding the proposed project's impact on cultural practices and resources.</i>

Consultation Effort	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 (SHPD), the Office of Hawaiian Affairs (OHA), and the O'ahu Island Burial Council. This effort was made by letter, e-mail, telephone, and in person contact.
Cultural Impact Results	<p>As of the date of this interim cultural impact study report, 2 state agencies have provided comments regarding the proposed project; OHA and SHPD. Responses from remaining cultural organizations, agencies and community members (e.g., cultural and lineal descendants of Waikīkī and cultural practitioners) are pending. SHPD and OHA provided the following information:</p> <ul style="list-style-type: none"> • SHPD recommended that recognized cultural and lineal descendants from the Waikīkī area be contacted about the proposed project, and offered to provide a list of descendants upon request. (CSH is currently in the process of contacting descendants and will be working with SHPD to ensure that all descendants apposite to the project area have been notified). • OHA cautioned that the present project area is located in the vicinity (immediately northeast) of the previous location of a <i>loko i'a</i> (fishpond), Loko Kaipuni. OHA commented that: <p style="margin-left: 40px;">While the information in your letter indicated that the proposed project area is currently developed, there is a possibility that <i>iwi kūpuna</i> may be discovered during ground disturbance. Thus, OHA seeks assurances that if this project moves forward, should Native Hawaiian traditional, cultural, or burial sites be identified during ground disturbance, all work will immediately cease, and the appropriate agencies notified pursuant to applicable law.</p>
Cultural Impact Recommendations	Based on the preliminary findings of this assessment, Cultural Surveys Hawai'i recommends that as a precautionary measure, personnel involved in future development activities in the area should be informed of the possibility of inadvertent cultural finds, and should be made aware of the appropriate notification measures to follow. <i>Final results of the community consultation will be provided in a draft cultural impact assessment report to be completed in the next few months.</i>

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Section 1 Introduction

1.1 Project Background

At the request of Patrick Sequirant, Cultural Surveys Hawaii, Inc. (CSH) conducted an cultural impact assessment of an approximately 1-acre parcel in the *ahupua'a* of Waikīkī, Kona District, Island of O'ahu, TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058. The project area is located at 1944 Kalākaua Avenue and is approximately 80 m (262 ft) southwest of the Ala Wai Canal (Figure 1 & Figure 2). The project area is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast, and Niu Street to the northwest (Figure 3).

The approximately 1-acre parcel is privately owned by Nihonkai and 1958 Kalakaua LLC. The proposed project involves the construction of a new commercial building along Kalākaua Avenue. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.

The proposed 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 traditional cultural practices. At the request of Patrick Sequirant, CSH undertook this cultural impact assessment. Through document research and cultural consultation efforts this document provides information pertinent to the assessment of the proposed project's impacts to cultural practices (per the OEQC's Guidelines for Assessing Cultural Impacts). 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-42 and Hawai'i Administrative Rules Chapter 13-284. *This interim report presents incipient research conducted for the cultural impact assessment and, in and of itself, does not satisfy Chapter 343 requirements regarding the proposed project's impact on cultural practices and resources.*

1.2 Archaeological Assessment

An archaeological assessment (AA) including subsurface testing was conducted for the project area. The results of the archaeological study are presented in a companion report titled, "Archaeological Assessment for the 1944 Kalākaua Avenue Project, Waikīkī Ahupua'a, Kona District, O'ahu. TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058" (Tulchin and Hammatt 2007).

1.2 Scope of Work

The scope for the cultural impact assessment includes:

1. Examination of historical documents, Land Commission Awards, and historic maps 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. A review of the existing archaeological information pertaining to the sites on the property as they may allow us to reconstruct traditional land use activities and identify and describe the cultural resources, practices and beliefs associated with the parcel and identify present uses, if appropriate.
3. Interviews with persons knowledgeable about the historic and traditional practices in the project area and region.
4. Preparation of a report on items 1-3 summarizing the information gathered related to traditional practices and land use. The report will assess the impact of the proposed action on the cultural practices and features identified.

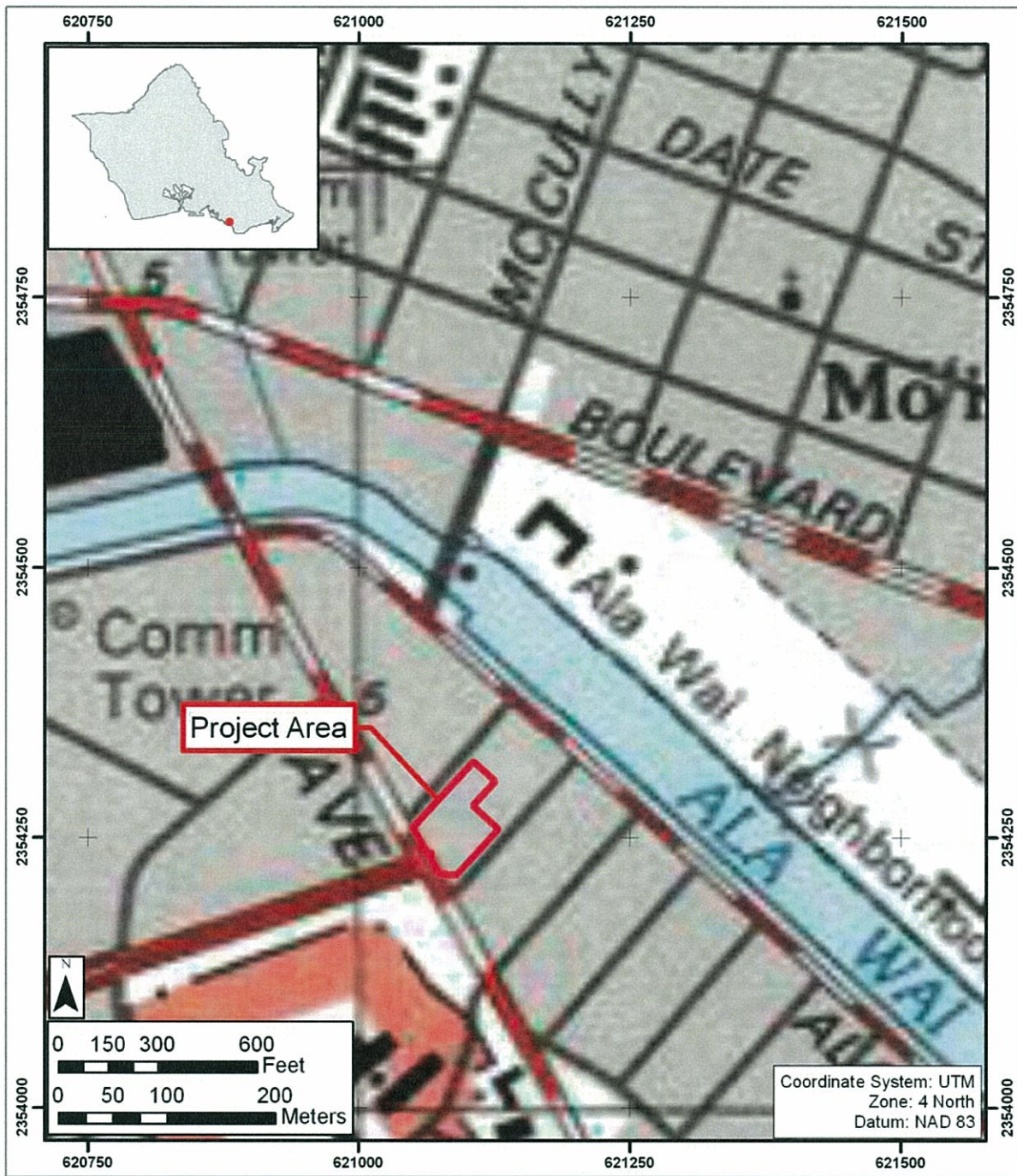


Figure 1. U.S. Geological Survey (USGS) 7.5 Minute Series Topographic Map, Honolulu (1998) Quadrangle, showing the location of the project area

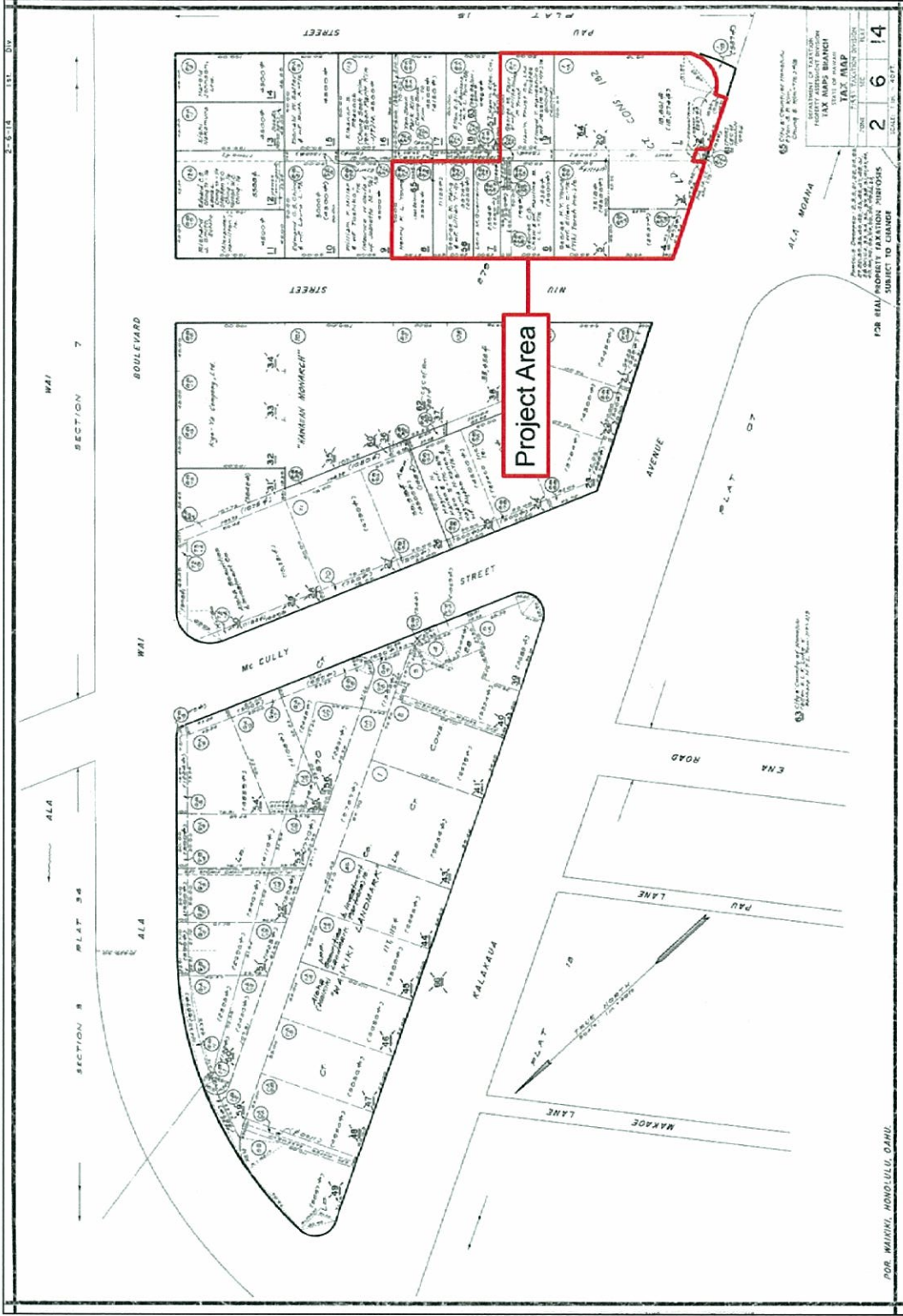


Figure 2. Tax Map Key [1] 2-6-014, showing the location of the project area

Cultural Impact Assessment for the 1944 Kalākaua Avenue Project

TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058



Figure 3. Aerial Photograph, showing the location of the project area (source: USGS Orthoimagery 2005)

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is located approximately 745 m (0.5 miles) northeast of Waikīkī Beach, near the southeastern coastline of the island of O'ahu. Lands within the project area are level with an elevation of 0.9 m (3 ft.) a.m.s.l.

According to U.S. Department of Agriculture (USDA) soil survey data (Foote et al. 1972) the sediments within the project area consist entirely of Fill land, mixed (FL) (Figure 4). Fill land, mixed is described as “areas filled with material dredged from the ocean or hauled from nearby areas, garbage, and general material from other sources...used for urban development including airports, housing areas, and industrial facilities” (Foote *et al.* 1972). The project area receives an average of 20 to 30 in. (1000 to 1500 mm) of annual rainfall (Giambelluca et al. 1986). The entire project area has been extensively disturbed and transformed by human activity leaving no naturally occurring vegetation within the subject parcel.

1.3.2 Built Environment

The project area is located within central Honolulu and is surrounded by modern urban development including high-rise condominiums, apartments and hotels, streets, sidewalks, and utility infrastructure. The project area is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast, and Niu Street to the northwest (see Figure 3 above). The southwestern half of the project area contains a two-story commercial building housing a Local Motion surf shop and associated asphalt parking areas. Additionally two concrete pads and a small wooden kiosk are located in the southwestern half of the project area utilized by the VIP Car Rental Hawaii as a staging area for car rentals. The northeastern half of the project area consists of an empty lot.

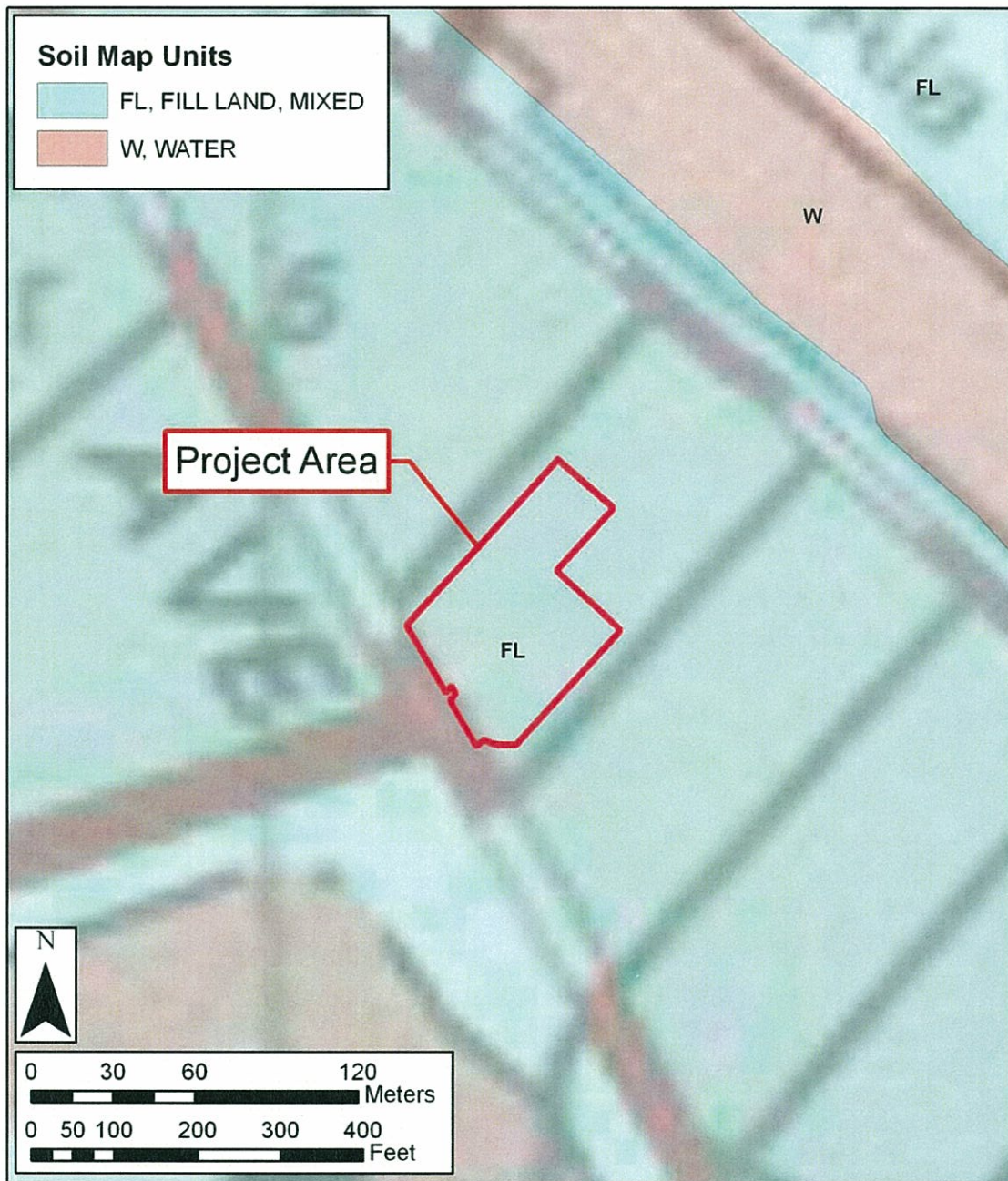


Figure 4. Overlay of Soil Survey of the State of Hawai'i (Foote et al. 1972), indicating sediment types within the project area

Section 2 Methods

Historical documents, maps and existing archaeological information pertaining to the sites in the vicinity of this project were researched at the State Historic Preservation Division library, and the Cultural Surveys Hawai'i library. Information on Land Commission Awards was accessed through Waihona Aina Corporation's Māhele Data Base (www.waihona.com). The State Historic Preservation Division, Office of Hawaiian Affairs, Island Burial Council, and members of other community organizations were contacted in order to identify potentially knowledgeable individuals with cultural expertise and/or knowledge of the study area and the surrounding vicinity. The names for potential community contacts were also provided by colleagues at CSH and from the researcher's familiarity with people who live in or around the study area. Some of the prospective community contacts were not available to be interviewed as part of this project. A discussion of the consultation process can be found in the section on "Community Consultations." Please refer to Table 2 for a complete list of individuals and organizations contacted.

Section 3 Background Research

This section will include discussions on different types of traditional practices, cultural resources and *mo'olelo* (stories) associated with Waikīkī. Excerpts from interviews and talk story sessions are incorporated throughout this section where applicable.

3.1 Mythological and Traditional Accounts of Waikīkī Ahupua'a

Waikīkī had a previous life, long before the first tourist arrived or the first hotel was built. Rekindling a love for Waikīkī's past has been the passion of author/historian Dr. George Kanaha. Traditionally, for Hawaiians, the *mo'olelo* (story) sought to do more than explain: it sought to re-enchant the mind and spirit. In his book *Waikīkī 100 B. C. to 1900 A.D. An Untold Story*, Dr. Kanaha sums up the following legends of Waikīkī reflecting the elements of water that once flourished in the lands of Waikīkī and whose rolling surf still breaks upon the shores of Waikīkī (Kanaha 1995:1).

3.1.1 Kamō'ili'ili (the pebble lizard)

Waikīkī's earliest *mo'o* (lizard, dragon, waterspirit) god was probably *Kamō'ili'ili* (literally, the pebble lizard) who was slain by Hi'iaka, Pele's sister. The legend relates that:

Hi'iaka and Wahine'ōma'o were escorting Lohi'au (Pele's lover-prince) back to Pele on the island of Hawai'i. During the return journey they left their canoe at Waikīkī and walked up toward Kamō'ili'ili. When they arrived at the particular spot (said to be where the old stone church stood in the 1920s), a heavy gust of wind blew, and Wahine'ōma'o and Lohi'au felt invisible hands pulling their ears back. They called to Hi'iaka for help. She knew that it was the lizard god, Kamō'ili'ili, who did it and told the other gods to keep closely behind her. A short distance away, they met Kamō'ili'ili who wanted to fight. Hi'iaka removed her outside skirt which concealed bolts of lightning and struck him with them. His body was cut to pieces and the pieces turned into the long, low hill across from Waikīkī's Kūhiō School. (Kanaha 1995:42)

3.1.2 The Shark God Ka'ehu

Shark stories accompany surfing stories in myth as well as in real life because the 'man-eating' shark is the most feared element in surfing. One legend that is popular even today is about the little yellow shark Ka'ehu of Pearl Harbor who was endowed with magical power by his ancestor Kamohoa'li'i, the shark god and brother of Pele.

One day Ka'ehu called his shark friends to accompany him to Puna. On the way they stopped at Waikīkī where they met Pehu, a man-eating shark from Maui, who was swimming back and forth at Kalehuawehe in wait for an unsuspecting surfer.

Ka'ehu asked what Pehu was doing there and he replied, "I'm catching a crab for my breakfast." "We'll help you catch your crab," Ka'ehu said, and told him to go

near the coral reef while he and his friends would drive them shoreward, allowing Pehu to catch this crab easily. He was pleased with the plan and swam close to the reef where he hid himself in its shadows.

Then Ka'ehu told his friends, "We must kill this man-eater because he is destroying our people. Let's try to push him into the shallow water."

Soon two surfers appeared and when Pehu lept to catch one, Ka'ehu and his friends pushed the surfer aside and hurled Pehu over the reef into a deep hole in the coral. The more he thrashed about to escape, the more trapped he became.

When the surfers saw what had happened, they were not as afraid of Pehu and moved to the hole to kill him. As they cut into his body they discovered the remains of their own people. Out of respect, they delivered them to Pele'ula (an area with many healing *heiau* located in Kou, now downtown Honolulu) and burned the remains. Ka'ehu had many more adventures that had a similar objective, the punishment of other man-eaters from the great sea. (Kanahele 1995:58-59)

3.1.3 Surfing with Kelea

Surfing was one of the principal attractions of Waikīkī to both chiefs and commoners. So important was surfing that there is a major *heiau* dedicated to the *nalu* or surf, and its riders. At the "surfing *heiau*" of Papa'ena'ena, a terraced structure built at the foot of Diamond Head, is where surfers came to offer their sacrifices in order to obtain *mana* and knowledge of the surf. The site overlooked what surfers call today "First Break," the start of the Kalehuawehe surfing course which extended to Kawewehi (the deep, dark surf) at Kālia. Although everyone, including women and children, surfed, it was the chiefs who dominated the sport, and one of the best among Waikīkī's chiefs was Kalamakua. He came from a long ancestry of champion surfers whose knowledge, skill and *mana* were handed down and passed on from generation to generation. The story of his romantic meeting with Keleanuino'ana'api'api ("Great Kelea who flutters,") has been preserved as a reminder of the role that surfing played in the history of Waikīkī (Kanahele 1995:56-58).

One day this beautiful chiefess with "clear skin and sparkling eyes," who then resided in Wahiawā (in Central O'ahu), was visiting Waikīkī with a few of her ladies-in-waiting. She entered the coconut grove and beach of Kawehewehe which was located just east of the Halekūlani Hotel. Here is where the sick came to bathe and to be healed. They would wear *limu kala* (seaweed) leis and leave them in the water as a request to the gods for forgiveness of past wrongs which was the cause of much illness.

The residents welcomed Keleanuino'ana'api'api and offered her coconuts to eat. She remarked that Waikīkī was "the most pleasant place we have seen," to which her hosts replied, "This is a place for enjoyment. Over there is the *kou* grove of Kahaloa where one may view the surfing of the chiefs and of the *ali'i nui*

Kalamakua.” Kahaloa, or “Long Place,” was also a beach area located today between the Royal Hawaiian and Halekūlani hotels and noted for its fragrant *līpoa* seaweed. When she asked if she could borrow a surfboard, the Waikīkīans were surprised because they thought people from Waihiawā were only adept at “slicing *mo'okilau* ferns and *pōpolo* stalks,” not at surfing. They did not know that their visitor was originally from Maui where she surfed with all the chiefs. She was too beautiful to refuse and someone gave her a board.

Before she entered the water, she “rubbed off the red dirt of ‘Ewa from her feet so as to look fresh,” and then paddled off like an expert, moving easily and noiselessly without the least heeling over. Instead of starting at the first break where *kama'āina* (native born) surfers congregated, she went beyond and waited for a large wave. She let the first, second and third waves pass, and rode the fourth one all the way to shore. The chiefs and commoners were so impressed with her skill and grace that they immediately joined in loud cheers of admiration.

Meanwhile, Kalamakua, who was working in his taro fields nearby asked his men who was causing the commotion. They replied that the people were amazed at the performance of a female surfer. A skilled surfer himself, Kalamakua rushed to the edge of the beach to see for himself. He recognized Kelea at once as the chiefess from Maui famed for her surfing prowess.

When she reached shore, he took hold of her board and asked, “Are you Kelea?” “Yes,” she answered. As she stood up, in naked splendor, he removed his feathered shoulder cap and wrapped it around her. Then he guided her to a *kapu* place and made her his *ali'i wahine mō'ī*, or queen. (Kanahele 1995:56-58)

3.1.4 Pre-Contact to Early 1800's

By the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, Waikīkī had long been a center of population and political power on O'ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become “the ruling seat of the chiefs of Oahu.” The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O'ahu by defeating the island's chief, Kalanikūpule. The 19th-century Hawaiian historian John Papa 'Ī'ī (1959:17), himself a member of the *ali'i* (chiefly class), described the king's Waikīkī residence:

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

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

Chiefly residences, however, were only one element of a complex of features – that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*. Water was also available from springs in nearby Mō'ili'ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver (1798:161-164), arriving at “Whyteete” in 1792, captured something of this profusion in his journals:

On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.

[Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.

This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.

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

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua'a* of Waikīkī are given by Archibald Menzies (1920:23-24), a naturalist accompanying Vancouver's expedition:

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

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change – disrupted by the same Euro-American contact which produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu - with the only sheltered harbor on O'ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood that had developed. By 1828, the missionary Levi Chamberlain (1957:26), describing a journey into Waikīkī, would note:

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

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

3.1.5 Mid-Nineteenth Century and the Māhele

The depopulation of Waikīkī, however, was not total and the *ahupua'a* continued to sustain Hawaiians living traditionally into the mid-19th century. The Organic Acts of 1845 and 1846 initiated the process of the Māhele (the division of Hawaiian lands) which introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali'i* (royalty) received their land titles. Subsequently in the Māhele, Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. Land Commission Award records document awardees

continuing to maintain fishponds and irrigated and dryland agricultural plots, though on a greatly reduced scale than had been previously possible with adequate manpower.

3.1.6 Mid to Late 1800s

As the 19th century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O‘ahu. An 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *ali‘i* – the Hawaiian royalty – and several notables had residences there. A visitor to O‘ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

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

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

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

The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.

In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai‘i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product. (Coulter and Chun, 1937: 13)

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

3.1.7 1900 to 1920

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

On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post...

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

All the fishponds were filled by 1928.

A fire insurance map of 1914 shows that there were five areas in Waikīkī where residential and commercial structures were concentrated in the early 20th century (Figure 5). These areas were located: 1) clustered at Saratoga Road and Lewers Road; 2) near the intersection of Ena Road and Kalākaua Avenue; 3) *makai* of Kālia Road on the east side of Ft. DeRussy; 4) clustered around the Moana Hotel on Kalākaua Avenue; and 5) in Kapahulu on the 'Ewa side of Makee Road (the present Kapahulu Avenue). The fire insurance map also reveals the relative isolation of Waikīkī, in the early 20th century, from the encroaching grid of modern Honolulu streets.

3.1.8 1920's to 1930's

During the 1920's, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikiki (Figure 6). The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa...

The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at

right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311]

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

The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.

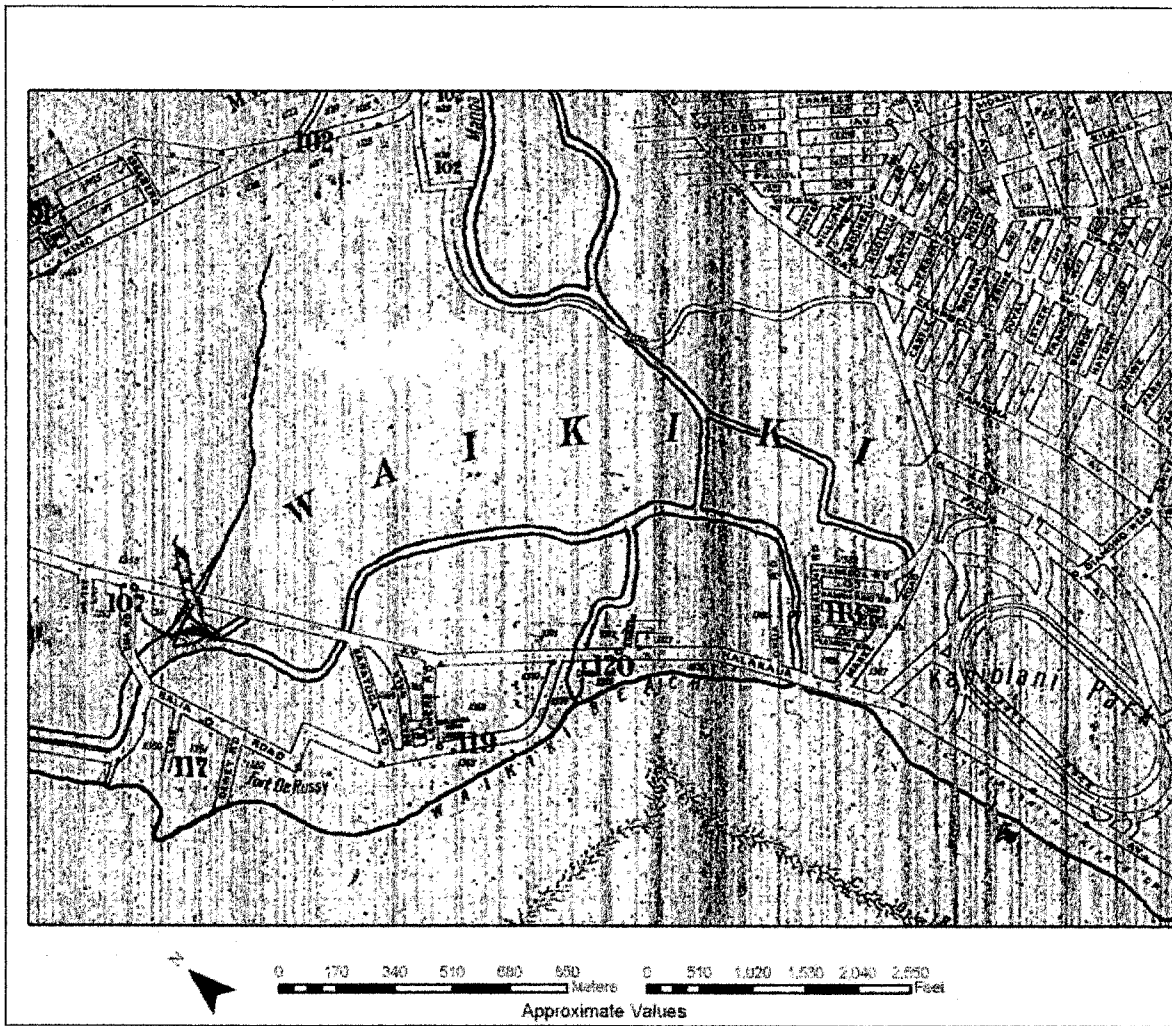


Figure 5. Portion of 1914 Sanborn Fire Insurance Map of Waikiki

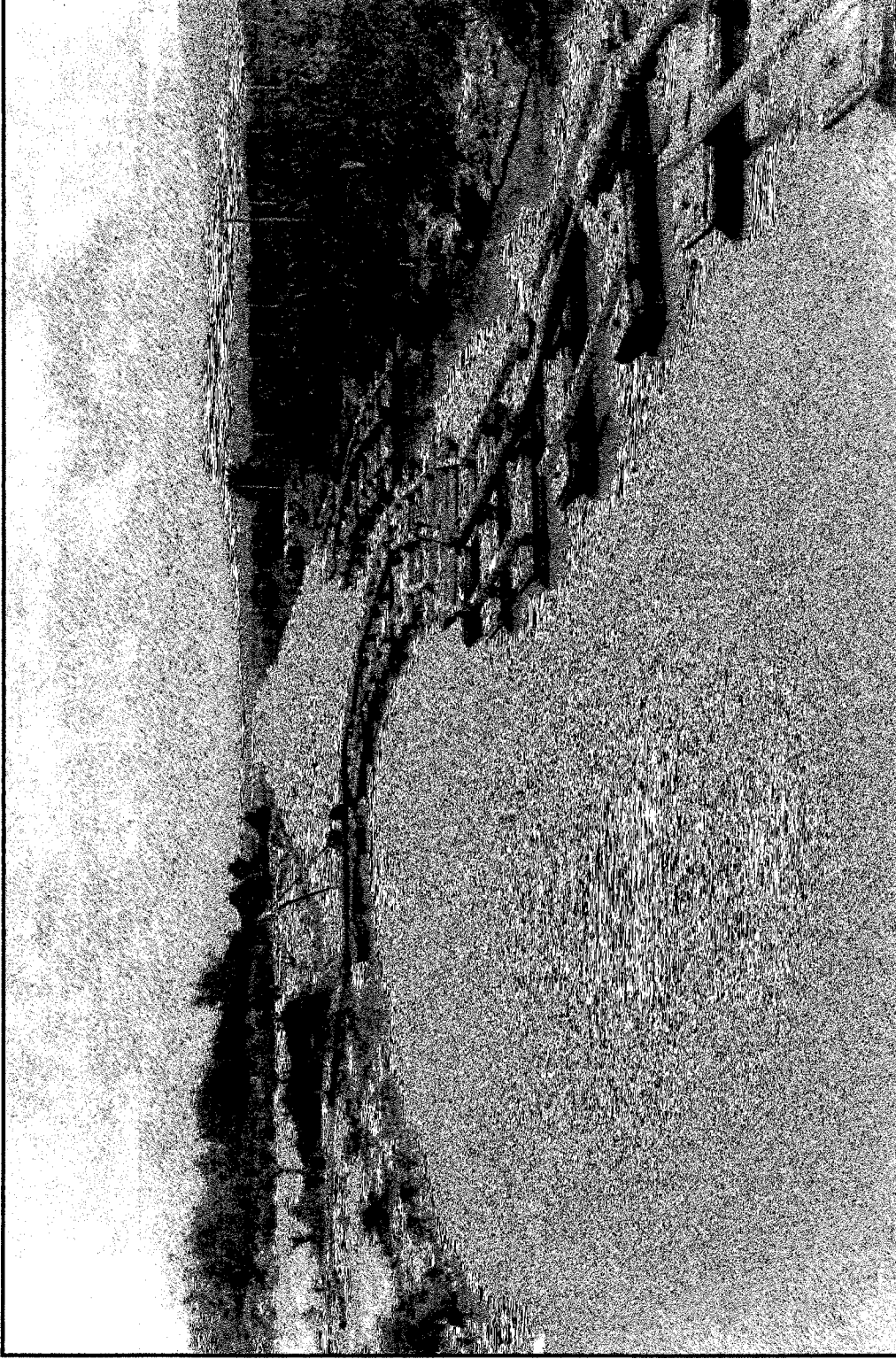


Figure 6. Floating Dredge Line in the Ala Wai Canal, circa 1924 (Bishop Museum Archives)

These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938: 10)

The writer speculated that the “future of Waikīkī is assured.”

3.1.9 1940's

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

It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]

Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the Honolulu Advertiser of July 16, 1945 decried “honky-tonks” that had sprung up in Waikīkī during the course of the war, and asked: “Can anyone look at present-day Kalākaua Ave. – lined with makeshift curio shops, noisy ‘recreation’ centers, eyesores that pass under the name of lunchrooms and miscellany of ‘joints’ – and hope that Waikīkī can stage a comeback [as a tourist destination]?”

3.1.10 1950's

By the mid-1950's there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi'olani Park. The Waikīkī population, by the mid-1950's, was not limited to transient tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

3.2 Historic Documentation of the Project Area

The present project area is located on the *mauka* fringe of a portion of Waikīkī that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds that extended between the present Saratoga Road and the grounds of Fort DeRussy to present Atkinson Drive and Ala Moana Shopping Center. An 1881 Hawaiian Government survey map by S.E. Bishop provides a detailed record of the physical landscape of Waikīkī before the transformations of the 20th century. Drawn before the extensive drainage and landfilling of the Waikīkī landscape, accomplished by the construction of the Ala Wai Canal in the 1920s, the 1881 map likely represents the project area as it had appeared in traditional Hawaiian times: a marsh environment surrounded by fishpond ponds and wetland fields (Figure 7). When the map was copied in 1922, additional material from

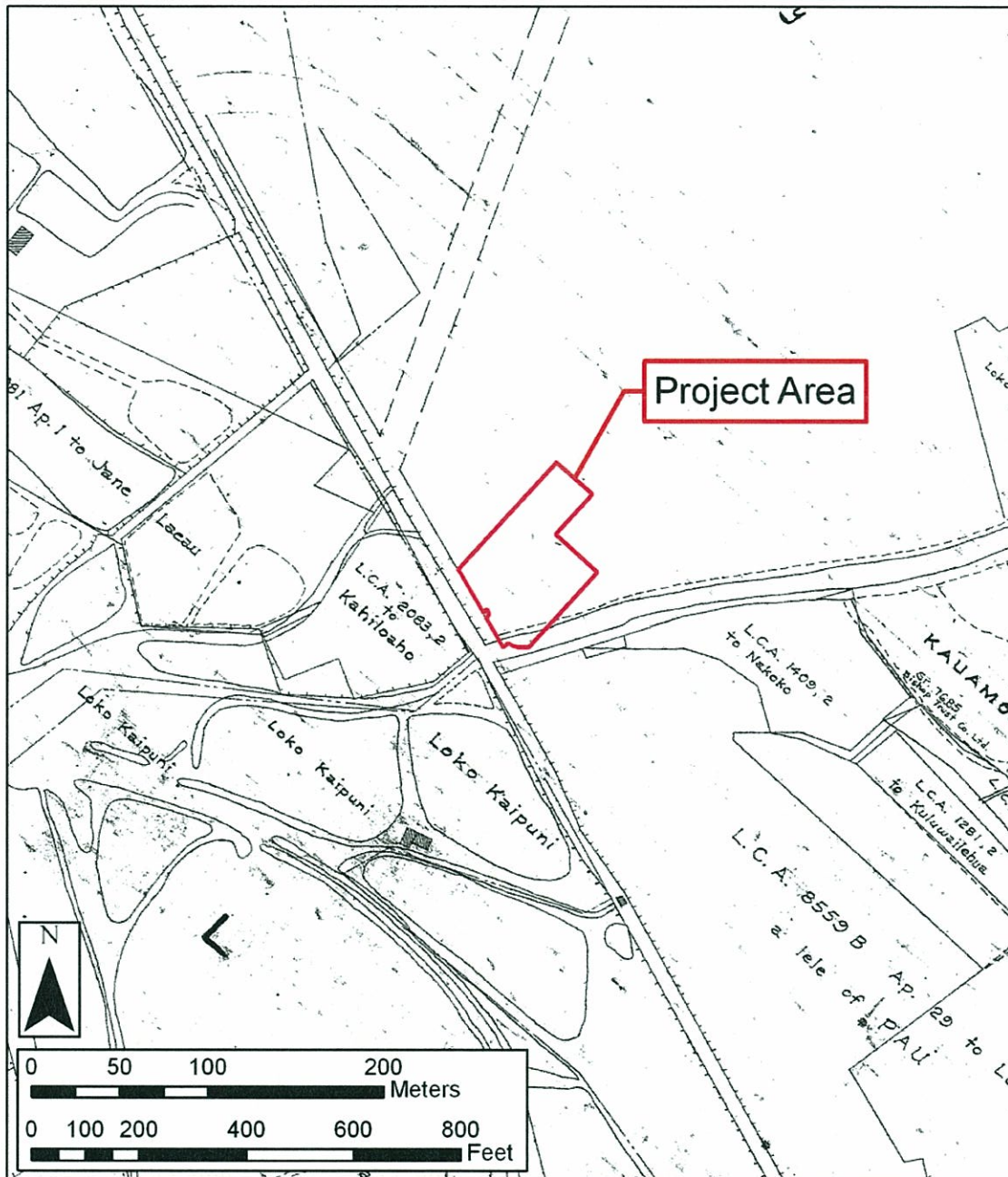


Figure 7. Portion of Registered Map 1398, a 1881 map by S.E. Bishop with location of present project area

subsequent government surveys was added, including locations of road corridors not present in 1881.

The 1881 map also indicates locations of mid-nineteenth century Land Commission Awards. Māhele records for these awards provide the first specific documentation of land use in the vicinity of the present project area. Three *apana* (parcels) associated with three Land Commission Awards – LCA 2083 to Kahiloaho, LCA 1409 to Nakoko, and LCA 8559 B to Lunalilo– are located immediately vicinity of the project area.

Documents for LCA 2083 and LCA 1409, indicate the presence of *lo'i* and houselots, suggesting that in the vicinity of the present project area, land usage and activity by the mid-nineteenth century included habitation and wetland agriculture (see Appendix A). This may reflect the continuation into that century of traditional Hawaiian land use, along with the farming of fishponds, in this portion of Waikīkī.

Documents for LCA 8559 B did not contain any land use information but is of note as it was awarded to William Charles Lunalilo, who was confirmed as King of Hawai'i in 1873.

Subsequent historic maps record the development of the project area through the first half of the twentieth century. A 1910 U.S. Engineers map of Waikīkī indicates that at this time the project area was undeveloped marshland surrounded by small dwellings, ponds, and wetland agricultural fields (Figure 8). A 1927 Sanborn Fire Insurance map indicates that the project area was still undeveloped, but has been subdivided and girded off (Figure 9). This suggests that the project area had been drained and filled in and was being prepped for development.

A 1956 Sanborn Fire Insurance map showing the project area reflects mid-twentieth century changes occurring within Waikīkī (Figure 10). Multiple dwelling structures and apartments are now present in the northeastern half of the project area, while the southwestern half of the project area contains an auto repair shop, gas station, and restaurant.

In summary, historic documentation indicates that the project area consisted of marshland that was not intensively utilized until the mid-twentieth century when Waikīkī became urbanized following the draining and filling of the area initiated in the 1920's. However, historic documentation also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites. By 1927 the project area was drained, filled in, and subdivided in preparation for development. By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes.

3.3 Previous Archaeological Research

The *ahupua'a* of Waikīkī, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources, that supported a large population. In the nineteenth and early twentieth centuries, after a period of depopulation, Waikīkī was reanimated by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system, which had been converted from taro to rice. Farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields. Remnants of the pre-Contact and historical occupation of Waikīkī have been discovered

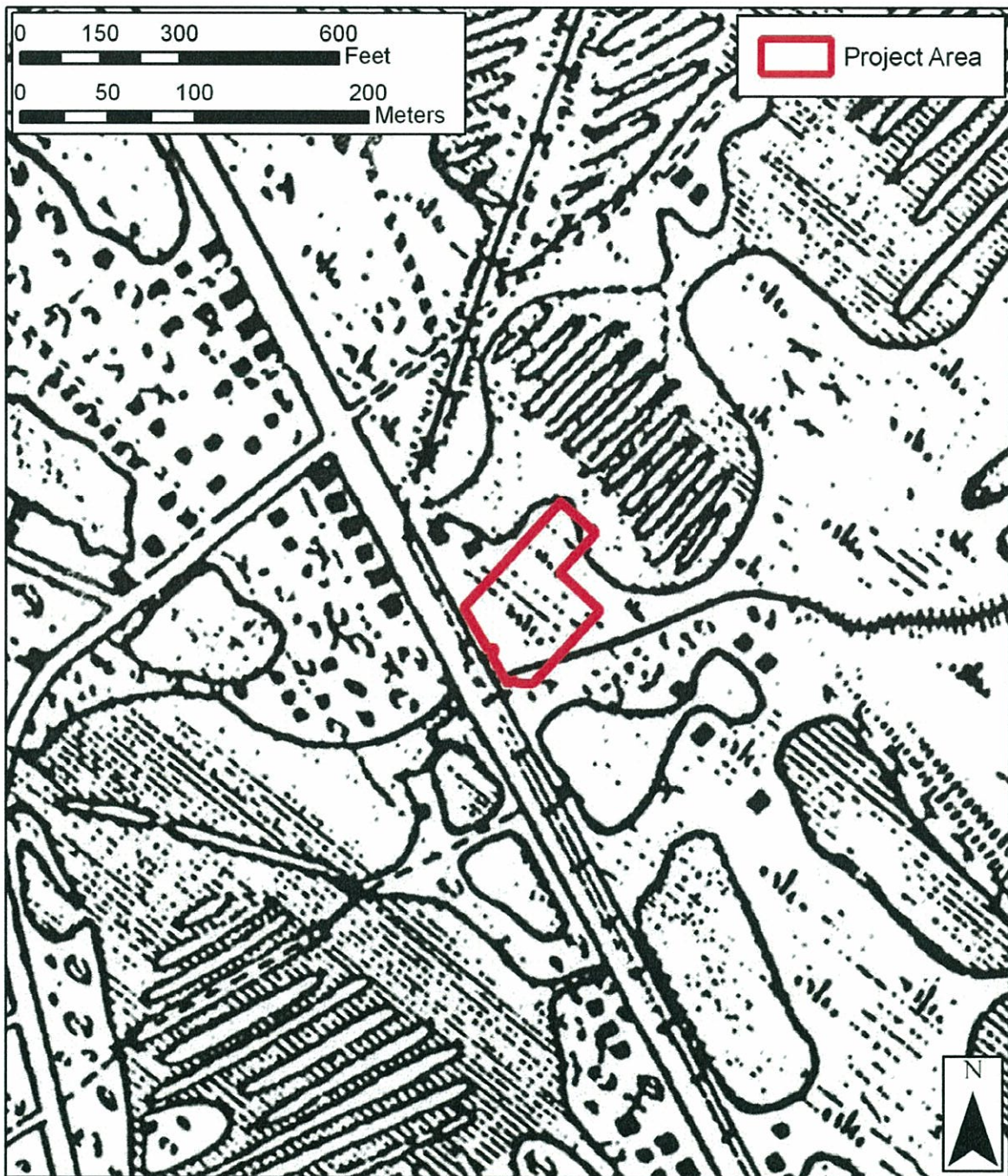


Figure 8. Portion of 1910 U.S. Engineers map with location of present project area indicated

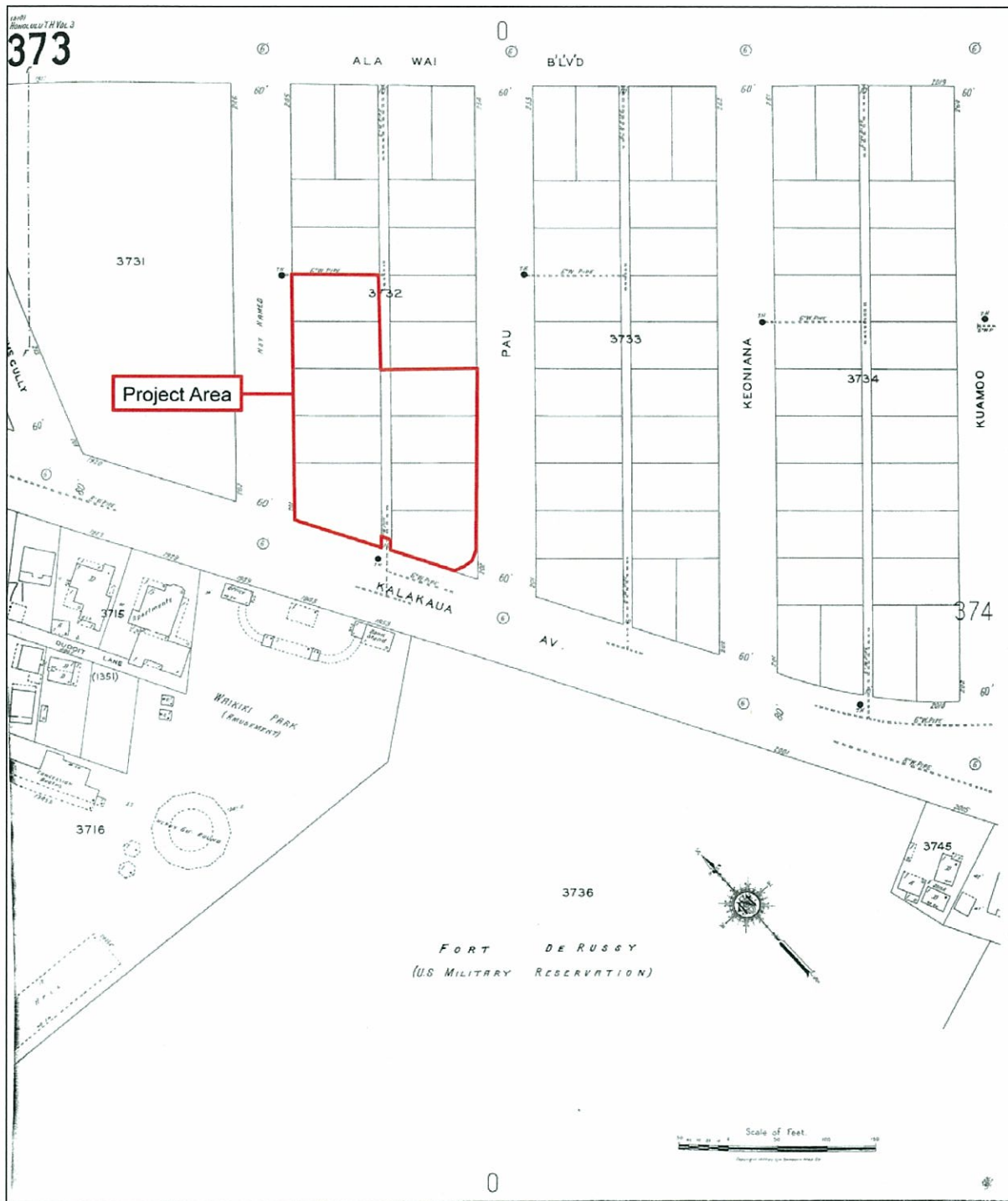


Figure 9. 1927 Sanborn Fire Insurance map of project area

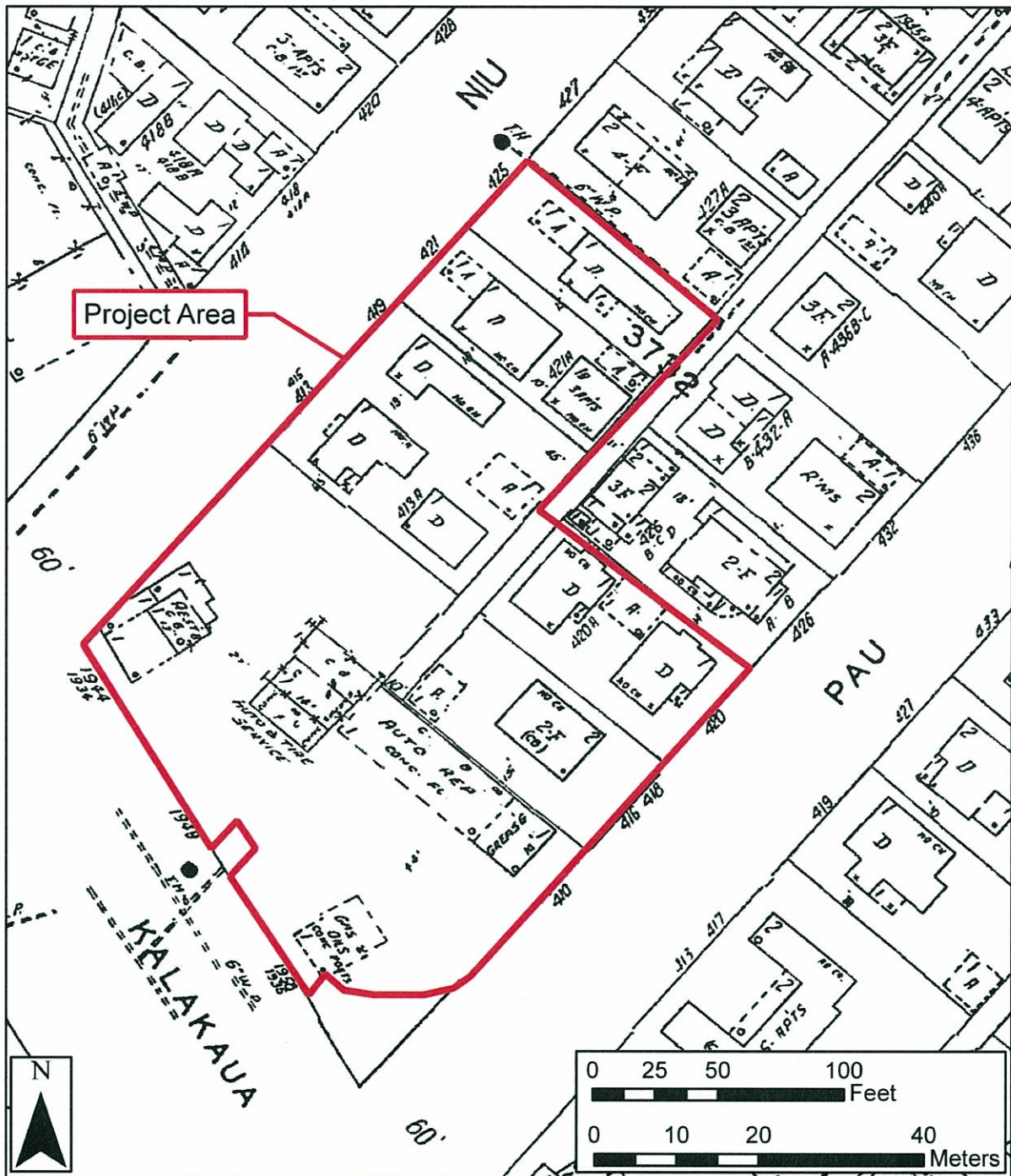


Figure 10. 1956 Sanborn Fire Insurance map of project area

and recorded in archaeological reports, usually in connection with construction activities related to urban development, or infrastructural improvements. These discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits. A full list of projects conducted in the Waikīkī area is listed in Table 1. A discussion of projects focusing on burials (Figure 11) follows.

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

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

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

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

In 1963, two human skulls and other human remains were discovered in a construction trench at 2431 Prince Edward St. (Bishop Museum site Oa-A4-23, cited in Neller 1984). Multiple burials were encountered in 1963 during excavation for the construction of the present Outrigger Canoe Club at the Diamond Head end of Kalākaua Avenue. As reported in a newspaper article on Jan. 24, 1963:

Table 1. Previous Archaeological Investigations in Waikīkī Ahupua'a

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

Reference	Type of Investigation	General Location	Findings
Rosendahl 1989	Inventory Survey, Prelim. Report	Fort DeRussy	Historic artifacts, no human remains
Athens 1990	Letter	TMK: 2-6-023:025	Letter to SHPD listing human remains at IARII lab from Pacific Beach Hotel, and Barbers Point Generating Station.
Hurst 1990	Historical Literature Search	Waikikian Hotel	Background and planning document. No fieldwork was done.
Chigioji 1991	Assessment	2 parcels, TMK 2-6-24:65-68 and 80-83, TMK 2-6-24:34-40 & 42-45	Formerly a corner of the 'Āinahau estate; remainder of parcels, former 'auwai, kalo and rice fields; test excavations and specific sampling strategy recommended.
Davis 1991	Monitoring Report	Fort DeRussy	See also Davis 1989. Subsurface features and material remains date to early post-contact times (c. 1780s to 1790s) through the mid-19th century.
Kennedy 1991	Monitoring Report	TMK: 2-6-022:014 IMAX theatre location	Pollen and bulk-sediment ¹⁴ C samples from ponded sediments were recovered. The three ¹⁴ C dates and pollen sequence were inverted.
SHPD 1991	Public Inquiry	TMK: 2-6-024:036	Bones were determined to be non-human and part of the extensive fill material present
Simons et al. 1991	Interim Field Study, Monitoring & Data Recovery	Moana Hotel Area	8 burials, preliminary osteological analysis indicates pre-contact type; pre- and post artifactual material recovered.
Hurlbett 1992	Monitoring Report	TMK: 2-6-008:001	Site -2870 (3 burials) found by Neller in 1980. This report is on testing and monitoring in same area.
Pietrusewsky 1992a	PA Report	Moana Hotel	Right half of human mandible found by hotel guest.
Pietrusewsky 1992b	PA Report	Lili'uokalani Gardens Site, Hamohamo	Human Remains from the Lili'uokalani Gardens Site, Hamohamo, Waikīkī, O'ahu
Rosendahl 1992	Monitoring Report	Hilton Hawaiian Village	Identified 12 historic refuse pits, 3 historic to modern trenches.

Reference	Type of Investigation	General Location	Findings
Streck 1992	Memorandum for Record	Fort DeRussy	Human burial discovery (believed to be late prehistoric Hawaiian) during data recovery excavations, May, 20, 1992.
Cleghorn 1993	Inadvertent Discovery of Human Remains	Waikīkī Aquarium	Remains of one human individual, mandible identified.
Dagher 1993	Inadvertent Discovery of Human Remains	Waikīkī Aquarium	Human remains of at least one person identified, excavation recommended.
Dega & Kennedy 1993	Inadvertent Discovery of Remains	Waikīkī Aquarium	Discovery of unidentified bone fragments, all remains turned over to SHPD.
Hammatt & Chiogioji 1993	Archaeological Assessment	16-Acre Portion of the Ala Wai Golf Course	Not associated with any know surface archaeological site, however prehistoric and early historic occupation layers associated with lo'i system remain intact below modern fill. Specific sampling strategy and potential burial testing recommended.
Maly et al. 1994	Archaeological and Historical Assessment Study	Convention Center Project Area	Recommend subsurface testing to determine presence or absence of cultural deposits and features.
McMahon 1994	SHPD Burial Report	Intersection of Kalākāua and Kuamo'o Streets	Inadvertent Burial Discovery: misc. bones uncovered in back dirt pile during construction. Follow up by CSH.
Hammatt & Shideler 1995	Sub-surface Inventory Surface	Hawai'i Convention Center Site, 1777 Kalākāua Ave.	No further work recommended.
Jourdane 1995	Inadvertent Discovery of Human Remains	Paoakalani Avenue	Human skeletal remains discovered in planted strip between street and sidewalk fronting hotel.

Reference	Type of Investigation	General Location	Findings
Simons et al. 1995	Data Recovery Excavations	Fort DeRussy	Historic and prehistoric artifacts, and midden materials collected from 7 occupation layers. 6 prehistoric cultural features recorded: 'auwai bunds and channels, fishpond walls and sediments, a possible lo'i, and hearths.
Cleghorn 1996	Inventory Survey	TMK: 2-6-016:23, 25, 26, 28, 61, 69	7 backhoe trenches excavated, no sites located.
Grant 1996	Historical Reference	Waikīkī	Historical information about Waikīkī prior to 1900.
Hammatt & Shideler 1996	Data Recovery	Hawai'i Convention Center Site	No clear evidence that Kuwili Pond sediments present in project area; no further work recommended.
McDermott et al. 1996	Inventory Survey	'Āinahau Estate	Buried remnants of 'auwai and lo'i and human burial found. ¹⁴ C dates
Denham et al. 1997	Data Recovery Report	Fort DeRussy	Excavations conducted at fishponds, ¹⁴ C dates mid-17th C.
Denham & Pantaleo 1997	Monitoring and Excavations Report	Fort DeRussy	Final Report does not include SHPD recommendations. 10 subsurface features and 9 burial locations found. ¹⁴ C dates
Beardsley & Kaschko 1997	Monitoring and Data Recovery Report	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposits and 2 human burials. 3 ¹⁴ C dates
Hammatt & Chiogioji. 1998	Assessment	King Kalākaua Plaza Phase II	No surface archaeological sites, documented human burials, presence of subsurface cultural deposits (both of pre-contact Hawaiian and historic provenance).
Hammatt & McDermott 1999	Burial Disinterment Plan and Report	Kalākaua Avenue	Two human burials found
Perzinski et al. 1999	Monitoring Report	Along Ala Wai Blvd., Kalākaua Ave., Ala Moana Blvd., & 'Ena Rd.	Two human burials found (1 preceding monitoring); pockets of undisturbed layers still exist. Burial #2 previously disturbed.
Rosendahl 1999	Interim Report: Inventory Survey	Fort DeRussy	This area is part of the old shoreline.

Reference	Type of Investigation	General Location	Findings
Hammatt & Chiogioji 2000	Archaeological Assessment	Honolulu Zoo Parcel	Majority of zoo parcel unlikely to yield significant cultural deposits. However, strong possibility of significant subsurface cultural deposits in the SW portion. Monitoring is recommended in this area.
LeSuer et al. 2000	Inventory Survey	King Kalākaua Plaza Phase II	Site -5796 has been adversely affected by land alteration of the project area. Site -4970, has been adequately documented.
Perzinski et al. 2000	Burial Findings	Kalākaua Ave. between Kai'ulani & Monsarrat Avenues	44 sets of human remains; 37 disinterred, 7 left in place; believed to be Native Hawaiian, interred prior to 1820.
Cleghorn 2001	Mitigation	Burger King Construction Site	Concerning three incidents of uncovered human remains while locating a buried sewer-line for the ABC's store.
Corbin 2001	Inventory Survey	Hilton Waikikian Property	No arch. sites were found during excavations of the area
Elmore & Kennedy 2001	Burial Report	Royal Hawaiian Hotel	Human remains found during trench excavations for conduit. The in situ remains were left in place, while the disturbed remains were re-interred with the others.
McGuire & Hammatt 2001	Cultural Assessment for Waikīkī Beach Walk Project	Along Lewers St., Beach Walk, Kālia Rd. & Saratoga Rd.	Primary cultural concern identified as inadvertent burial discovery. Cultural monitoring recommended for all subsurface work within project area.
Perzinski & Hammatt 2001a	Monitoring Report	Kapi'olani Bandstand	A charcoal layer was observed, concentrated on the SW side of the bandstand; recovered indigenous basalt lamp with a handle, from the SE end of the bandstand.
Perzinski & Hammatt 2001b	Monitoring Report	Kapi'olani Park	No cultural layer, artifacts, midden or human burials were encountered during the excavations.
Perzinski & Hammatt 2001c	Monitoring Report	Kalākaua Avenue from the Natatorium to Poni Mo'i Road	No cultural layer, artifacts, midden or human burials were encountered during the excavations.

Reference	Type of Investigation	General Location	Findings
Rosendahl 2001	Assessment Study	Outrigger Beach Walk	Assessment of previous archaeology and historical literature.
Winieski & Hammatt 2001	Monitoring Report	TMK: 1-2-6-025:000	There is a possibility that Hawaiian or Historic materials as well as human burials may still be present within the project area.
Borthwick et al. 2002	Inventory Survey	71,000 sq. ft. parcel, TMK: 2-6-016:002	No burials were found during testing; absence of dry jaucas sand deposits indicate that burial finds are unlikely in project area.
Bush et al. 2002	Monitoring Report	Kalākaua Avenue, between Ala Moana Blvd. and Kapahulu Ave.	Encountered 4 human burials, probably pre-contact Native Hawaiians; several historic trash pits; entire pig within an imu pit (estimated date, A.D. 1641-1671); gleyed muck associated with former ponds.
Calis 2002	Monitoring Report	Lemon Road	No historic deposits, major previous disturbance
Elmore & Kennedy 2002	Monitoring Report	Fort DeRussy	No findings.
Mann & Hammatt 2002	Monitoring Report	Lili'uokalani Avenue and Uluniu Avenue	5 burial finds of 6 individuals; two historic trash pits.
Putzi & Cleghorn 2002	Monitoring Report	Hilton Hawaiian Village	No findings during monitoring of trench excavations for sewer connections.
Winieski, Perzinski, Shideler et al. 2002	Monitoring Report	Kalākaua Ave. between Ka'iulani and Monsarrat Avenues.	44 human burials encountered, 37 disinterred; buried habitation layer identified, with traditional Hawaiian artifacts, midden, firepits, & charcoal; fragment of light gauge rail, remnant of Honolulu Transit trolley system, observed; low energy alluvial sediments associated with the now channelized muliwai Kukaunahi also observed.
Winieski, Perzinski, Souza et al. 2002	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals, six disinterred, only 2 in situ. 4 indigenous artifacts, none in situ. Discontinuous cultural layer, historic seawall.

Reference	Type of Investigation	General Location	Findings
Bush et al. 2003	Monitoring Report	International Marketplace	Historic trash found.
Tome & Dega 2003	Monitoring Report	Waikīkī Marriot	One isolated not in situ possible human bone fragment found. Recommends monitoring during future work.
Tulchin & Hammatt 2003	Archaeological & Cultural Impact Assessment	2284 Kalākaua Ave.	Notes possibility of burials in the project area; recommends an inventory survey with subsurface testing.
Freeman et al. 2005	Archaeological Inventory Survey	Hobron Lane	Four sites identified during subsurface testing; 1 disturbed burial; 1 coffin burial with two individuals; 1 cultural deposit; and, 1 fishpond sediment
O'Hare et al. 2005	Archaeological Inventory Survey	Kaio'o Drive	Site 50-80-14-6848, a pre-contact firepit radiocarbon dated to AD 1470-1660, was recorded.
O'Leary et al. 2005	Archaeological Inventory Survey	Former Waikiki 3 Theater	A likely pre-Contact Native Hawaiian human burial (SIHP # 50-80-14-6819) was identified
Bell & McDermott 2007	Archaeological Inventory Survey	Former Wave Waikiki	Two traditional Hawaiian burials of undetermined age (SIHP # 50-80-14-6873 & SIHP # 50-80-14-6875) and a subsurface cultural layer, of pre- and post-Contact origin (SIHP # 50-80-14-6874) were identified.

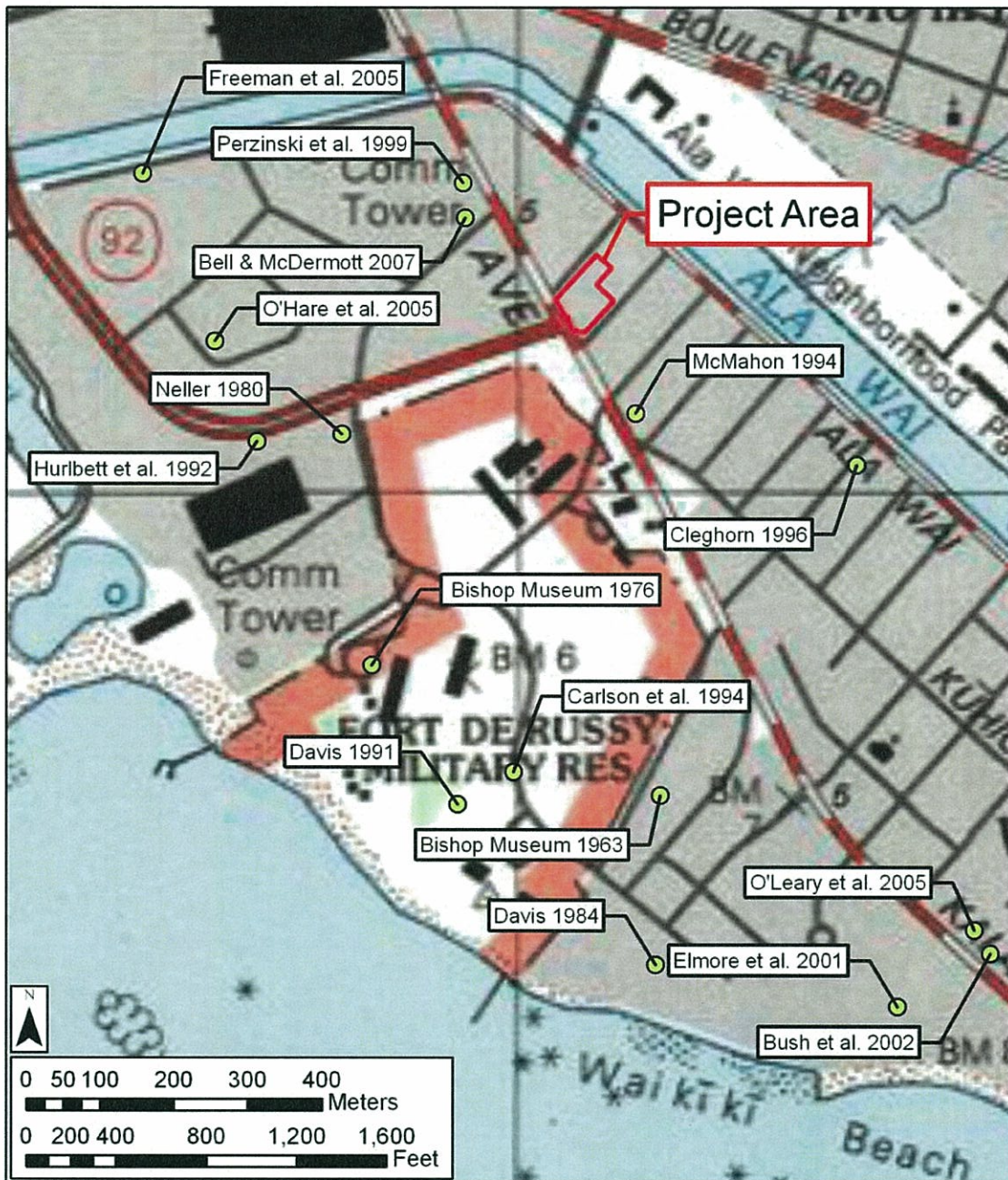


Figure 11. Previous archaeological studies in the vicinity of the project area focusing on the locations of burials

The Outrigger Canoe Club yesterday dedicated its new site [on land adjacent to and leased from the Elks Club], an ancient Hawaiian burial ground in Waikīkī. . .

Robert Bowen of the Bishop Museum has been working closely with Ernest Souza, Hawaiian Dredging superintendent, on the removal of skeletons unearthed on the site, between the Colony Surf and the Elks Club. . . .

Most of the bodies were buried in the traditional hoolewa position, with the legs bound tightly against the chest.

One of the skeletons, Bowen said, shows evidence of a successful amputation of the lower forearm, indicating that the Hawaiians knew this kind of operation before the arrival of Europeans.

The ages of the skeletons ranged from children to 40-year-old men and women. The average life span of the Hawaiians at the time was about 32 years [*Honolulu Star-Bulletin*; Jan. 24, 1963: 1A].

A total of 27 burials were encountered (Yost 1971: 28). Apparently, no formal archaeological report on the burials was produced.

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

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

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

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

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

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits

related to the different ethnic and social groups that occupied Waikīkī over the last 200 years [Neller 1980:5].

Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekūlani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date . . . settlement in Waikīkī to no later than the mid-1600s" (Neller 1980:5). Just as significant to Davis was the collection of historic era material at the Halekūlani site; he states:

[The] Halekūlani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikīkī, Honolulu, or in any of the other urbanized areas of Hawai'i [Neller 1980:5].

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

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

During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph.D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikīkī. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered during the monitoring, all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The three partial burials reported by Neller (1980) were found within this project area (see above). No further burials were encountered during the PHRI field work (Hurlbett et. al. 1992).

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

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

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

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

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simons et al. 1995). BioSystems research documents the development and expansion of the fishpond and 'auwai system in this area. The 'auwai system was entered on the State Inventory of Historic Places (SIHP) as State Site 50-80-14-4970. As indicated on the 1881 map by S. E. Bishop discussed above, this 'auwai enters the Fort DeRussy grounds through the present project area). Remains of the fishpond and 'auwai deposits, as well as habitation deposits, were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late prehistoric/early historic subsurface deposits, even amidst the development of Waikīkī.

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

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

In 1993, during construction activities at the Waikīkī Aquarium fragmentary human remains were discovered scattered in a back dirt pile, although no burial pit was identified (Dega and Kennedy 1993).

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

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

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

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

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

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

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

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

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

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

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

In April 2001 human remains were inadvertently disturbed during excavations associated with the construction of a spa at the Royal Hawaiian Hotel (Elmore et al. 2001). Archaeological Consultants of the Pacific, Inc was responsible for the documentation of the remainder of the burial and carrying out the instruction of DLNR/ SHPD. The burial and place it was encountered was assigned State Site # 50-80-14-5937. The burial was encountered on the North side of the hotel in the spa garden approximately 75 meters north of the current project area separated by a wing of the hotel. The burial was partially disturbed through the thoracic region and anatomical left side. The disturbed remains were wrapped in muslin cloth and placed with the in-situ remains and reburied. The burial was recorded as a post contact burial based on artifacts associated with it. The associated artifacts included one shell button found *in-situ* and three more shell buttons found in the disturbed material. A single drilled dog tooth was found also during excavation but could not be positively associated with the site.

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

In 2001 and 2002, CSH (Mann and Hammatt 2002) performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili'uokalani Avenue. During the course of monitoring, five burials finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these inadvertent finds were found in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no State Site number(s) be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned State Site #50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was recorded from Lili'uokalani Avenue. Since three burials had been found in the immediate vicinity during a

previous project (Winieski et al. 2002b) and had been assigned to Site #50-80-14-5859, the two new individuals were recorded as Feature H of this previously recorded site.

In 2004, Cultural Surveys Hawai'i conducted an archaeological inventory survey and cultural impact evaluation for the Ala Wai Gateway project site (Freeman et al. 2005). The project site comprised TMK 2-6-011:001, 002, 004, 32, 37, and 40, which are bounded by Ala Wai and Ala Moana boulevards, Hobron Lane, and Līpe'epe'e Street. Four historic properties were documented in the survey: Site 50-80-14-6700, a disturbed set of ethnicity undetermined, human skeletal remains; Site 50-80-14-6701, a historic coffin burial, with two individuals, ethnicity undetermined; Site 50-80-14-6702 a culturally enriched buried A horizon; and, Site 50-80-14-6703, a fishpond remnant.

In 2005, Cultural Surveys Hawai'i conducted an archaeological inventory survey of a 1-acre parcel at 2284 Kalākaua Avenue, the site of the former Waikiki 3 Theater (O'Leary et al. 2005). A pre-Contact Native Hawaiian burial (SIHP No. 50-80-14-6819) was encountered during subsurface testing in the southeastern corner of the project close to Kalākaua Avenue and Dukes Lane. The burial was found at approximately 150 cmbs (4.9 ft. below surface) within organically stained (very dark grey to black) wetland agricultural soils present throughout the project area.

In 2007, Cultural Surveys Hawai'i conducted an archaeological inventory survey of a 2.3-acre parcel located at the corner of Kalākaua Avenue and Ena Road (Bell & McDermott 2007). Two traditional Hawaiian burials of undetermined age (SIHP # 50-80-14-6873 & SIHP # 50-80-14-6875) and a subsurface cultural layer, of pre- and post-Contact origin (SIHP # 50-80-14-6874) were identified.

3.4 Background Summary and Predictive Model

The *ahupua'a* of Waikīkī in the centuries before the arrival of Europeans was a well-used locale with abundant natural and cultivated resources – including an expansive system of irrigated taro fields and numerous fishponds – supporting a large population that included the highest-ranking *ali'i* (Hawaiian royalty). In the second half of the nineteenth century, after a period of depopulation and desuetude, Waikīkī was reanimated by the Hawaiian *ali'i* and the foreigners residing there, and by farmers continuing to work the irrigated field system that had been converted from taro to rice. This farming continued up to the first decades of the twentieth century when the newly-constructed Ala Wai Canal drained the remaining ponds and irrigated fields of Waikīkī.

The present project area is located on the *mauka* fringe of a portion of Waikīkī that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds. Also located in this portion of Waikīkī were wetland and dry land agricultural fields, and habitation sites. Land Commission Award documents from the mid-nineteenth century record continuing Native Hawaiian habitation and taro cultivation in parcels adjacent to the present project area. However, nineteenth and twentieth century maps indicate that the project area consisted of undeveloped marshland, suggesting that it was not actively utilized for traditional Hawaiian habitation or agriculture during this time period. By 1927 the project area was drained and filled in during a push to urbanize Waikīkī. By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes.

Previous archaeological studies have documented subsurface cultural deposits and human burials – both pre-contact Hawaiian and historic – in the vicinity of the project area. These findings confirm the traditional Hawaiian and historic activities indicated in the vicinity of the project area through historic documents (LCAs, maps, etc.).

Based on background research it is possible that intact pre-Contact and early contact cultural deposits associated with Hawaiian habitation, agriculture, and burial interment are lying undisturbed beneath fill layers within the project area. Other cultural deposits, including historic trash pits, associated with early twentieth century commercial and residential sites may also be present.

3.5 Archaeological Assessment: Summary and Interpretation

As noted in section 1.2, an archaeological assessment (AA) including subsurface testing was conducted for the project area. The results of the archaeological study are presented in a companion report titled, “Archaeological Assessment for the 1944 Kalākaua Avenue Project, Waikīkī Ahupua‘a, Kona District, O‘ahu. TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058” (Tulchin and Hammatt 2007).

In compliance with and to fulfill applicable Hawai'i state historic preservation legislation, CSH completed what began as an archaeological inventory survey investigation (AIS) of the project area, but because no historic properties were located, this investigation became an archaeological assessment (AA), per the language of HAR Chapter 13-13-275-5. Per the Hawai'i state requirements for archaeological assessments, the AA report includes the results of historical and archaeological background research and fieldwork. The background research focused on summarizing the project area's pre-Contact and historic land use, cultural significance, and types and locations of potential historic properties within the project area and its vicinity.

The fieldwork results support the background research, which indicates that the project area consisted of marshland that was not intensively utilized until the mid-twentieth century when Waikīkī became urbanized following the draining and filling of the area initiated in the 1920's. However, background research also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites. Due to the proximity of this traditional Hawaiian occupation, it is still possible that intact pre-Contact and early contact cultural deposits associated with Hawaiian habitation, agriculture, and burial interment are lying undisturbed beneath the fill layers within the project area. It should be noted that typically cultural deposits associated with traditional Hawaiian habitation and burial interment are located in Jaucas sand deposits, which were not observed within the project area, thus while there is the potential to encounter these types of cultural deposits, it is unlikely. The naturally deposited soils observed in the project area consisted of a loam formed by the alluvial deposit of sediment and the decomposition of organic matter. This soil would have been excellent for agriculture and thus makes the potential for encountering cultural deposits associated with traditional Hawaiian agriculture more likely. Additionally, cultural deposits, including historic trash pits, associated with early twentieth century commercial and residential sites may also be present.

Section 4 Community Consultations

Throughout the course of this cultural impact assessment (CIA), 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, e-mail, telephone and in person contact. In the majority of cases, letters along with a map and aerial photograph of the project area were mailed with the following text:

At the request of American Commercial Equities Three, LLC, LP, (ACE3), Cultural Surveys Hawai'i is conducting a cultural impact assessment for a proposed approximately 1.1 acre project at 1944 Kalakaua Avenue in Waikīkī Ahupua'a, Honolulu (Kona) District, Island of O'ahu (Tax Map Keys: [1] 2-6-014: 001, 004, 006, 007, 008, 019, 058).

American Commercial Equities Three, LLC proposes to develop an approximately 14,300 square foot two-story commercial building and at-grade parking at the corner of Kalakaua Avenue and Niu Street, near the existing Local Motion Store. The proposed new building's architectural character and scale, as well as the overall landscaping, would compliment the existing Local Motion site. A sister company of ACE3, named "1958 Kalakaua Avenue LLC", recently purchased the Local Motion property and building. No changes to the Location Motion building are proposed. ACE3 will seek a Conditional Use Permit for Joint Development of eight TMK parcels. The total area for the proposed development is 44,871 square feet. The proposed uses for the 1944 Kalakaua Avenue LLC project would be approximately 7,300 square feet of retail space on the ground floor and a 190-seat 7,000 square foot restaurant space on the upper floor. The existing driveway off of Kalakaua Avenue would be removed. Vehicular access is proposed to be from Pau Street and Niu Street. See attached maps of the project area.

The purpose of this cultural study is to assess potential impacts to cultural practices as a result future development in the Waikīkī Ahupua'a. We are seeking your kōkua and guidance regarding the following aspects of our study:

- General history and present and past land use of the project, and surrounding, area.
- Knowledge of cultural sites which may be impacted by future development of the project area - for example, historic sites, archaeological sites and burials.
- Knowledge of Hawaiian gathering practices in and near the project area both past and ongoing.

- Cultural associations of the project area, legends 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* lands and near-shore environment.
- Any other cultural concerns the community might have related to Hawaiian cultural practices and ongoing within or in the vicinity of the project area.

Several (3-9) attempts were made to contact individuals, organizations, and agencies apposite to the cultural impact assessment for Waikīkī Ahupua'a. The results of the community consultation process are presented in Table 2.

Table 2. Partial List of Community Contacts

Name	Organization, Affiliation	Results
Ailā, William	Hui Malama O Nā Iwi O Hawai'i Nei	CSH sent letter on November 5, 2007
Among, Les	Waikīkī Neighborhood Board Subdistrict 1-Chair	CSH sent letter on November 5, 2007
Apaka, Jeff	Waikīkī Neighborhood Board Subdistrict 2-Chair	CSH sent letter on November 5, 2007
Ayau, Edward Halealoha	Hui Malama O Nā Iwi O Hawai'i Nei	Emailed letter on November 9, 2007. Email bounced back as undeliverable.
Chinen, Melanie	State Historic Preservation Division, Administrator	CSH sent letter on November 5, 2007. As of December 7, 2007 Ms. Chinen is no longer the Administrator for the SHPD. CSH received a response from Linda Kaleo Paik, Cultural Specialist in the History and Culture department of the SHPD. In an email sent on December 18, 2007 Ms. Paik recommended that recognized cultural and lineal descendants from the Waikīkī area be contacted about the proposed project, and offered to provide a list of descendants upon request.
Diamond, Van Horn	O'ahu Island Burial Council Chair	CSH sent letter on November 9, 2007
Finley, Bob	Waikīkī Neighborhood Board	CSH sent letter on November 5, 2007
Harris, Cy K.	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007
Kaleikini, Paulette Ka'anohi	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007

Name	Organization, Affiliation	Results
Keohokālole, Adrian K.	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007
Keohokālole, Emalia E.	Cultural Descendant of Waikīkī	CSH sent letter on November 14, 2007
Kini (Norman), Debbie P. K.	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007
Kruse, T. Kehaulani	O'ahu Island Burial Council	CSH sent letter on November 5, 2007
McQuivey, Jace	O'ahu Island Burial Council, Chair	CSH sent letter on November 5, 2007
Medeiros, Clarence A. Jr.	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007
Nāmu'o, Clyde	Office of Hawaiian Affairs	See OHA letter below table
Nobrega, Malia	Waikīkī Hawaiian Civic Club	CSH sent letter on November 14, 2007
Norman, Carolyn D. K.	Cultural Descendant of Waikīkī	CSH sent letter on November 9, 2007
Rose, Charles	Association of Hawaiian Civic Clubs-President	CSH sent letter on November 14, 2007
Souza, William D.	Royal Order of Kamehameha, Kūhiō Chapter	CSH sent letter on November 5, 2007
Tomczyk, Pi'ikea L.	Waikīkī Hawaiian Civic Club-President	CSH sent letter on November 5, 2007

PHONE (808) 594-1888

FAX (808) 594-1865



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

December 6, 2007

HRD07_3326

Lisa Gollin
Project Manager
Cultural Surveys Hawai'i, Inc.
P.O. Box 1114
Kailua, Hawai'i 96734

Re: Cultural Impact Assessment
Waikiki Ahupua'a, Kona District, Island of O'ahu
Tax Map Keys: 2-6-014:001, 004, 006, 007, 008, 019, 058

The Office of Hawaiian Affairs (OHA) is in receipt of your November 5, 2007 letter initiating consultation ahead of a cultural impact assessment for a proposed development project on the above mentioned tax map key parcels.

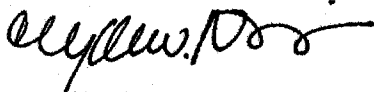
As you know, beginning in the 20th century, the landscape of Waikiki has been modified significantly. Certain traditional accounts detail that the high chief Ma'ilikukahi made Waikiki his permanent residence c. 1400 and with a few exceptions, Waikiki remained a location of the residences of ruling O'ahu ali'i into historic times. 'Apuakehau Heiau, located to the east of the project area, was of the luakini class and was where ali'i such as Kauhiakama and Kahahana were offered as sacrifices. Several notable ali'i were born in Waikiki, which also became known as a training ground for both sport and warfare and for the construction of large lo'i and loko i'a.

The project area appears to be in the immediate vicinity of the loko i'a known as Kaipuni. While the information in your letter indicates that the proposed project area is currently developed, there is a possibility that iwi kupuna may be discovered during ground disturbance. Thus, OHA seeks assurances that if this project moves forward, should Native Hawaiian traditional, cultural, or burial sites be identified during ground disturbance, all work will immediately cease, and the appropriate agencies notified pursuant to applicable law.

Lisa Gollin, Projects Manager
Cultural Surveys Hawai'i, Inc.
December 6, 2007
Page 2

Thank you for initiating consultation at this early stage and we look forward to the opportunity for a comprehensive review of the completed cultural impact assessment. Should you have any questions, please contact Keola Lindsey, Lead Advocate-Culture at (808) 594-1904 or keolal@oha.org.

'O wau iho nō,



Clyde W. Nāmu'o
Administrator

Figure 12. December 6, 2007 review letter from the Office of Hawaiian Affairs

Section 5 Summaries of Kama'āina "Talk Story" Interviews

Kama'āina and *kūpuna* with knowledge of the Waikīkī Ahupua'a and the area within the vicinity of the proposed 1944 Kalākaua Avenue project will be invited to participate in "talk-story" sessions for the current cultural impact assessment.

Cultural Surveys Hawai'i Inc. employs snowball sampling, an informed consent process and semi-structured interviews (Bernard 2005). The approach of Cultural Surveys Hawai'i Inc. to cultural impact studies affords those community contacts an opportunity to review transcriptions and/or interview notes and to make any corrections, deletions or additions to the substance of their testimony. To assist in discussion of natural and cultural resources and any traditional cultural practices specific to the project area, CSH initiates the "talk-story" session questions from five broad categories. The categories include: Gathering Practices, Marine and Freshwater Resources, Burials, Trails and Historic Properties. Excerpts from extensive interviews specifically related to Waikīkī and its environs will be presented in this section.

Section 6 Cultural Landscape of the Project Area

Discussions of specific aspects of traditional Hawaiian culture as they may relate to the project area in the broader context of the encompassing Waikīkī Ahupua'a landscape are presented below. Excerpts from talk story sessions will be incorporated throughout this section where applicable.

6.1 Hawaiian Agriculture

Kalo or taro, from which *poi* is made, was a major food staple in the traditional Hawaiian diet. Evidence from the Māhele LCAs indicates that *kalo* was cultivated on *kuleana* land in Waikīkī. Documents for LCA 2083 and LCA 1409, indicate the presence of *lo'i* and houselots, suggesting that in the vicinity of the present project area, land usage and activity by the mid-nineteenth century included habitation and wetland agriculture (see Appendix A). For example, Nakoko (LCA 1409) indicated they maintained 2 *lo'i* (taro pond) on their land.

6.2 Hawaiian Aquaculture

Hawaiian aquaculture is especially significant, as it was not practiced elsewhere in the Pacific. The majority of fishponds most likely were constructed in the sixteenth century. The prefix *loko* means "body of water" and the suffix describes the specific type. The four types of ponds are: *loko i'a kalo* (fish and taro raised together in a pond), *loko wai* (inland freshwater fishpond), *loko pu'uone* (isolated shore fishpond formed by a barrier sand berm creating a single elongated ridge parallel to the coast) and *loko kuapā* (seawall on a reef with sluice gates). In 1902, Cobb recorded the fishponds at Kālia as freshwater *loko wai* (Cobb 1902). Davis (1989, 1991) labeled the ten fishponds at Fort DeRussy to be *loko pu'uone* with salt-water lens intrusion and fresh water entering from upland *'auwai*. Kāhāwai Pi'inaio was this type of stream. The 10 ponds are inland, swale-based ponds constructed between beach ridges that may have formed along the coast within the last millennium. Existing depressions in the sand were chosen to make the *loko pu'uone*, and brush was cleared out. During traditional times, the ponds were used to farm fish, usually for the Hawaiian *ali'i* (royalty). The *'ama'ama* (mullet) and the *awa* (milkfish) were the two types of fish traditionally raised. During his 1973 archaeological studies, Kikuchi categorized the ponds at Kālia as type IIIB; "A man-altered *loko wai* which has a dirt and stone embankment wall separating from a river or stream and which has a sluice gate" (Kikuchi 1976:229).

Kikuchi writes that fishponds evolving "from a simple technological device into a symbol of status and power is significant from the vantage point of the development of stratified societies in the Pacific" (Kikuchi 1976:296). Fishponds were a crucial component of food production as well as symbols of status. Water from *'auwai* (irrigation ditch or canal) would have been used for both agriculture and aquaculture, therefore requiring a cooperative system of water utilization. The types of fish that thrived in the brackish water were the Euryhaline fish mullet (*Mugil cephalus*) and milkfish (*Chanos chanos*). These fish have a natural inclination to swim against currents toward freshwater sources. Maintenance of the ponds would have been constant and necessitated a fulltime caretaker or caretakers.

Motivated by business in the late 1880s, Chinese farmers began leasing the ponds from Hawaiians to raise fish and ducks and the taro fields were converted to rice fields.

Many ponds in the Kālia area were filled in when Fort DeRussy was built and when the Ala Wai Canal was dredged in the 1920s. Earl Vida, whose father supervised the construction of the Ala Wai, related that Dillingham had a dual-purpose scheme, not only to build the canal, but to fill in the ponds. "We don't need the ponds. We need the land" (Oral History Project 1985:597). The filling in of the ponds (and the taro fields) had dramatic implications for future generations of Hawaiians: it forever altered the traditional landscape and it prevented Hawaiians from being able to return to this traditional way of life in Waikīkī. The present project area is located in the vicinity of the fishpond, Loko Kaipuni.

6.3 Gathering of Plant Resources

Hawaiians utilized upland resources for a multitude of purposes. Forest resources were gathered not only for the basic needs of food and clothing, but for tools, weapons, canoe building, house construction, dyes, adornments, hula, medicinal, and religious purposes. However, as noted above, during traditional Hawaiian times the present project area was used for the gathering of *hala*, *kukui* and similar upland resources.

Within the project area itself, no specific documentation was found in regards to gathering of plants during traditional Hawaiian times.

6.4 Marine and Freshwater Resources

The ocean was just as important a gathering place as the land. A study of ocean resources indicated that although the entire coastline along Kālia and Waikīkī was utilized for gathering and subsistence, particular spots seemed richer in certain resources than others. Generally, the whole coastline of Waikīkī was accessed because certain fish are known to frequent certain areas and an experienced fisherman knows where to go to catch a particular fish. Where one chooses to fish might also depend on the crowds at the beach and time of day. In Waikīkī, especially due to the high volume of people on the beaches, many fishermen these days go fishing at night. The more favorable fishing grounds were in front of the old Niumalu Hotel (Hilton Hawaiian Village), the Royal Hawaiian and Halekūlani, and the area fronting the Natatorium. Specifically, the area between Diamond Head and the Kapahulu Groin was considered better fishing grounds than the Outrigger Reef on the Beach/Ft. DeRussy portion of the shoreline. Likewise, the squid grounds are located between the Kapahulu groin and Diamond Head.

Kālia was renowned for the fragrant *limu līpoa*, as well as several other varieties of seaweed such as *manauea*, *wāwae'iole*, *'ele'ele*, *kala* and some *kohu*. The area between the Royal Hawaiian and the Halekūlani was the area where *limu līpoa* was traditionally gathered. Mr. Paoa confirmed the great fishing and the abundant *limu* in the Kālia area.

The *'ele'ele* existed in relation to Po'inaio Stream and the two other streams feeding into Waikīkī. It seems this resource is no longer found in Waikīkī today, because the streams no longer flow to the sea. *'Ele'ele* normally grows in areas where there is freshwater intrusion, such as where freshwater streams enter the ocean (Abbott 1974:10).

Interviews from a prior cultural impact evaluation (Chiogioji et al. 2005) confirmed that the Waikīkī shoreline was abundant in many varieties of fish and *limu*, certain varieties of crab and lobster, as well as being good squid grounds. Talk-story with fishermen who presently use the Waikīkī coast confirms, for the most part, this is still true today.

Before the Ala Wai Canal was built and the streams diverted, the streams feeding into Waikīkī were once abundant in *‘o‘opu* (species of Hawaiian endemic fish in the Goby family) and *‘ōpae* (shrimp). Local *kama‘āina* attest that by the time they were born these two resources were no longer available. However, stories passed down by their elders and parents indicated the stream was once an important cultural resource for them. Sadly, these two cultural resources are no longer found in Waikīkī today.

6.5 Burials

The discovery of burials in the Waikīkī area during recent construction projects has been a cause of concern over the last few years.

There are approximately 14,500 records associated with LCA claims during the Māhele of 1847-1853. Of these records, 432 are for claims both awarded and unawarded in Waikīkī. Among these 432 claims, there is only one mention of a graveyard or burial place, Claim 613 (to Kuluwailehua) which was not awarded (www.waihona.com). Although it is uncertain where the reported burial ground is located, based on the boundaries given in the testimony (Native Register, Vol. 2: 299-300 found in www.waihona.com), it is speculated that it might be adjacent to the former location of Waikīkī Church, near Ka‘iulani Avenue.

It seems the circumstances of the burials discovered in the vicinity of the project area are much more mundane than battle deaths or human sacrifices - namely that the vast majority of the deceased were the common people of Kālia. Withington (1953:16), probably referring to the *‘oku‘u* plague (circa 1804), wrote: "...a few years of peace settled over the Islands. Kamehameha and other warring chiefs took this opportunity to re-establish their forces, which had been greatly reduced through war and disease. A terrible epidemic of measles had attacked the people of the islands. It is claimed that more than three hundred bodies were carried out to sea from Waikīkī in one day" (Withington: 1953:16). It is possible that some of the Kālia burials discovered to date reflect such early depopulation by introduced diseases.

Social rank appears to have had profound influences on places available for burial sites. A king's body, or those of his attendants, could be placed within the district of the king's authority. Many geographical features were available. Fewer were available to lesser chiefs and their attendants, who were presumably limited to their own districts. The number of geographical features available for burial sites seems to have decreased as rank decreased. Burial sites for members of an extended family living in an *‘ili* was restricted to those geographical features located within the land unit, whether broken lava flats, lava tubes, earth plains, or sand dunes (Bowen 1961:21).

According to Bowen (1961:21), most Hawaiians in the pre-contact period belonged to the *maka‘āinana* (commoner) class and their bones were usually buried in no other area than their particular *‘ili* (land division within an *ahupua‘a*).

Burials are commonly reported from clean, consolidated sand deposits, as this was clearly a common method of interment practiced by Hawaiians (Cleghorn 1987:42). One of the earliest references to traditional Hawaiian burial practices was made by Urey Lisiansky, who visited Hawai'i in June 1804. He notes: "The poor are buried anywhere along the beach..." (1814: 122).

Commenting on the nature of burial areas and body positions used in burial, William Ellis (1827:361-363) wrote: "...the common people committed their dead to the earth in a most singular manner." The body was flexed, bound with cord, wrapped in a coarse mat, and buried one or two days after death. Graves were:

...either simply pits dug in the earth, or large enclosures...Occasionally they buried their dead in sequestered places at a short distance from their habitations, but frequently in their gardens and sometimes in their houses. Their graves were not deep and the bodies were usually placed...in a sitting posture. (Ellis 1827:361)

Hawaiians placed significance on the *iwi* (bones), which were regarded as a lasting physical manifestation of the departed person and spirit. "The bones of the dead were guarded, respected, treasured, venerated, loved or even deified by relatives; coveted and despoiled by enemies" (Pukui et al., 1974:107).

6.6 *Mo'o* (Water Spirits)

Traditionally, *mo'o* (water spirits) are associated with fishponds, springs and water resource areas that they guard and protect. *Mo'o* are known to take on more than one form (*kino lau*), many times taking on the form of a part-human or human. Often, ponds were associated with a particular named *mo'o* who was worshiped and to whom offerings were made. Kamehameha promised one of his *akua* (gods), Kihawahine, that he would build her a *hale puaniu* – a house where offerings were made with *'awa* (*Piper methisticum*) (Kamakau 1964: 85-86).

6.7 Hawaiian Trails

In *Fragments of Hawaiian History* John Papa 'Ī'i described the "Honolulu trails of about 1810" (1959: 89), including the trail from Honolulu to Waikīkī:

The trail from Kawaiahao 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 Puaaliilii, down to the mouth of the Apuakehau stream. ('Ī'i 1959: 92)

Based on 'Ī'i's description, the trail from Honolulu to Waikīkī in 1810 coursed through the *makai* side of the present Ft. DeRussy grounds and continued *makai* of the present project area in the vicinity of Kalia Road. It is likely that this trail was a long-established traditional route through Waikīkī (Figure 13).

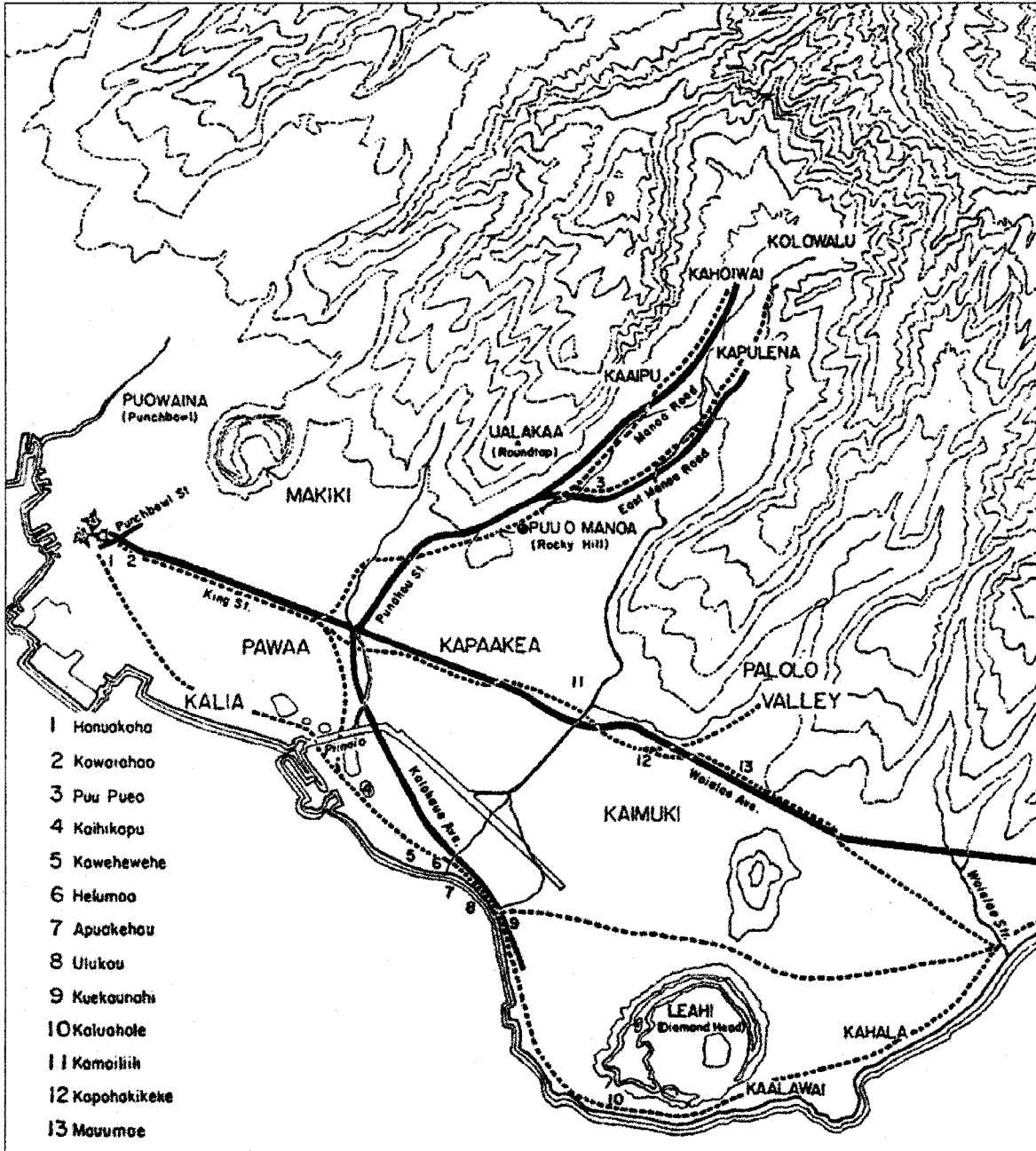


Figure 13. Trails from Punchbowl Street to Waialae as described by ‘Ī‘Ī, map by Gerald Ober (‘Ī‘Ī 1959:93)

Section 7 Summary and Recommendations

Cultural Surveys Hawai'i, Inc., undertook this *preliminary* cultural impact assessment at the request of Patrick Sequirant for the 1944 Kalākaua Avenue Project, Waikīkī Ahupua'a, Kona District, O'ahu, TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058. The proposed project involves the construction of a new commercial building along Kalākaua Avenue. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.

In pre- and early post contact times, Waikīkī Ahupua'a was home to several notable O'ahu *ali'i* (monarchs). Waikīkī was the site of many large *lo'i kalo* (taro ponds) and *loko i'a* (fishponds). Native Hawaiian cultural practices declined with the extensive land modification and urbanization of the greater Waikīkī area. As the wetlands were drained and ponds were filled to accommodate the continuing expansion of urban Honolulu, native Hawaiian cultural practices and resources in Waikīkī were forever changed.

It is anticipated, based on historical research and previous archaeological projects that evidence of pre-contact and early post-contact aquaculture, habitation, agriculture, and possibly burial practices may be found in the project area if intact *Jaucus* sand deposits remain below nineteenth and twentieth century fill layers (see Tulchin and Hammatt 2007). Native Hawaiian burial practices were such that the potential for encountering human burials in sandy deposits within the current proposed project area does exist. Additionally, the present project area is located in the vicinity of the fishpond, Loko Kaipuni. Thus, remnant subsurface fishpond sediments could be encountered.

As of the date of this interim cultural impact study report, two state agencies have provided comments regarding the proposed project; OHA and SHPD. Responses from remaining cultural organizations, agencies and community members (e.g., cultural and lineal descendants of Waikīkī and cultural practitioners) are pending. SHPD and OHA provided the following information:

- SHPD recommended that recognized cultural and lineal descendants from the Waikīkī area be contacted about the proposed project, and offered to provide a list of descendants upon request. (CSH is currently in the process of contacting descendants and will be working with SHPD to ensure that all descendants apposite to the project area have been notified).
- OHA cautioned that the present project area is located in the vicinity (northeast) of the previous location of a *loko i'a* (fishpond), Loko Kaipuni. OHA commented that:

While the information in your letter indicated that the proposed project area is currently developed, there is a possibility that *iwi kūpuna* may be discovered during ground disturbance. Thus, OHA seeks assurances that if this project moves forward, should Native Hawaiian traditional, cultural, or burial sites be identified during ground disturbance, all work will immediately cease, and the appropriate agencies notified pursuant to applicable law.

Based on the preliminary findings of this assessment, Cultural Surveys Hawai'i recommends that as a precautionary measure, personnel involved in future development activities in the area should be informed of the possibility of inadvertent cultural finds, and should be made aware of the appropriate notification measures to follow. *Final results of the community consultation will be provided in a draft cultural impact assessment report to be completed in the next few months.*

Section 8 References Cited

Acson, Veneeta

1983 *Waikiki: Nine Walks Through Time*. Island Heritage Limited, Norfolk Island, Australia.

Armstrong, R. Warwick (ed.)

1973 *Atlas of Hawai'i*. University of Hawaii Press, Honolulu, HI.

Athens, Stephen

1990 *Letter: Inventory of Human Skeletal Remains from Hawaii at IARII*. International Archaeological Research Institute Inc., Honolulu, Hawai'i.

Bath, Joyce, and Carol Kawachi

1989 *Ala Wai Golf Course Burial: Site 80-14-4097 ME#89-0252 Mānoa, Honolulu District, O'ahu TMK 2-7-36:15*. Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

Beardsley, Felicia, and Michael Kaschko

1997 *Archaeological Monitoring and Data Recovery Pacific Beach Hotel Office Annex, Waikiki, O'ahu*. International Archaeological Research Institute, Inc., Honolulu, HI.

Beckwith, Martha

1940 *Hawaiian Mythology*. Yale University Press, New Haven, CT.

Bell, Matthew and Matt McDermott

2007 *Archaeological Inventory Survey Report for the Allure Waikiki Development, Waikiki Ahupua'a, Honolulu (Kona) District, O'ahu TMK [1] 2-6-13: 1, 3, 4, 7, 8, 9, 11 and 12*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Bernice Pauahi Bishop Museum

1984 *Burial Remains Waikiki Ahupua'a Maunalua to Waikiki (incl. Manoa) at Bishop Museum Kona*. Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

1981 *Interim Progress Report on Archaeological Testing, Excavations, and Monitoring at the Halekulani Hotel*. Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

Borthwick, Douglas, Anthony Bush, Rodney Chiogioji, Hallett Hammatt

2002 *Archaeological Inventory Survey of an Approximately 71,000-sq.ft. Parcel in Waikiki, Waikiki Ahupua'a, Kona District, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Bowen, Robert N.

1974 Appendix A: Mokapu: Its Historical and Archaeological Past. IN *Early Hawaiians: An Initial Study of Skeletal Remains from Mokapu, Oahu*, by Charles E. Snow. The University Press of Kentucky, Lexington, KY.

Bush, Anthony, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report for the Waikiki Anticrime Lighting Improvement Project Phase II (TMK 2-6-1, 2-6-2, 2-6-3, 2-6-5, 2-6-6, 2-6-25, 2-6-16, 2-6-18, 2-6-19, 2-6-22, 2-6-23, 2-6-26, 2-6-27)*. Cultural Surveys Hawaii, Inc.: Kailua, HI.

Bush, Anthony, John P. Winieski, Hallett H. Hammatt

2003 *Archaeological Monitoring Report for Excavations for the New International Market Place Sign Project, Waikiki, O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Calis, Irene

2002 *An Archaeological Monitoring Report for ABC Store No. 35 Lemon Road Fence Wall Construction Project Waikiki Ahupua'a, Honolulu District, O'ahu Island, Hawai'i*. Scientific Consultant Services, Honolulu, Hawai'i.

Carlson, Ingrid, Sara Collins, and Paul Cleghorn

1994 *Report of Human Remains found during the Realignment of Kalia Road, Fort DeRussy, Waikiki, O'ahu*. BioSystems Analysis, Kailua, HI.

Center for Oral History, Social Science Research Institute

1985 *Waikiki, 1900-1985: Oral Histories Volumes I-IV*. University of Hawai'i-Manoa, Honolulu, Hawai'i.

Chamberlain, Levi

1957 *Tour Around O'ahu: 1828*, in *Sixty-fifth Annual Report of the Hawaiian Historical Society for the Year 1956*, pp. 2541. Hawaiian Historical Society, Honolulu, HI.

Chiogioji, Rodney

1991 *An Archaeological Assessment of Two Parcels in Waikiki Ahupua'a*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Cleghorn, June Noelani Johnson

1987 *Hawaiian Burial Reconsidered: An Archaeological Analysis*. Unpublished Master's Thesis. University of Hawaii, Honolulu, HI.

Cleghorn, June

1993 *Inadvertent Discovery of Human Remains at the Waikiki Aquarium Renovation Project, Waikiki, Kona, O'ahu, TMK: 3-1-31: 006*. State Historic Preservation Division, Honolulu, Hawai'i.

Cleghorn, Paul

1996 *The Results of an Archaeological Inventory Survey at the Proposed Kalākaua Plaza, Waikiki, O'ahu, Hawai'i (TMK 2-6-16:23, 25-26, 28, 61, and 69)*. Pacific Legacy, Inc., Kailua, HI

2001 *FINAL: Archaeological Mitigation near Waikiki Burger King Construction Site TMK: 2-6-026:012 & 013, Kona District, Waikiki Ahupua'a, Island of O'ahu Letter to Mr. Paul Kosasa (ABC Stores)*. Pacific Legacy, Kailua, Hawai'i.

Corbin, Alan B.

- 2001 *FINAL: Appendix C: Subsurface Archaeological Inventory Survey-Hilton Waikikian Property, Land of Waikiki, Honolulu (Kona) District, Island of O'ahu (TMK: 2-6-9-:2, 3, 10)*. Pacific Health Research Institute, Honolulu, Hawai'i.

Dagher, Cathleen

- 1993 *Inadvertent Discovery of Human Remains at the Waikiki Aquarium Renovation Project, Waikiki, Kona, O'ahu, TMK: 3-1-31: 006*. State Historic Preservation Division, Honolulu, Hawai'i.

Davis, Bertell

- 1991 *Archaeological Monitoring of Environmental Baseline Survey and Excavations in Hawaiian Land Commission Award 1515 ('Apana 2) at Fort DeRussy, Waikiki, O'ahu*. State Historic Preservation Office manuscript.
- 1989 *Subsurface Archaeological Reconnaissance Survey and Historical Research at Fort DeRussy, Waikiki, O'ahu, Hawai'i*. International Archaeological Research Institute, Inc., Honolulu, HI.
- 1984 *The Halekūlani Hotel Site: Archaeological and Historical Investigations in Waikiki, O'ahu, Hawai'i*. B.P. Bishop Museum, Honolulu, HI.

Dega, Michael, and Joseph Kennedy

- 1993 *Archaeological Report Concerning the Inadvertent Discovery of Remains at the Waikiki Aquarium (TMK: 3-1-31:06) Waikiki Ahupua'a Kona District, Island of Oahu*. Archaeological Consultants of Hawaii, Inc., Haleiwa, HI.

Denham, Timothy, and Jeffrey Pantaleo

- 1997 *Archaeological Monitoring and Investigations During Phase I: Kalia Road Realignment and Underground Utilities, Fort DeRussy, Waikiki, O'ahu*. Biosystems Analysis, Kailua, Hawai'i.

Denham, Timothy, Jeffrey Pantaleo, Thomas L. Jackson, William Fortini, Alan Ziegler, Gail Murakami, Linda Scott-Cummings, Paul Tichenal

- 1997 *Archaeological Data Recovery Excavations at the Fort DeRussy Military Reservation, Waikiki, Island of O'ahu, State of Hawai'i*. GANDA Biosystems, Honolulu, Hawai'i.

Elmore, Michelle, and Joseph Kennedy

- 2002 *An Archaeological Monitoring Report for the Installation of a Security Fence at Fort DeRussy, Waikiki Ahupua'a, Honolulu District, Island of O'ahu*. Archaeological Consultants of the Pacific, Haleiwa, Hawai'i.
- 2001 *A Report Concerning the Inadvertent Discovery of Human Remains at the Royal Hawaiian Hotel, (TMK: (1)2-6-02:5, in Waikiki Ahupua'a, Honolulu District, Island of O'ahu*. Archaeological Consultants of Hawaii, Inc, Haleiwa, HI.

Emerson, N.B.

- 1902 *A Preliminary Report on a Find of Human Bones Exhumed in the Sands of Waikiki, in Tenth Annual Report of the Hawaiian Historical Society for the Year 1901*, pp.18-20. Hawaiian Historical Society, Honolulu, HI.

Foote, Donald E., E.L. Hill, S. Nakamura, and F. Stephens

1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii*. U.S. Dept. of Agriculture, U.S. Government Printing Office, Washington, D.C.

Freeman, Sallee, Matt McDermott, Constance O'Hare, and Hallett H. Hammatt

2005 *Archaeological Inventory Survey and Cultural Impact Evaluation for the Ala Wai Gateway Project Site, Kālia, Waikīkī, O'ahu (TMK [1] 2-6-011: 001, 002, 004, 032, 037, and 040)*. Cultural Surveys Hawai'i Inc., Kailua, HI.

Giambelluca, T.W., Nullet, M.A., and T.A. Shroeder

1986 *Hawaii Atlas, Report R76*, Hawaii Division of Water and Land Development, Department of Land and Natural Resources, Honolulu.

Grant, Glen

1996 *Waikiki Yesteryear*. Mutual Publishing, Honolulu.

Griffin, Agnes

1987 *Kalakaua Avenue Gas Pipe Excavation Burial Recovery, Waikiki, C. Honolulu, O'ahu (TMK: 2-6-01:12)*. State Medical Officer's office memorandum to Department of Land and Natural Resources, Honolulu, HI.

Hammatt, Hallett H., Rodney Chiogioji

2006 *Archaeological Literature Review and Field Inspection of a 2.3-acre Project Area in Waikīkī Ahupua'a, Kona District, Island of O'ahu [TMK 2-6-13:1,3,4,7,8,9,11 and 12]*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

2000 *Archaeological Assessment of the Honolulu Zoo Parcel, Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1998 *Archaeological Assessment of King Kalakaua Plaza Phase II, Waikiki, Island of O'ahu, (TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73, & 74)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1993 *An Archaeological Assessment of a 16-Acre Portion of the Ala Wai Golf Course in the Ahupua'a of Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, Hallett H., Matt McDermott

1999 *DRAFT: Burial Disinterment Plan and Report, State Site Numbers 50-80-14-5744-1 and -2 found During Anti-Crime Street Lighting Improvements Beneath Kalakaua Avenue, Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, Hallett H., David W. Shideler

1996 *Archaeological Data Recovery at the Hawai'i Convention Center Site, Waikiki, Kona District, O'ahu ((TMK 2-3-35:001)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1995 *Archaeological Sub-surface Inventory Survey at the Hawai'i Convention Center Site, Waikiki, Kona District, O'ahu (TMK 2-3-35:001)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Honolulu Star Bulletin

1928 The Whole World Knows Waikiki. 17 October:2:1-16. Honolulu.

Hurlbett, Robert, et al.

1992 *Archaeological Monitoring of Mechanical Loop Excavations Hilton Hawaiian Village, Land of Waikiki, Honolulu (Kona) District, Island of O'ahu.* State Historic Preservation Office, Honolulu, HI.

Hurst, Gwen

1990 *Historical Literature and Documents Search, Archaeological Testing and Subsequent Procedures for the Proposed Redevelopment of the Waikikian Hotel.* Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

'I, 'i, John Papa

1959 *Fragments of Hawaiian History as Recorded by John Papa 'I'i.* Bishop Museum Press, Honolulu, HI.

Johnson, Donald D.

1991 *The City and County of Honolulu: A Governmental Chronicle.* University of Hawai'i Press, Honolulu, HI.

Jourdane, Elaine

1995 *Inadvertent discovery of Human Skeletal Remains At Waikiki, Sunset Hotel, Waikiki, Kona, O'ahu.* Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

Kanahele, George S.

1995 *Waikiki 100B.C. to 1900 A.D.: An Untold Story.* Honolulu: The Queen Emma Foundation. Honolulu, HI.

Kennedy, Joseph

1991 *Archaeological Monitoring Report for the proposed IMAX Theater Project.* Archaeological Consultants Hawai'i, Haleiwa, Hawai'i.

LeSuer, C. Celeste, Matt McDermott, Rodney Chiogioji, Hallett H. Hammatt

2000 *Draft: An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikiki, Waikiki Ahupua'a, Kona District, Island of O'ahu, Hawai'i.* Cultural Surveys of Hawai'i, Kailua, Hawai'i.

Maly, Kepa, Leta J. Franklin, Paul H. Rosendahl

1994 *Archaeological and Historical Assessment Study Convention Center Project Area, Land of Waikiki, Kona District, Island of O'ahu.* Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

Mann, Melanie, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report for the Installation of 12- and 8-inch Water Mains on Lili'uokalani Avenue and Uluniu Avenue, Waikiki Ahupua'a, Kona District, Island of O'ahu (TMK 2-6-023, 24, and 26).* Cultural Surveys Hawai'i, Inc., Kailua, HI.

McAllister, J.G.

1933 *Archaeology of O'ahu.* B.P. Bishop Museum Bulletin, No.104.

McDermott, Matthew, Rodney Chiogioji, and Hallett Hammatt

1996 *An Archaeological Inventory Survey of Two Lots (TMK 2-6-24:65-68 and 80-83 and TMK 2-6-24:34-40 and 42-45) in Waikiki Ahupua'a, O'ahu, Hawai'i.* Cultural Surveys Hawaii, Inc., Kailua, HI.

McGuire, Ka'ohulani and Hallett H. Hammatt

2001 *A Traditional and Cultural Practices Assessment for a Proposed Outrigger Hotels Hawai'i Property Redevelopment in Waikiki, Kona District, island of O'ahu.* Cultural Surveys of Hawai'i, Kailua, Hawai'i.

McMahon, Nancy

1994 *Inadvertent Burial Discovery on April 28, 1994, Waikīkī, Kona, O'ahu-- Intersection of Kalākaua and Kuamo'o Streets.* State Historic Preservation Office, Kapolei, HI.

Menzies, Archibald

1920 *Hawai'i Nei 128 Years Ago.* Honolulu.

Mitchell, Aulii and Hallett H. Hammatt

2006 *Cultural Impact Assessment Of a 2.3-acre Project Area, Waikīkī Ahupua'a, Kona District, O'ahu (TMK 2-6-13: 1,3,4,7,8,9,11, and 12). Job Code: WAIKI 4.* Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Nakamura, Barry Seichi

1979 *The Story of Waikiki and the "Reclamation" Project.* Unpublished M.A. thesis, Department of History, University of Hawaii, Honolulu.

Neller, Earl

1984 *An Informal Narrative Report on the Recovery of Human Skeletons From a Construction Site in Waikīkī on Paoakalani Street, Honolulu, Hawai'i.* State Historic Preservation Office, Kapolei, HI.

1981 *An Archaeological Reconnaissance of the New Construction at the Halekulani Hotel, Waikiki.* State Historic Preservation Division, Honolulu, Hawai'i.

a. *The Kālia Burial Site #50-OA-2870: Rescue Archaeology in Waikīkī, Hawai'i.* State Historic Preservation Program, Kapolei, HI.

O'Hare, Constance, David Shideler and Hallett H. Hammatt

2005 *Archaeological Inventory Survey for the 116-unit Kaio'o Multifamily Condominium Project, Waikiki Ahupua'a, Honolulu (Kona) District, O'ahu Island, TMK (1) 2-6-012:037-044, 055-058.* Cultural Surveys Hawai'i, Kailua, HI.

O'Leary, Owen, Rodney Chiogioji, Douglas F. Borthwick, and Hallett H. Hammatt

2005 *Archaeological Inventory Survey of a 1-Acre Parcel, 2284 Kalākaua Avenue, Waikīkī, Kona District, Island of O'ahu.* Cultural Surveys Hawai'i, Kailua, HI.

Perzinski, David, Matt McDermott Rodney Chiogioji, and Hallett H. Hammatt

1999 *Archaeological Monitoring Report for Anti-Crime Street Lighting Improvements Along Portions of Ala Wai Boulevard, Kalākaua Avenue, Ala Moana Boulevard and 'Ena Road, Waikīkī, O'ahu.* Cultural Surveys Hawai'i, Kailua, HI.

Perzinski, Mary, Hallett H. Hammatt

- 2001a *Archaeological Monitoring Report for the Kapiolani Bandstand Redevelopment Project, Waikiki, Waikiki Ahupua'a, Kona District, O'ahu (TMK 3-1-43).* Cultural Surveys Hawai'i, Kailua, Hawai'i.
- 2001b *Archaeological Monitoring Report for the Re-Internment Facility for the Waikiki Iwi Kupuna, Kapiolani Park, Waikiki, Island of O'ahu (TMK: 3-1-43:1).* Cultural Surveys Hawai'i, Kailua, Hawai'i.
- 2001c *Archaeological Monitoring Report for Street Light Improvements Along a Portion of Kalakaua Avenue Between the Natatorium to Poni Mo'i Road, Waikiki, Island of O'ahu (TMK 3-1-031, 032 & 043).* Cultural Surveys Hawai'i, Kailua, Hawai'i.

Perzinski, Mary, David W. Shideler, John Winieski, Hallett H. Hammatt

- 2000 *Burial Findings During the Excavation of a 16th Watermain on an Approximately 915 Meter (3,000 Ft.) Long portion of Kalakaua Avenue Between Kai'ulani and Monsarrat Avenues Associated with the Kuhio Beach Extension/Kalakaua Promenade Project, Waikiki Ahupua'a, Kona District, Island of O'ahu, (TMK 2-6-1, 2-6-22, 2-6-23, 2-6-26, 2-6-27, and 3-1-43).* Cultural Surveys Hawai'i, Kailua, Hawai'i.

Pietrusewsky, Michael

- 1992a *A Mandible Fragment found at the Sheraton Moana Surfrider Hotel, Waikiki.* State Historic Preservation Division, Honolulu, Hawai'i.
- 1992b *Human Remains from the Lili'uokalani Gardens Site, Hamohamo, Waikiki, O'ahu.* State Historic Preservation Division, Honolulu, Hawai'i.

Putzi, Jeffrey L., Paul Cleghorn

- 2002 *Archaeological Monitoring of Trench Excavations for Sewer Connections Associated with the Hilton Hawaiian Village Improvements.* Pacific Health Research Institute, Hilo, Hawai'i.

Riford, Mary F.

- 1989 *Pre-Field Background Literature Search for Archaeological Resources at the Proposed Waikiki Landmark Property.* Bernice Pauahi Bishop Press, Honolulu, Hawai'i.

Rosendahl, Paul

- 2001 *Archaeological Assessment Study Waikiki Beach Walk Project, Land of Waikiki, Honolulu (Kona) District, Island of O'ahu Technical Report for EIS.* Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.
- 1999 *Interim Report: Hale Koa Hotel Subsurface Inventory Survey-Luau Facility, Kalia, Land of Waikiki, District of Kona, Island of O'ahu.* Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.
- 1992 *Archaeological Monitoring of Mechanical Loop Excavations Hilton Hawaiian Village.* Pacific Health Research Institute, Hilo, Hawai'i.
- 1989 *Preliminary Report Upon Completion of Field Work Hale Koa Hotel Site Subsurface Inventory Survey Kalia, Land of Waikiki, District of Kona.* Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

Simons, Jeannette A., S. Antonio-Miller, D. Trembly, and L. Somer

- 1991 *Archaeological monitoring and data recovery at the Moana Hotel Historical Rehabilitation Project, O'ahu, Waikīkī*. Applied Research Group, Bishop Museum, Honolulu, HI.

Simons, Jeannette A., Paul Cleghorn, R. Jackson, T. Jackson

- 1995 *DRAFT Archaeological Data Recovery Excavations at Fort DeRussy, Waikīkī, O'ahu, Hawai'i*. Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

State Historic Preservation Division (SHPD)

- 1991 *Non Human Bones found in Waikiki*. State Historic Preservation Division, Honolulu, Hawai'i.
- 1987 *Kalakaua Avenue Gas Pipe Excavation Burial*. State Historic Preservation Division, Honolulu, Hawai'i.

Streck, Charles

- 1992 *Human Burial Discovery during Archaeological Data Recovery Excavations at Fort DeRussy, Waikiki, O'ahu Island, Hawai'i, 20 May 1992*. State Historic Preservation Division, Honolulu, Hawai'i.

Tome, Guerin and Michael Dega

- 2003 *Archaeological Monitoring Report for Construction Work at the Waikiki Marriot, Waikiki, Manoa Ahupua`a, Honolulu District, O'ahu Island, Hawai'i*. Scientific Consultant Services, Honolulu, Hawai'i.

Tulchin, Jon and Hallett H. Hammatt

- 2003 *Archaeological and Cultural Impact Assessment of a 1-Acre Parcel, 2284 Kalakaua Avenue, Waikiki, Kona District, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Tulchin, Todd, David W. Shideler and Hallett H. Hammatt

- 2006 *Archaeological Inventory Survey Plan For a 2.3-acre Project Area, Waikīkī Ahupua`a, Kona District, O'ahu TMK [1] 2-6-13: 1, 3, 4, 7, 8, 9, 11 and 12*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Vancouver, George

- 1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World...Performed in the years 1790-1795*. Robinsons and Edwards, London.

Winieski, John P., and Hallett H. Hammatt

- 2001 *Archaeological Monitoring Report for the Public Baths Waste Water Pumping Station Force Main Replacement, Waikīkī, Honolulu, O'ahu, Hawai'i (TMK 2-6-25, 26, & 27, and 3-1-31, 43)*. Cultural Surveys Hawai'i, Kailua, HI.

Winieski, John, Mary Perzinski, David Shideler, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report for the Installation of a 16-Inch Water Main on an Approximately 915 Meter (3,000 Ft) Long Portion of Kalākaua Avenue Between Ka'iulani and Monsarrat Avenues Associated with the Kūhiō Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua'a, Kona District, Island of O'ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43).* Cultural Surveys Hawai'i, Kailua, HI.

Winieski, John, Mary Perzinski, Kehaulani Souza, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report, The Kuhio Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua'a, Kona District, Island of O'ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43),* Cultural Surveys Hawai'i, Kailua, HI.

Yost, Harold

1971 *The Outrigger Canoe Club of Honolulu, Hawaii.* Outrigger Canoe Club, Inc., Honolulu, HI.

Appendix A LCA Documentation

Waihona 'Aina
Your ultimate resource
for hawaiian history and land use

Articles Information Samples Gallery About Us Contact Us
Mahele Database Boundary Commission Land Grants Royal Patents **Review Cart & Checkout**

DOCUMENT DELIVERY Change password Log out

Mahele Database Documents
Number: 01409

Claim Number:	01409	
Claimant:	Nakoko	
Other claimant:		
Other name:		
Island:	Oahu	
District:	Kona	
Ahupuaa:	Waikiki	
Ili:	Kalia, Aikahi*	
Apana:	2	Awarded: 1
Loi:	2	FR:
Plus:		NR: 100v3
Mala Taro:		FT: 12v3
Kula:		NT: 333v3
House lot:	1	RP: 4154

Kihapai/Pakanu:	Number of Royal Patents:	1
Salt lands:	Koele/Poalima:	No
Wauke:	Loko:	No
Olona:	Lokoia:	No
Noni:	Fishing Rights:	No
Hala:	Sea/Shore/Dunes:	No
Sweet Potatoes:	Auwai/Ditch:	No
Irish Potatoes:	Other Edifice:	No
Bananas:	Spring/Well:	No
Breadfruit:	Pigpen:	No
Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	Yes
Bitter Melon/Gourd:	Stream/Muliwai/River:	Yes
Sugar Cane:	Pali:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	1 house

No. 1409, Nakoko
N.R. 100-102v3

To the Land Commissioners, Greetings and peace: I, the undersigned, hereby tell of my claims for one lo'i, named Aikahi, also a house lot at Kalia, in Waikiki, Island of Oahu.

NAKOKO

Residence: Kapapala

F.T. 12v3

Ci. 1409, Nakoko, October 11, 1845

Kawao, sworn, This land is in the ili of Aikahi, Waititi, Oahu, in two lots.

1. House lot, Kalia, partly fenced and one house on it.
 Mauka is Kekuanaoa's waste land
 Waialae is Paele's
 Makai is Kaluahinenui's
 Honolulu, Kimo's.

2. Kalo land in Aikahi, two patches and an auwai.
 Mauka is Lilikalani's
 Waialae, Kuluwalehua's
 Makai, Peleuli's
 Honolulu, Kaluahinenui's.

I gave claimant these lands in time of Kaahumanu I and he has held them in peace ever since. I am konohiki of them under Victoria.

N.T. 333v3

No. 1409, Nakoko, October 11, 1845

Kawao, sworn, I have seen his interest at Kapapala in Waikiki. The house lot is Makai at Kealia in Waikiki.

1. One house lot:
 Mauka, Kekuanaoa's place
 Waialae, Paele's place
 Makai, Kaluahinenui's place
 Honolulu, Kimo's place.
 One side of the property has been enclosed while the other is open.

2. Two patches and a stream:
 Mauka, Lilikalani's place
 Waialae, Paele's place
 Makai, Peleuli's place

Honolulu, Kaluahinenui's place.

All of these interests have been from me given at the time of Kaahumanu I and since that time to the present, he has lived there peacefully without any objections. I am the konohiki for this place since Kaahumanu I to the present time. Pikolia is the landlord.

[Award 1409; R.P. 4154; Kalia Waikiki Kona; 1 ap.; 2.92 Acs]



Number: 08559B*O

Claim Number:	08559B*O		
Claimant:	Lunalilo, William C.		
Other claimant:	Kanaina, Charles for King		
Other name:			
Island:	Oahu		
District:	Kona, Koolauloa		
Ahupuaa:	Waikiki, Kapahulu, Kaalaea, Laie, Pahipahialua, Kapaka		
Ili:	Kamoku, Pau, Kalauakou, Laiewai, Laiemaloo,		
Apana:	9	Awarded: 1	
Loi:		FR:	
Plus:		NR:	
Mala Taro:		FT:	551v3, 82v16
Kula:		NT:	185v10
House lot:		RP:	5688, 7394, 7531, 7635, 7
Kihapai/Pakanu:		Number of Royal Patents:	12
Salt lands:		Koele/Poalima:	No
Wauke:		Loko:	No
Olonā:		Lokoia:	No

Noni:	Fishing Rights:	No
Hala:	Sea/Shore/Dunes:	No
Sweet Potatoes:	Auwai/Ditch:	No
Irish Potatoes:	Other Edifice:	No
Bananas:	Spring/Well:	No
Breadfruit:	Pigpen:	No
Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	No
Bitter Melon/Gourd:	Stream/Muliwai/River:	No
Sugar Cane:	Palisade:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	'ili and ahupua'a claims

**No. 8559B*O, (W.C. Lunalilo) C. Kanaina
F.T. 551-552v3**

W.H. Uana, sworn, says he knows the house lot of Lunalilo, in Kaluaaha, Molokai. It is bounded:

Mauka by the public road
 On the Halawa side by a fish pond of the government called "Neaupala"
 Makai by the sea beach
 On Kaluaakoi side by a government fish pond called "Kaluaaha "

This lot formerly was ordered to be enclosed by Hoapili wahine and Kekauluohi when Eseta Kipa was Governess of Molokai. The people of Kekauluohi's lands erected a stone house on this lot in the year 1835. It is now in possession of Lunalilo as heir of Kekauluohi.

E. Kipa, sworn says, she knows the lot. I was Governess of Molokai under Hoapili wahine &

Kekauluohi in former times, and by their orders enclosed this lot and built a stone house on it with the labor of the people of their own lands. When the government sold the land of "Kaiuaaha" to the Missionaries, I heard Kaloioa come and ask permission from Kanaina to live in the stone house, which permission she got.

(A. Paki sets up a claim for this lot as heir of Kalaolou.)

L. Haalelea, sworn says, he knows the house lot claimed by Lunailo in Kailua, Hawaii. It is bounded:

On Kiholo side by the church lots
 Makai by the public road
 On Keauhou side by a road leading mauka
 Mauka by some house lots.

It is enclosed by a wall. This lot I have heard belonged formerly to Keaho, the father of Mahuka. I have heard that when Keaho died he left this lot to Kekauluohi, and I have recently seen a letter from Mahuka to W.C. Lunailo requesting him to allow Mahuka to retain charge of this lot under Lunailo. In 1843 I was at Kailua & Kekauluohi was there. I then saw the later Governor Adams give her some money which he said was rent received for this same lot. Part of this lot is claimed by the heir of W.P. Leleiohoku. There is a fence remaining though and dividing the lot into two parts.

F.T. 82-84v16 and N.T. 82-84v16

No. 8559B, William C. Lunailo

Polea, sworn says, he knows the lots claimed by William C. Lunailo, at Lahaina, Maui.

The first called Luaehu, is bounded as follows:

Mauka by Kaiheekai and Hiram's land
 Olowalu by King's land
 Makai by Sea beach
 Kaanapali by Polea and M.J. Nouliou [Nowlien].

The second in Pakala is bounded as follows:

Mauka by Public street
 Olowalu by Kaiheekai's land
 Makai by H.S. Swinton's and others' land

Kaanapali by Public road.

The third lot called Hawaikaekae is also bounded as follows:

Mauka by Kalaleikio's land
Olowatu by Public road
Makai by Alaioa Kahiko street
Kaanapali by Daniela II's land.

This lot is disputed by Manuahina the wife of George Shaw, whose claim in right of her father. She has already got an award for a part of this lot.

The fourth lot in Paunau is bounded as follows:

Mauka by Keaweihuehu's and Kahula's land
Olowatu by Keaweluaole's land
Makai by Old road
Kaanapali by Street leading to Lahainaluna.

The fifth lot called Loinui is bounded as follows:

Mauka by Keaweluaole, Kauhi and Kalolou's land
Olowatu by Mr. Baldwins
Makai by Old road
Kaanapali by Kamakinui's land.

The sixth lot in Aki is bounded as follows:

Mauka by Kaweka's land
Olowatu by Wahie's land
Makai by Main road
Kaanapali by M.I. Nowlein's land.

The seventh lot in Puunoa is bounded as follows:

Mauka by Main road
Olowlu by Iosua Kaeo
Makai by Iosua Kaeo
Kaanapali by King's land.

The eighth lot in Kelawea is bounded as follows:

Mauka by Lahainaluna

Olowalu by Road from the beach
 Makai by Keleikini and Kahookano's lands
 Kaanapali by A stream.

All these lots have descended to William C. Lunalilo from his mother, Kekauluohi, and are now in the hands of his lunas. The lot in "Pakala" is disputed by Paki and others.

N.T. 619-620v3

No. 8559, [C. Kanaina], Section 49, C. Kanaina, From pg. 597 Vs. No. 2619 Pahau

C. Kanaina has come before the land commissioners and stated, "I am opposing Pahau's interest in section 2 consisting of nine patches They are in my land which is the lele Opukaala of the Pau ill land in Waikiki.

Here is the reason Pahau had acquired that land. Kaaha had given land to him and when he /Kaaha / died all of the lands in Pau were returned to Wm. C. Lunalilo; therefore, I feel that these patches in that section should be returned to me permanently, or else they should be divided between him and me.

Postponed until they make their own settlements and present the best one to the land officers who will approve it.

N.T. 185-187v10

No. 8559B, William Charles Kanaina, [for Lunalilo], Honolulu, 24 April 1850

COPY

Greetings to you Highness, John Young, the Minister of Interior.

My desire is to have the government claim separated from my lands; therefore I hereby give some of my land for the government to have forever and the same shall apply to mine. Here are the names of my lands:

Kawela ahupuaa, Hamakua, Hawaii.
 Waikaekoe ahupuaa, Hamakua, Hawaii.
 Makapala ahupuaa, Kohala, Hawaii.

Kehena ahupuaa, Kohala, Hawaii.
Puhau ili of Iole, Kohala, Hawaii.
Puakoa ili of Waimea, Kohala, Hawaii.
Honuainonui ahupuaa, Kona, Hawaii.
Puapuanui ahupuaa, Kona, Hawaii.
Lehuulanui ahupuaa, Kona, Hawaii.
Kawainui ahupuaa, Kona, Hawaii.
Lanihaunui ahupuaa, Kona, Hawaii.
Pakiniili ahupuaa, Kau, Hawaii.
Hanuapo ahupuaa, Kau, Hawaii.
Kahanalea ahupuaa, Puna, Hawaii.
Keahialaka ahupuaa, Puna, Hawaii.
Keeau ahupuaa, Puna, Hawaii.
Makahalanaloa ahupuaa, Hilo, Hawaii.
Pepekeo ahupuaa, Hilo, Hawaii.

Kaapuhu ahupuaa, Kipahulu, Maui.
2 Waiehu, Puuli, West Maui.
Ahipuli ili for Waiehu, West Maui.
Pepee ili for Waituku, West Maui.
Honolua ahupuaa, Kaanapali, Maui.
Kalimaoha ahupuaa, Lahaina, Maui.
Polanui ahupuaa, Lahaina, Maui.
Kuhouilea ahupuaa, Lahaina, Maui.

Waialua ahupuaa, Kona, Molokai.
Kawela ahupuaa, Kona, Molokai.

Pau ili for Waikiki in Manoa, Kona, Oahu.
Kamoku ili for Waikiki in Manoa, Kona, Oahu.
Kaluaokau ili for Waikiki in Manoa, Kona, Oahu.
Kapahulu ili for Waikiki in Manoa, Kona, Oahu.
Kaalea ahupuaa, Koolaupoko, Oahu.
Kapaka ahupuaa, Koolauloa, Oahu.
Laiewai ahupuaa, Koolauloa, Oahu.
Laiemaloo ahupuaa, Koolauloa, Oahu.
Pahipahialua, Koolauloa, Oahu.

Kahili, Koolauloa [sic], Koolau, Kauai.
 Kalihiwai, Koolauloa [sic], Koolau, Kauai.
 Pilauiwai, Koolauloa [sic], Koolau, Kauai.
 Manuahi ili, Kona, Kauai.
 Waipouli ahupuaa, Puna, Kauai.

These lands listed above shall be for me fee simple forever, it would not be right for the government to claim my land.

The following lands, I shall give to the government fee simple forever.

Kapulena ahupuaa, Hamakua, Hawaii.
 Kukulhaele ahupuaa, Hamakua, Hawaii.
 Auau ahupuaa, Kohala, Hawaii.
 Keopuhukahi ahupuaa, Kona, Hawaii.
 Papaakoko ili of Honokohau, Kona, Hawaii.
 Ninole ahupuaa, Kau Hawaii.
 Laepaoo ahupuaa, Puna, Hawaii.
 Koaie 1 ahupuaa, Puna, Hawaii.
 Koaie 2 ahupuaa, Puna, Hawaii.
 Laepuki ahupuaa, Puna, Hawaii.
 Kaiuliki ahupuaa, Hilo, Hawaii.
 Kahuku ahupuaa, Hilo, Hawaii.

Waiakoa ahupuaa, Kula, Maui.
 Kou ili of Waiehu Puaii, Komohana, Maui.
 Kapoino ili of Waiehu Puaii, Komohana, Maui.
 Haeleena ili of Waiehu Puaii, Komohana, Maui.
 Keokamu ili of Waiehu Puaii, Komohana, Maui.
 Wainee ahupuaa, Lahaina, Maui.

Mahana ahupuaa, Lanai.

Kamalomalo ahupuaa, Puna, Kauai.
 Kumukumu ahupuaa, Koolau, Kauai.

I've given the lands listed above to the government forever, all of them are for the government.

Please consider my request with compassion for me.
With appreciation, I am,
William Charles Lunaliio, Charles Kanaina (child guardian)
Department of Interior, 6 April 1852.

This is a try copy of Lunaliio's division with the government,
A.G. Thruston, Secretary

N.T. 450v10

No. 8559B, William C. Lunallio, Protested by Kaai

Mahuna, sworn, it is true my own place was written in the bill of sale to C. Kanaina, the place is just mauka of the land in Kailua of Kona, Hawaii, over which there is a dispute by Kaai. That is the lot I have transmitted to him, Kanaina, but I have not seen the property Kaai has at this present time, however, I had seen my parents living on this land at the time [of] Kaahumanu I. I had gone on a tour. Houses had been built, but I have not lived there since that time to the present, nor have I seen this lot over which there is a dispute with Kaai.

C. Kanaina, relates - the witnesses for this land on which Kaai and I are working are dead; although, I had thought they (two) would be my witnesses, but today they have denied by claim to this place. It is true this place had been for their father, Keoho, where he lived until he had died and they (two) are his own children, but I am demanding according to the old bequest of Keaho to M. Kekauluohi as well as by many other statements.

Naea, sworn, I have seen Kaai's place in Keopu of Kona, Hawaii, which is a house lot.

Mauka by Mahuka's lot
South Kona by a road
Makai by Government road
Kohala by vacant lot.

Land from Keoho (his father) upon his (Keoho) death in 1833. Keoho had obtained it long ago as idle land.

Kaai has always lived there peacefully to the present time.

Now C. Kanaina has offered a protest, I do not know the reason for it.

Kioloa, sworn, all of the statements above are true. I have known in the same way. I have not known the place was for C. Kanaina. It had been for Keoho, Kaai's father and now Kaai is the true claimant of this place.

[Award 8559B; (Oahu); R.P. 7635; Kamoku Waikiki (apana 30); R.P. 8193, 8311 & 8416; Pau Waikiki (apana 29)(see Kapahulu award); R.P. 8434; Pau Waikiki Kona; (ap. 29); R.P. 8124; Kapahulu Kona; 1 ap.; 31.50 Acs (apana 32); R.P. 8165; Kapahulu Kona; 2 ap.; 2,184.44 Acs (apana 32); R.P. 8514; Kaea Kapahulu Waikiki; 1 ap.; 6.16 Acs; R.P. 7652; Kaluakou Waikiki (apana 31); R.P. 7531; Kaalaea Koolaupoko; 1 ap.; 1340 Acs;(apana 33); R.P. 7494; Laie-wai Koolauloa (apana 35); Laie-maloo Koolauloa (apana 36); R.P. 5688; Pahipahialua Koolauloa (apana 37); 704 Acs; no R.P.; Kapaka Koolauloa (apana 34); (Maui) R.P. 8395; Polanui Lahaina; 1 ap.; 440 Acs (apana 25); R.P. 8129; Honolulu Kaanapali; 1 ap.; 3860 Acs (ahupua'a, apana 23); R.P. 7664; Pepee Wailuku; R.P. 8396; 1 ap.; 255.7 Acs; Kalimaohe Lahaina; 2 ap.; 4.93 Acs; (apana 24); R.P. 8397; Kuholiiea Lahaina; 2 ap.; 184.5 Acs; (apana 26); R.P. 5637; Paunau Lahaina; 1 ap.; 2 roods 24 perkas (apana 4); R.P. 5639; Aki Lahaina; 1 ap.; 16 perkas (apana 6); no R.P.; Paeohi Lahaina; 1 ap.; 1 Ac. 52 rods; R.P. 5699; Loiniu (Luaehu Waianae) Lahaina; 2 ap.; 2.75 Acs 37 rods; R.P. S8550/S8546 & S8537. Kaapahu Kipahulu; 1 ap.; (ahupuaa, apana 19); Walehu 2 Wailuku; no R.P. Ahikuli Waiehu; (Hawaii) R.P. 478; Pakiniiki Kau; 1 ap.; 2357 Acs; Makaanaloa Hilo; 2 ap.; 7600 Acs; R.P. 7049; Honuapo Kau; 1 ap.; ahupuaa 2200 Acs; Honuaino nui; 1 ap.; 262 Acs; R.P. 7454; Kawainui iki Kona; 1 ap.; 380 Acs; R.P. 7455; Lehuula nui; 1 ap.; 290 Acs; Lehuula nui; 1 ap.; 2840 Acs; Puapuaanui Kona; 1 ap.; 370 Acs; R.P. 7680; Kahena 2 N. Kohala; 1 ap.; (ap.4); ahupuaa; Puako S. Kohala; 1 ap.; Iliaina (Ap.6); Kahaualea Puna; 1 ap.; 26,000; Keahialaka Puna; 1 ap.; 5562 Acs; Pepeekeo Hilo; Keaau Puna; 1 ap.; 64,275 Acs; Kawela Hamakua; R.P. 7434; Honuainonui N. Kona; R.P. 7456; Lanihau Nui Kona; R.P. 8452; Waikoekoe Hamakua; no R.P.; Makapala Kohala; R.P. 7192 Makaanaloa Hilo; 2 ap.; 7600 Acs; (Molokai) R.P. 7655; Waialua; R.P. 7656 Kawela; (Kauai) R.P. 8173; Kalihiwai Halelea; no R.P. Manuahi Hanapepe; R.P. 8323; Kahili Koolau; R.P. 7060; Pilaa Koolau; R.P. 7373; Waipouli Puna; See 8559 to C. Kanaina who is awarded a property at Ukumehame under 8559B; see also Award 277]

Mahele Database Documents

Number: 02083

Claim Number	02083		
Claimant	Kahiloaho		
Other claimant:			
Other name:			
Island:	Oahu		
District:	Kona		
Ahupuaa:	Waikiki		
Ili:	Kamookahi, Kanukukahi, Piinaio, Mooiki, Piinao		
Apana:	3	Awarded:	1
Loi:	3	FR:	
Plus:		NR:	350v3
Mala Taro:		FT:	
Kula:		NT:	638v3
House lot:	1	RP:	3923
Kihapai/Pakanu:		Number of Royal Patents:	1
Salt lands:		Koele/Poalima:	No
Wauke:		Loko:	No
Oloha:		Lokoia:	No
Noni:		Fishing Rights:	No
Hala:		Sea/Shore/Dunes:	No
Sweet Potatoes:		Auwai/Ditch:	No
Irish Potatoes:		Other Edifice:	No
Bananas:		Spring/Well:	No
Breadfruit:		Pigpen:	No

Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	No
Bitter Melon/Gourd:	Stream/Muliwai/River:	No
Sugar Cane:	Pali:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	

**No. 2083, Kahiloaho
N.R. 350v3**

I, the one those name is below, hereby state my claim for two lo'i. One is at Aipae, and another at Kaulukukahi /and also/ my house lot and five ponds. This is my claim of which I am telling you keiki, two lo'i at Mookahi.
KAHILOAHO X, his mark
Waikiki, Oahu, 23 December 1847

N.T. 638v3

No. 2083, Kahiloaho, July 3, 1850

Ku, sworn, I have seen his land at Waikiki - 3 sections in the ili below:

- Section 1 - 1 patch in Mooiki ili.
- Section 2 - 2 patches in Mookahi ili.
- Section 3 - House lot in Kalia ili.

He received section 1 from Kamakahonu, the konohiki, in 1844. It had been from the king to Kamakahonu; Section 2, from Kaaukuallii in 1834; section 3, an idle land on which he worked in 1836, before the death of Kinau and he has lived there comfortably to the present time. No one has objected.

1. The boundaries are:
Mauka, Kahanaumaikai
Waiatae, Kamakahonu
Makai, Kaiakooli
Honolulu, Kauhoa.

2.
Mauka, Kanemakua
Waiatae, Haumalu
Makai, Kumoanahulu
Honolulu, Keaka.

3. Kaluahinenui's land is around completely.

Haumalu, sworn. Everything which has been mentioned above is true. I have known in the way.

[Award 2083; R.P. 3923; Kamoookahi Waikiki Kona; 2 ap.; .44 Ac.; Kanukukahi Waikiki Kona; .34 Ac.; Piinaio Waikiki Kona; 1 ap.; 1.73 Acs]

Appendix G

**Archaeological Assessment for the 1944 Kalākaua Avenue
Project, Waikīkī Ahupua‘a, Kona District, O‘ahu**

TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058

**Prepared for
Patrick Sequirant**

**Prepared by
Jon Tulchin, B.A.
and
Hallett H. Hammatt, Ph.D.**

**Cultural Surveys Hawai‘i, Inc.
Kailua, Hawai‘i
(Job Code: WAIKIKI 12)**

December 2007

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Management Summary

Reference	Archaeological Assessment for the 1944 Kalākaua Avenue Project, Waikīkī Ahupua'a, Kona District, O'ahu, TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058 (Tulchin & Hammatt 2007)
Date	December 2007
Project Number (s)	Cultural Surveys Hawai'i job code: WAIKIKI 12
Investigation Permit Number	Fieldwork for this investigation was performed under archaeological fieldwork permit number 07-19, issued by the Hawai'i Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD).
Project Location	The project area is located approximately 80 m (262 ft) southwest of the Ala Wai Canal, and is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast and Niu Street to the northwest. It is depicted on the 1998 U.S. Geological Survey (USGS) 7.5 Minute Series topographic map, Honolulu Quadrangle.
Land Jurisdiction	Private
Agencies	State of Hawai'i Department of Land and Natural Resources / State Historic Preservation Division (DLNR / SHPD)
Project Description	The proposed project involves the construction of a new commercial building along Kalākaua Avenue and Pau Street. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.
Project Acreage	Approximately 1 acre.
Area of Potential Effect (APE) and Survey Acreage	Based on available information, the proposed commercial building development will not impose adverse visual, auditory or other environmental impact to any known historic properties, including standing architecture, located outside the project area. Accordingly, the proposed project, based on available information lacks potential to affect historic properties outside the project area. As a result the project's Area of Potential Effect (APE) is the same as the project area. The survey area for the current investigation included the entire approximately 1-acre APE/project area.

Historic Preservation Regulatory Context	The 1944 Kalākaua Avenue Project constitutes a project requiring compliance with and review under state of Hawai'i historic preservation legislation [Hawai'i Revised Statutes (HRS) Chapter 6E-8 and Hawai'i Administrative Rules (HAR) Chapter 13-13-275]. At the request of Patrick Sequirant, CSH completed what began as an archaeological inventory survey investigation of the project area, per the requirements of HAR Chapter 13-13-276. Because no historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. This archaeological assessment report was prepared to support the proposed project's historic preservation review (under HAR 13-13-275) and any other project-related historic preservation consultation.
Fieldwork Effort	Ra'imana Hunkin, B.A., and Doug Thurman, B.A., assisted project director Jon Tulchin, B.A., with the field effort, which required 12 person-days to complete. Fieldwork took place between November 8th and November 15th 2007 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator).
Number of Historic Properties Identified	None
Historic Properties Recommended Eligible to the Hawai'i Register of Historic Places (Hawai'i Register)	None
Historic Properties Recommended Ineligible to the Hawai'i Register	None
Effect Recommendation	Based on the current investigation, there are no historic properties recommended Hawai'i Register-eligible within the project's APE. Accordingly, based on the available information, it is recommended that the proposed project will have no effect on significant (i.e. Hawai'i Register-eligible) historic properties. A project specific effect determination of "no historic properties affected" is warranted for the project.

Mitigation Recommendation	<p>The proposed 1944 Kalākaua Avenue Project will not have an adverse impact to any historic properties and no further work is recommended for the project.</p> <p>In the unlikely event that previously unidentified subsurface historic properties are encountered by project construction, the project proponents should immediately stop work in the vicinity and contact SHPD's O'ahu Office [Tel. (808) 692-8015].</p>
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Section 1 Introduction

1.1 Project Background

At the request of Patrick Sequirant, Cultural Surveys Hawaii, Inc. (CSH) conducted an archaeological inventory survey of an approximately 1-acre parcel in the *ahupua'a* of Waikīkī, Kona District, Island of O'ahu, TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058. The project area is located at 1944 Kalākaua Avenue and is approximately 80 m (262 ft) southwest of the Ala Wai Canal (Figure 1 & Figure 2). The project area is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast, and Niu Street to the northwest (Figure 3).

The proposed project involves the construction of a new commercial building along Kalākaua Avenue and Pau Street. Associated ground disturbance will include excavation related to the project area's development, to include structural footings, utility installation, roadway and parking area installation, and landscaping.

Based on available information, the proposed commercial building development will not impose adverse visual, auditory or other environmental impact to any known historic properties, including standing architecture, located outside the project area. Accordingly, the proposed project, based on available information lacks potential to affect historic properties outside the project area. As a result the project's Area of Potential Effect (APE) is the same as the project area. The survey area for the current investigation included the entire approximately 1-acre APE/project area.

The proposed project constitutes a project requiring compliance with and review under state of Hawai'i historic preservation legislation [Hawai'i Revised Statutes (HRS) Chapter 6E-42 and Hawai'i Administrative Rules (HAR) Chapter 13-13-275]. At the request of Patrick Sequirant, CSH completed what began as an archaeological inventory survey investigation of the project area, per the requirements of HAR Chapter 13-13-276. Because no historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. This archaeological assessment report was prepared to support the proposed project's historic preservation review (under HAR 13-13-275) and any other project-related historic preservation consultation.

1.2 Scope of Work

The following archaeological inventory survey scope of work was developed and implemented to satisfy SHPD requirements. The scope of work for this inventory survey (which later became an archaeological assessment because no historic properties were located within the project) was designed in accord with State Historic Preservation Division rules governing standards for archaeological inventory surveys and reports (HAR 13-13-276):

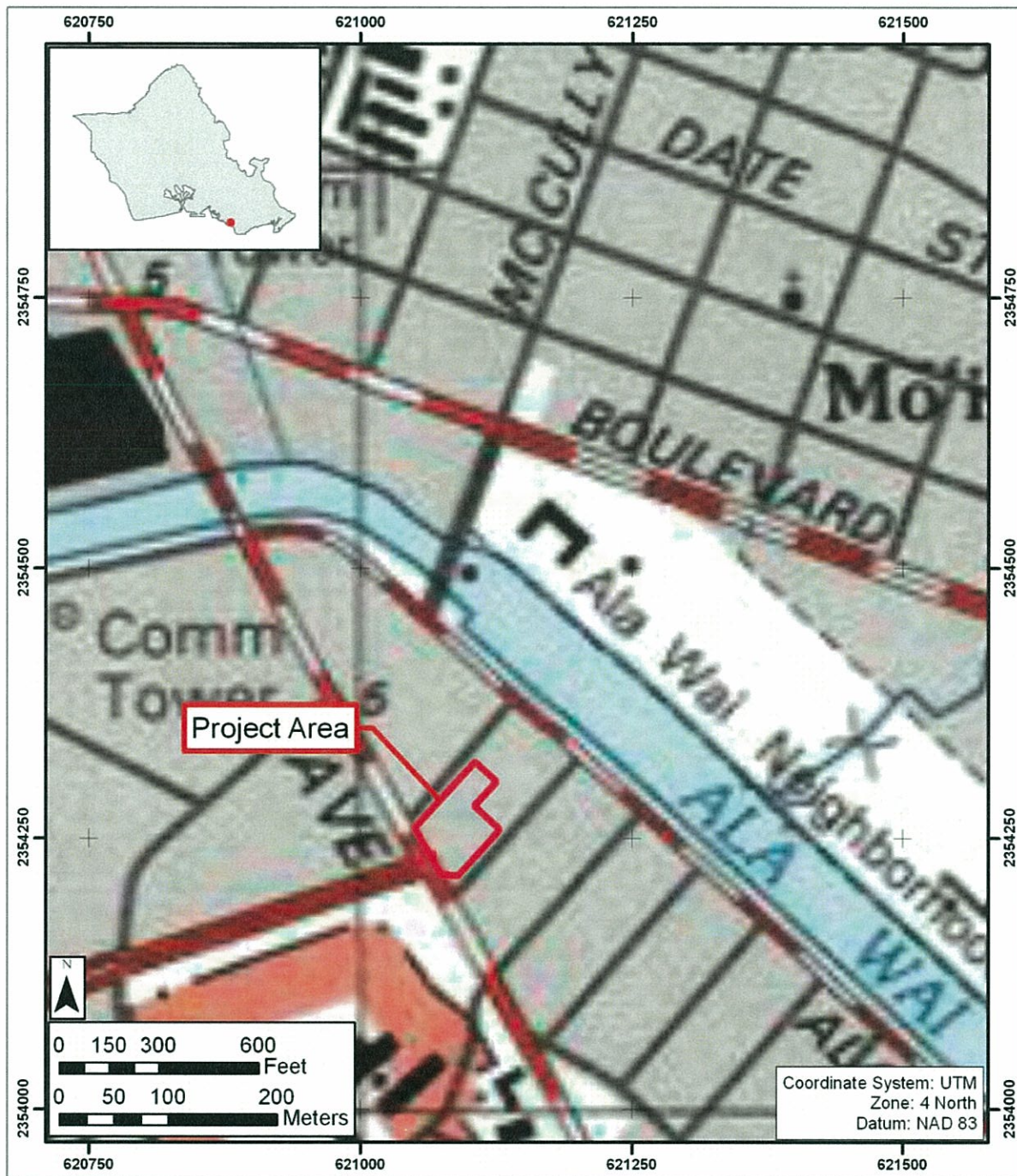


Figure 1. U.S. Geological Survey (USGS) 7.5 Minute Series Topographic Map, Honolulu (1998) Quadrangle, showing the location of the project area

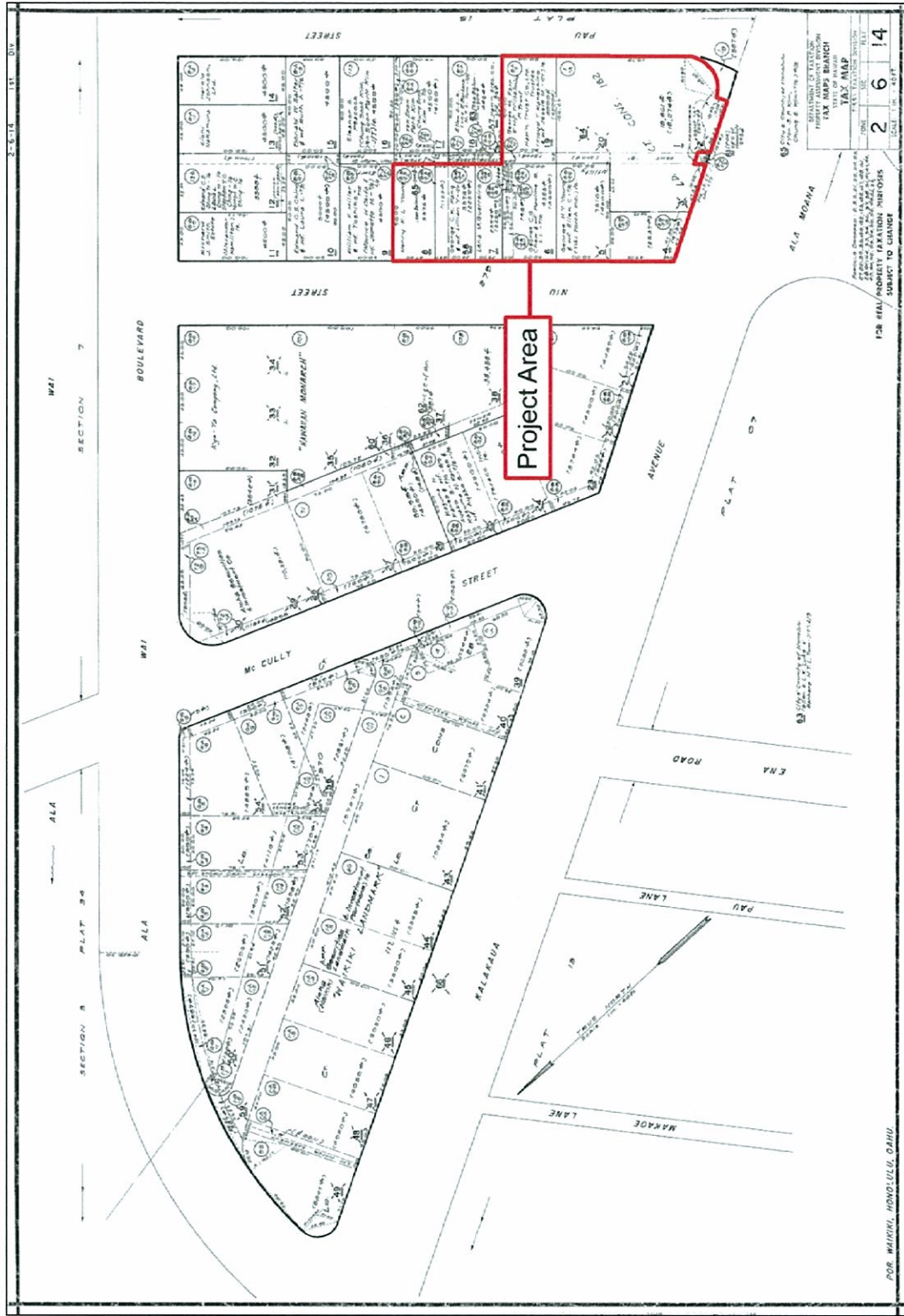


Figure 2. Tax Map Key [1] 2-6-014, showing the location of the project area

Archaeological Assessment for the 1944 Kalaheua Avenue Project

TMK: [1] 2-6-014: 001, 004, 006, 007, 008, 019, & 058



Figure 3. Aerial Photograph, showing the location of the project area (source: USGS Orthoimagery 2005)

1. A complete ground survey of the entire project area for the purpose of historic property inventory. If historic properties were located the following would be applicable: All historic properties would be located, described, and mapped with evaluation of function, interrelationships, and significance; and documentation in the form of photographs and scale drawings of selected sites and complexes.
2. Research on historic and archaeological background, including search of historic maps, written records, and Land Commission Award documents. This research focused on the specific area with general background on the *ahupua'a* and district and emphasizes settlement patterns.
3. Preparation of this inventory survey report including the following:
 - A project description;
 - A topographic map of the survey area showing all record historic properties;
 - Descriptions of all historic properties, including selected photographs, scale drawings, and discussions of age, function, and significance, per the requirements of HAR Title 13, Subtitle 13, Chapter 276 "Rules Governing Standards for Archaeological Inventory Surveys and Reports." Cultural resources were assigned State Inventory of Historic Properties (SIHP) numbers;
 - Historical and archaeological background sections summarizing prehistoric and historic land use of the project area and its vicinity;
 - A summary of cultural resource categories and significance based upon the Hawai'i Register of Historic Places (Hawai'i Register) criteria;
 - A project effect recommendation; and
 - Treatment recommendations to mitigate the project's adverse effect on historic properties recommended eligible to the Hawai'i Register (i.e. "significant historic properties").

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

1.3 Environmental Setting

1.3.1 Natural Environment

The project area is located approximately 745 m (0.5 miles) northeast of Waikīkī Beach, near the southeastern coastline of the island of O'ahu. Lands within the project area are level with an elevation of 0.3 m (1 ft.) a.m.s.l.

According to U.S. Department of Agriculture (USDA) soil survey data (Foote *et al.* 1972) the sediments within the project area consist entirely of Fill land, mixed (FL) (Figure 4). Fill land, mixed is described as "areas filled with material dredged from the ocean or hauled from nearby

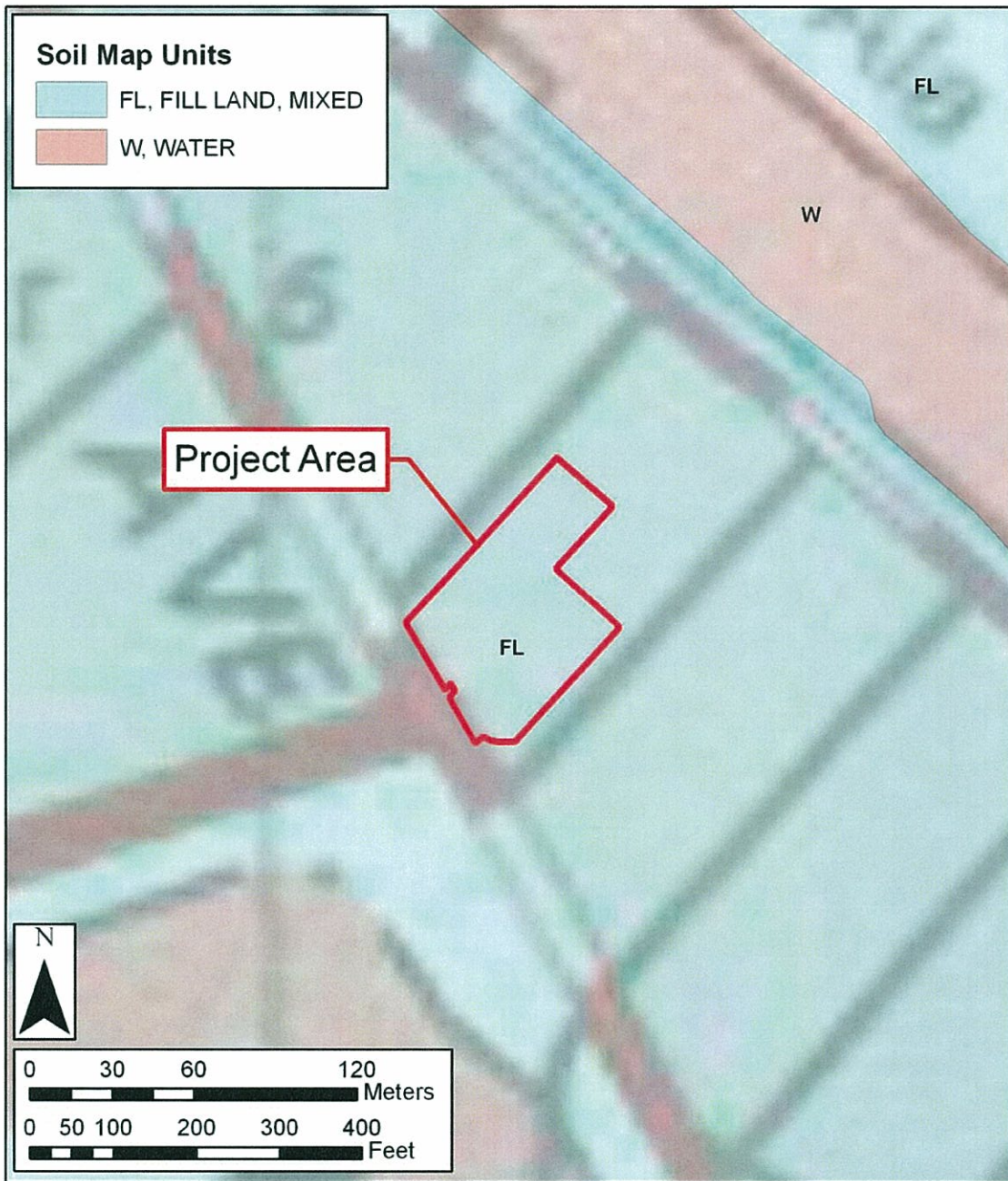


Figure 4. Overlay of Soil Survey of the State of Hawai'i (Foote et al. 1972), indicating sediment types within the project area

areas, garbage, and general material from other sources...used for urban development including airports, housing areas, and industrial facilities" (Foote *et al.* 1972).

The project area receives an average of 20 to 30 in. (1000 to 1500 mm) of annual rainfall (Giambelluca *et al.* 1986). The entire project area has been extensively disturbed and transformed by human activity leaving no naturally occurring vegetation within the subject parcel.

1.3.2 Built Environment

The project area is located within central Honolulu and is surrounded by modern urban development including high-rise condominiums, apartments and hotels, streets, sidewalks, and utility infrastructure. The project area is bounded by urban development to the northeast, Kalākaua Avenue to the southwest, Pau Street to the southeast, and Niu Street to the northwest (see Figure 3 above). The southwestern half of the project area contains a two-story commercial building housing a Local Motion surf shop and associated asphalt parking areas. Additionally two concrete pads and a small wooden kiosk are located in the southwestern half of the project area utilized by the VIP Car Rental Hawaii as a staging area for car rentals. The northeastern half of the project area consists of an empty lot.

Section 2 Methods

2.1 Field Methods

Ra'imana Hunkin, B.A., and Doug Thurman, B.A., assisted project director Jon Tulchin, B.A., with the field effort, which required 12 person-days to complete. Fieldwork took place between November 8th and November 15th 2007 under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator). The fieldwork was performed under CSH's annual archaeological research permit, No. 07-19, issued by DLNR / SHPD.

2.1.1 2.1.1 Pedestrian Inspection

A 100 percent pedestrian inspection of the project area confirmed that all standing architecture was less than 50 years old and that there were no surface historic properties. Accordingly, the inventory survey focused on a program of subsurface testing to locate any buried cultural deposits that were potentially within the project area. For this report, historic is defined as anything older than 50 years and modern is defined as anything younger than 50 years.

2.1.2 2.1.2 Subsurface Testing

Subsurface testing consisted of the excavation of 17 backhoe trenches. Trenches were distributed throughout the project area to provide representative coverage and assess the stratigraphy and potential for subsurface cultural resources within the project area. The test trenches generally measured 5-7 m in length, 0.8 m in width, and were excavated down to the water table (approximately 2 m deep). Certain areas could not be tested due to the presence of subsurface concrete slabs and a utility easement that ran through the middle of the project area (see Section 4 Results of Fieldwork below).

2.1.3 2.1.3 Documentation of Stratigraphy

The stratigraphy in each trench was drawn and photographed. The sediments were described for each of the trenches using USDA soil description observations/terminology. Sediment descriptions include Munsell color, texture, consistence, structure, plasticity, cementation, origin of sediments, descriptions of any inclusions such as cultural material and/or roots and rootlets, lower boundary distinctiveness and topography, and other general observations. Feature documentation included profiles and/or plan views, collected samples, stratigraphic descriptions, and photographs.

2.1.4 2.1.4 GPS

The location of each of the trenches was recorded using a Trimble Pro XR backpack GPS unit with a TSCI Datalogger and real-time differential correction. This unit provides submeter horizontal accuracy in the field. GPS field data were post-processed, yielding horizontal accuracy between 0.5 and 0.3 m. GPS location information was converted into GIS shape files using Trimble's Pathfinder Office software, version 2.80, and graphically displayed using ESRI's ArcGIS 9.1.

2.2 Laboratory Methods

No materials were collected during the inventory survey and thus, no laboratory methods were applied.

2.3 Document Review

Background research included a review of previous archaeological studies on file at the State Historic Preservation Division (SHPD) of the Department of Land and Natural Resources (DLNR); a review of geology and cultural history documents at Hamilton Library of the University of Hawai'i, the Hawai'i State Archives, the Mission Houses Museum Library, the Hawai'i Public Library, and the Archives of the Bishop Museum; study of historic photographs at the Hawai'i State Archives and the Archives of the Bishop Museum; and a study of historic maps at the Survey Office of the DLNR. Information on LCAs was accessed through Waihona 'Āina Corporation's Māhele Data Base (<www.waihona.com>).

This research provided the environmental, cultural, historic, and archaeological background for the project area. The sources studied were used to formulate a predictive model regarding the expected type and location of sub-surface pre and post-contact historic properties in the project area.

Section 3 Background Research

This section begins with a review of the available documentary evidence for the general character of the Waikīkī area as it had evolved in the years before western contact in the later 18th century. The development of Waikīkī lands adjacent to and including the present project area during the 19th century and into the early 20th century was recorded in increasingly detailed documentation – including photographs, maps and government records. Finally, during subsequent decades of the 20th century, abundant documentation of the Waikīkī area allows a more precise focus on the development of the project area itself up to the 1950s.

3.1 Traditional and Historical Background

3.1.1 Pre-Contact to Early 1800's

By the time of the arrival of Europeans in the Hawaiian Islands during the late eighteenth century, Waikīkī had long been a center of population and political power on O'ahu. According to Martha Beckwith (1940), by the end of the fourteenth century Waikīkī had become “the ruling seat of the chiefs of Oahu.” The preeminence of Waikīkī continued into the eighteenth century and is betokened by Kamehameha's decision to reside there upon wresting control of O'ahu by defeating the island's chief, Kalanikūpule. The 19th-century Hawaiian historian John Papa 'Ī'ī (1959:17), himself a member of the *ali'i* (chiefly class), described the king's Waikīkī residence:

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

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

Chiefly residences, however, were only one element of a complex of features – that characterized Waikīkī up to pre-contact times. Beginning in the fifteenth century, a vast system of irrigated taro fields was constructed, extending across the littoral plain from Waikīkī to lower Mānoa and Pālolo valleys. This field system – an impressive feat of engineering the design of which is traditionally attributed to the chief Kalamakua – took advantage of streams descending from Makiki, Mānoa and Pālolo valleys which also provided ample fresh water for the Hawaiians living in the *ahupua'a*. Water was also available from springs in nearby Mō'ili'ili and Punahou. Closer to the Waikīkī shoreline, coconut groves and fishponds dotted the landscape. A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouver (1798:161-164), arriving at “Whyteete” in 1792, captured something of this profusion in his journals:

On shores, the villages appeared numerous, large, and in good repair; and the surrounding country pleasingly interspersed with deep, though not extensive valleys; which, with the plains near the sea-side, presented a high degree of cultivation and fertility.

[Our] guides led us to the northward through the village, to an exceedingly well-made causeway, about twelve feet broad, with a ditch on each side.

This opened our view to a spacious plain, which, in the immediate vicinity of the village, had the appearance of the open common fields in England; but, on advancing, the major part appeared to be divided into fields of irregular shape and figure, which were separated from each other by low stone walls, and were in a very high state of cultivation. These several portions of land were planted with the eddo or taro root, in different stages of inundation; none being perfectly dry, and some from three to six or seven inches under water. The causeway led us near a mile from the beach, at the end of which was the water we were in quest of. It was a rivulet five or six feet wide, and about two or three feet deep, well banked up, and nearly motionless; some small rills only, finding a passage through the dams that checked the sluggish stream, by which a constant supply was afforded to the taro plantations.

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

Further details of the exuberant life that must have characterized the Hawaiians use of the lands that included the *ahupua'a* of Waikīkī are given by Archibald Menzies (1920:23-24), a naturalist accompanying Vancouver's expedition:

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

However, the traditional Hawaiian focus on Waikīkī as a center of chiefly and agricultural activities on southeastern O'ahu was soon to change – disrupted by the same Euro-American

contact which produced the first documentation (including the records cited above) of that traditional life. The *ahupua'a* of Honolulu - with the only sheltered harbor on O'ahu - became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. Kamehameha himself moved his residence from Waikīkī to the coast near Honolulu harbor, likely in order to maintain his control of the lucrative trade in sandalwood that had developed. By 1828, the missionary Levi Chamberlain(1957:26), describing a journey into Waikīkī, would note:

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

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

3.1.2 Mid-Nineteenth Century and the Māhele

The depopulation of Waikīkī, however, was not total and the *ahupua'a* continued to sustain Hawaiians living traditionally into the mid-19th century. The Organic Acts of 1845 and 1846 initiated the process of the Māhele (the division of Hawaiian lands) which introduced private property into Hawaiian society. In 1848, the crown (Hawaiian government) and the *ali'i* (royalty) received their land titles. Subsequently in the Māhele, Land Commission Awards (LCAs) for *kuleana* parcels were awarded to commoners and others who could prove residency on and use of the parcels they claimed. Land Commission Award records document awardees continuing to maintain fishponds and irrigated and dryland agricultural plots, though on a greatly reduced scale than had been previously possible with adequate manpower.

3.1.3 Mid to Late 1800s

As the 19th century progressed, Waikīkī was becoming a popular site among foreigners – mostly American – who had settled on O'ahu. An 1865 article in the Pacific Commercial Advertiser mentioned a small community that had developed along the beach. The area continued to be popular with the *ali'i* – the Hawaiian royalty – and several notables had residences there. A visitor to O'ahu in 1873 described Waikīkī as “a hamlet of plain cottages, whither the people of Honolulu go to revel in bathing clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873).

Other developments during the second half of the 19th century a prelude of changes that would dramatically alter the landscape of Waikīkī during the 20th century – include the improvement of the road connecting Waikīkī to Honolulu (the route of the present Kalākaua Ave.), the building of a tram line between the two areas, and the opening of Kapi'olani Park on June 11, 1877. Traditional land-uses in Waikīkī were abandoned or modified. By the end of the 19th century most of the fishponds that had previously proliferated had been neglected and

allowed to deteriorate. The remaining taro fields were planted in rice to supply the growing numbers of immigrant laborers imported from China and Japan, and for shipment to the west coast of the United States.

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

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

The primary market for both husked rice and paddy raised in all parts of the Hawaiian Islands was in Honolulu. The number of Chinese in the islands created a large home demand.

In 1880 the home market was made more secure by an increase in the duty on rice imported into Hawai'i to 1½ cents on paddy and 2½ cents on hulled rice. It resulted in further checking the importation of foreign rice and giving an immense impetus to the home product [Coulter and Chun, 1937: 13]

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

3.1.4 1900 to 1920

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

On 12 November 1908, a detachment of the 1st Battalion of Engineers from Fort Mason, California, occupied the new post...

Between 1909 and 1911 the engineers were primarily occupied with mapping the island of O'ahu. At DeRussy other activities also had to be attended to - especially the filling of a portion of the fishponds which covered most of the Fort. This task fell to the Quartermaster Corps, and they accomplished it through the use of an hydraulic dredger which pumped fill from the ocean continuously for nearly a year in order to build up an area on which permanent structures could be

built. Thus the Army began the transformation of Waikīkī from wetlands to solid ground, [Hibbard and Franzen 1986:79].

All the fishponds were filled by 1928.

A fire insurance map of 1914 shows that there were five areas in Waikīkī where residential and commercial structures were concentrated in the early 20th century (Figure 5). These areas were located: 1) clustered at Saratoga Road and Lewers Road; 2) near the intersection of Ena Road and Kalākaua Avenue; 3) *makai* of Kālia Road on the east side of Ft. DeRussy; 4) clustered around the Moana Hotel on Kalākaua Avenue; and 5) in Kapahulu on the 'Ewa side of Makee Road (the present Kapahulu Avenue). The fire insurance map also reveals the relative isolation of Waikīkī, in the early 20th century, from the encroaching grid of modern Honolulu streets.

3.1.5 1920's to 1930's

During the 1920's, the Waikīkī landscape would be transformed when the construction of the Ala Wai Drainage Canal, begun in 1921 and completed in 1928, resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikiki (Figure 6). The canal was one element of a plan to urbanize Waikīkī and the surrounding districts:

The [Honolulu city] planning commission began by submitting street layout plans for a Waikīkī reclamation district. In January 1922 a Waikīkī improvement commission resubmitted these plans to the board of supervisors, which, in turn, approved them a year later. From this grew a wider plan that eventually reached the Kapahulu, Mō'ili'ili, and McCully districts, as well as lower Makiki and Mānoa...

The standard plan for new neighborhoods, with allowances for local terrain, was to be that of a grid, with 80-foot-wide streets crossing 70-foot-wide avenues at right angles so as to leave blocks of house lots about 260 by 620 feet. Allowing for a 10-foot-wide sidewalk and a 10-foot right-of-way [alley] down the center of each block, there would be twenty house lots, each about 60 by 120 feet, in each block [Johnson 1991:311]

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

The expansion of apartment and private residence construction is no secret. Examination of building permits will show that more projects have been completed during the past year, and more are now underway in this area, than in any other section of the territory.

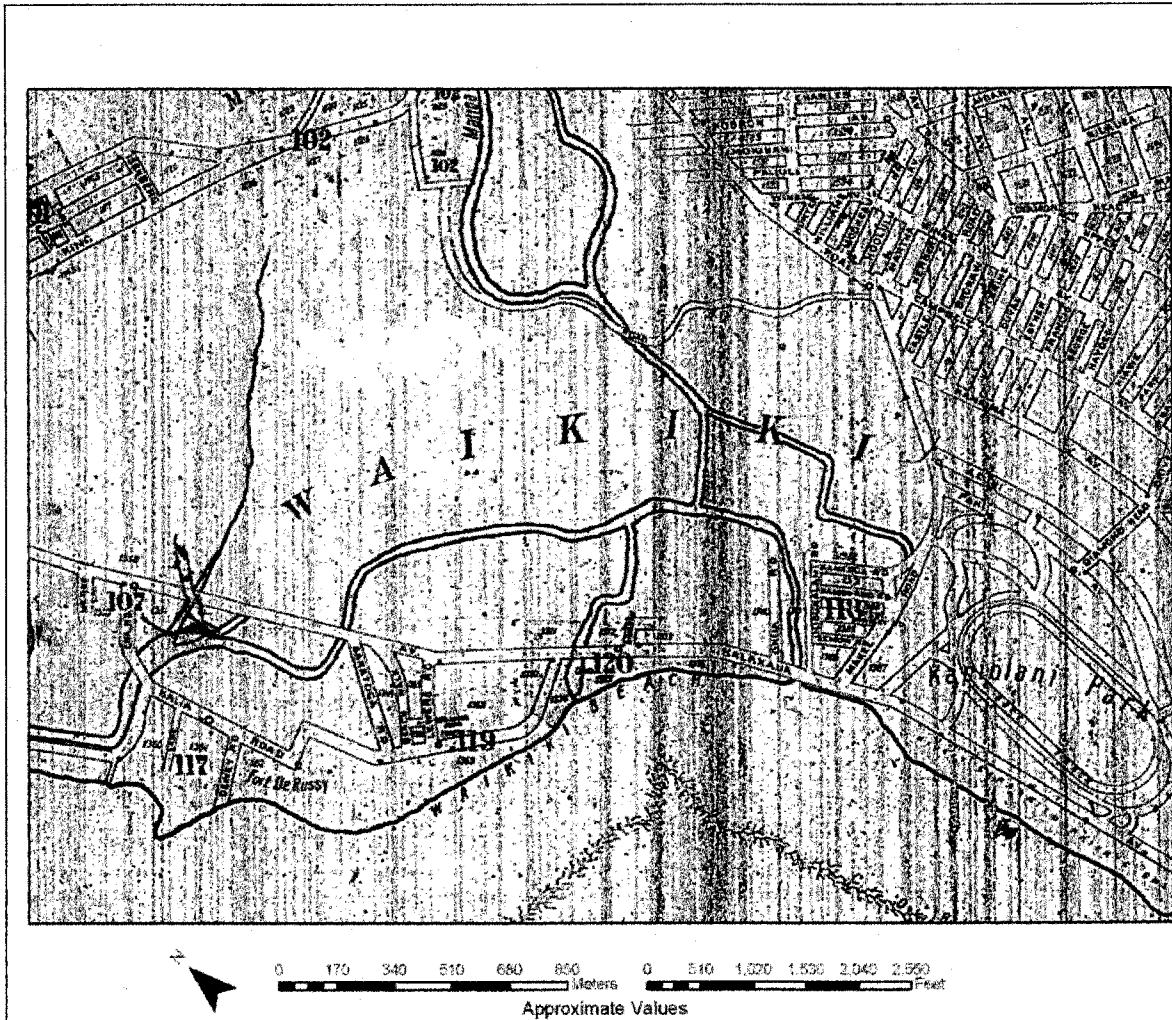


Figure 5. Portion of 1914 Sanborn Fire Insurance Map of Waikīkī



Figure 6. Floating Dredge Line in the Ala Wai Canal, circa 1924 (Bishop Museum Archives)

These developments are being made by island residents who have recognized the fact that Waikīkī presents the unparalleled possibility for safe investment with excellent return. (Newton 1938: 10)

The writer speculated that the “future of Waikīkī is assured.”

3.1.6 1940's

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

It was not the same Waikīkī as before the war, though; barbed wire barricades now lined its sands, and there were other changes too. Fort DeRussy became a huge recreation center, with a dance hall called Maluhia that attracted thousands of men at a time. The Moana Hotel continued to function, but many other establishments and private homes in the area were taken over by the military. [Brown 1989:141]

Nearing the war's end, concerns began arising over the future of Waikīkī. An article in the Honolulu Advertiser of July 16, 1945 decried “honky-tonks” that had sprung up in Waikīkī during the course of the war, and asked: “Can anyone look at present-day Kalākaua Ave. – lined with makeshift curio shops, noisy ‘recreation’ centers, eyesores that pass under the name of lunchrooms and miscellany of ‘joints’ – and hope that Waikīkī can stage a comeback [as a tourist destination]?”

3.1.7 1950's

By the mid-1950's there were more than fifty hotels and apartments from the Kālia area to the Diamond Head end of Kapi'olani Park. The Waikīkī population, by the mid-1950's, was not limited to transient tourists but included 11,000 permanent residents living in 4,000 single dwellings and apartments in stucco or frame buildings.

3.2 Historic Documentation of the Project Area

The present project area is located on the *mauka* fringe of a portion of Waikīkī that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds that extended between the present Saratoga Road and the grounds of Fort DeRussy to present Atkinson Drive and Ala Moana Shopping Center. An 1881 Hawaiian Government survey map by S.E. Bishop provides a detailed record of the physical landscape of Waikīkī before the transformations of the 20th century. Drawn before the extensive drainage and landfilling of the Waikīkī landscape, accomplished by the construction of the Ala Wai Canal in the 1920s, the 1881 map likely represents the project area as it had appeared in traditional Hawaiian times: a marsh environment surrounded by fishpond ponds and wetland fields (Figure 7). When the map was copied in 1922, additional material from

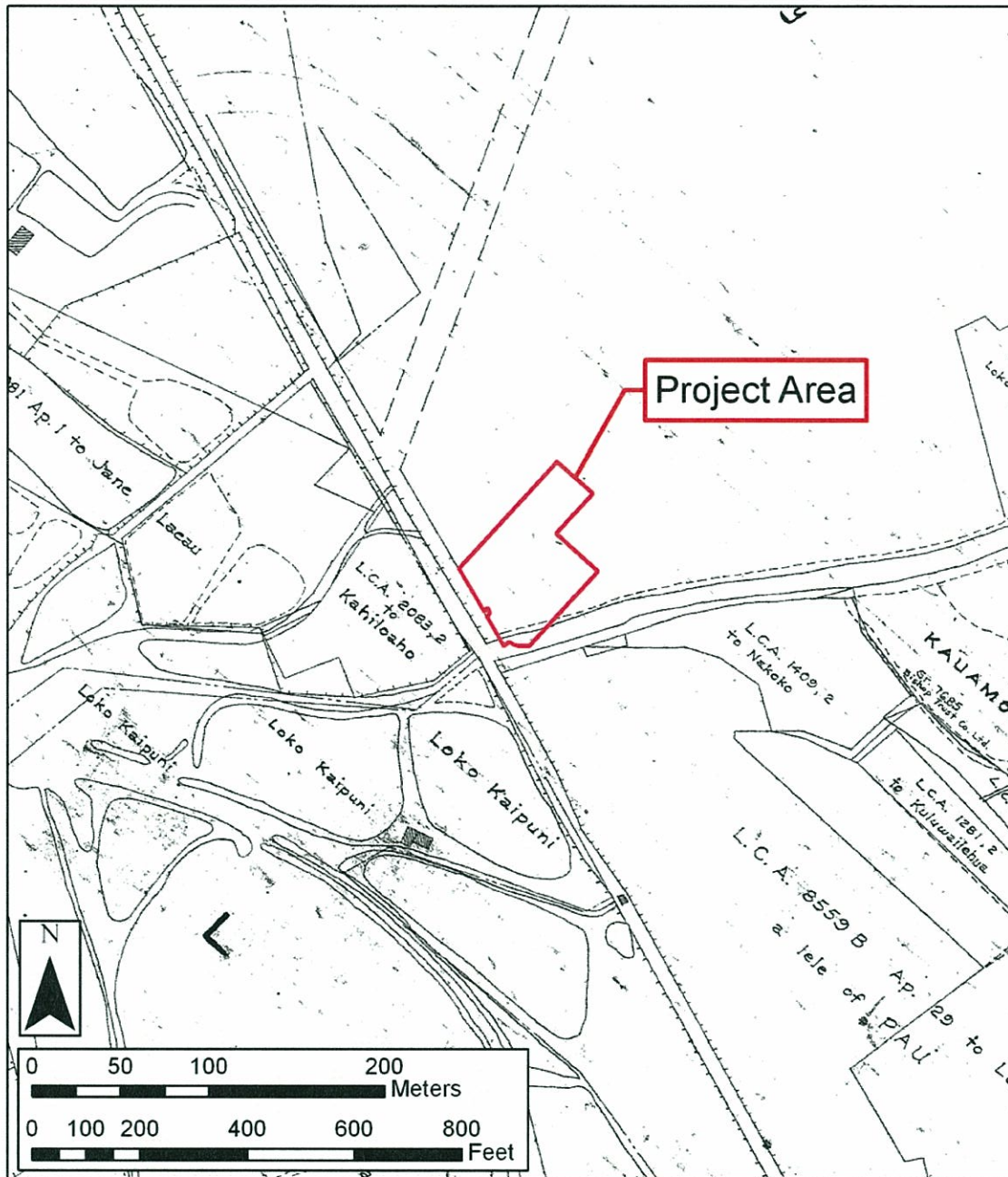


Figure 7. Portion of Registered Map 1398, a 1881 map by S.E. Bishop with location of present project area

subsequent government surveys was added, including locations of road corridors not present in 1881.

The 1881 map also indicates locations of mid-nineteenth century Land Commission Awards. Māhele records for these awards provide the first specific documentation of land use in the vicinity of the present project area. Three *apana* (parcels) associated with three Land Commission Awards – LCA 2083 to Kahiloaho, LCA 1409 to Nakoko, and LCA 8559 B to Lunalilo– are located immediately vicinity of the project area.

Documents for LCA 2083 and LCA 1409, indicate the presence of *lo'i* and houselots, suggesting that in the vicinity of the present project area, land usage and activity by the mid-nineteenth century included habitation and wetland agriculture (see Appendix A). This may reflect the continuation into that century of traditional Hawaiian land use, along with the farming of fishponds, in this portion of Waikīkī.

Documents for LCA 8559 B did not contain any land use information but is of note as it was awarded to William Charles Lunalilo, who was confirmed as King of Hawai'i in 1873.

Subsequent historic maps record the development of the project area through the first half of the twentieth century. A 1910 U.S. Engineers map of Waikīkī indicates that at this time the project area was undeveloped marshland surrounded by small dwellings, ponds, and wetland agricultural fields (Figure 8). A 1927 Sanborn Fire Insurance map indicates that the project area was still undeveloped, but has been subdivided and girded off (Figure 9). This suggests that the project area had been drained and filled in and was being prepped for development.

A 1956 Sanborn Fire Insurance map showing the project area reflects mid-twentieth century changes occurring within Waikīkī (Figure 10). Multiple dwelling structures and apartments are now present in the northeastern half of the project area, while the southwestern half of the project area contains an auto repair shop, gas station, and restaurant.

In summary, historic documentation indicates that the project area consisted of marshland that was not intensively utilized until the mid-twentieth century when Waikīkī became urbanized following the draining and filling of the area initiated in the 1920's. However, historic documentation also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites. By 1927 the project area was drained, filled in, and subdivided in preparation for development. By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes.

3.3 Previous Archaeological Research

The *ahupua'a* of Waikīkī, in the centuries before the arrival of Europeans, was an intensely utilized area, with abundant natural and cultivated resources, that supported a large population. In the nineteenth and early twentieth centuries, after a period of depopulation, Waikīkī was reanimated by Hawaiians and foreigners residing there, and by farmers continuing to work the irrigated field system, which had been converted from taro to rice. Farming continued up to the first decades of this century until the Ala Wai Canal drained the remaining ponds and irrigated fields. Remnants of the pre-Contact and historical occupation of Waikīkī have been discovered

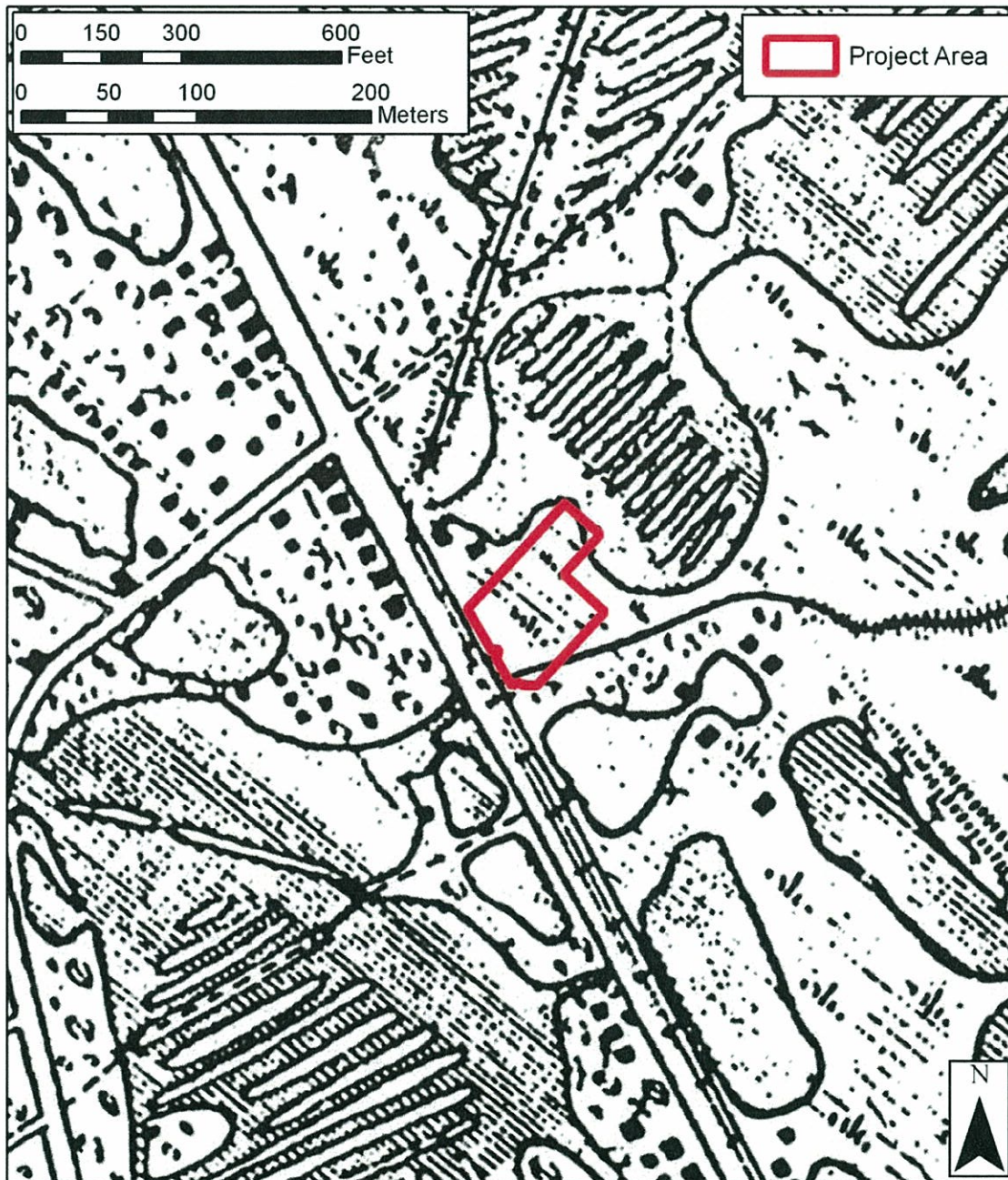


Figure 8. Portion of 1910 U.S. Engineers map with location of present project area indicated

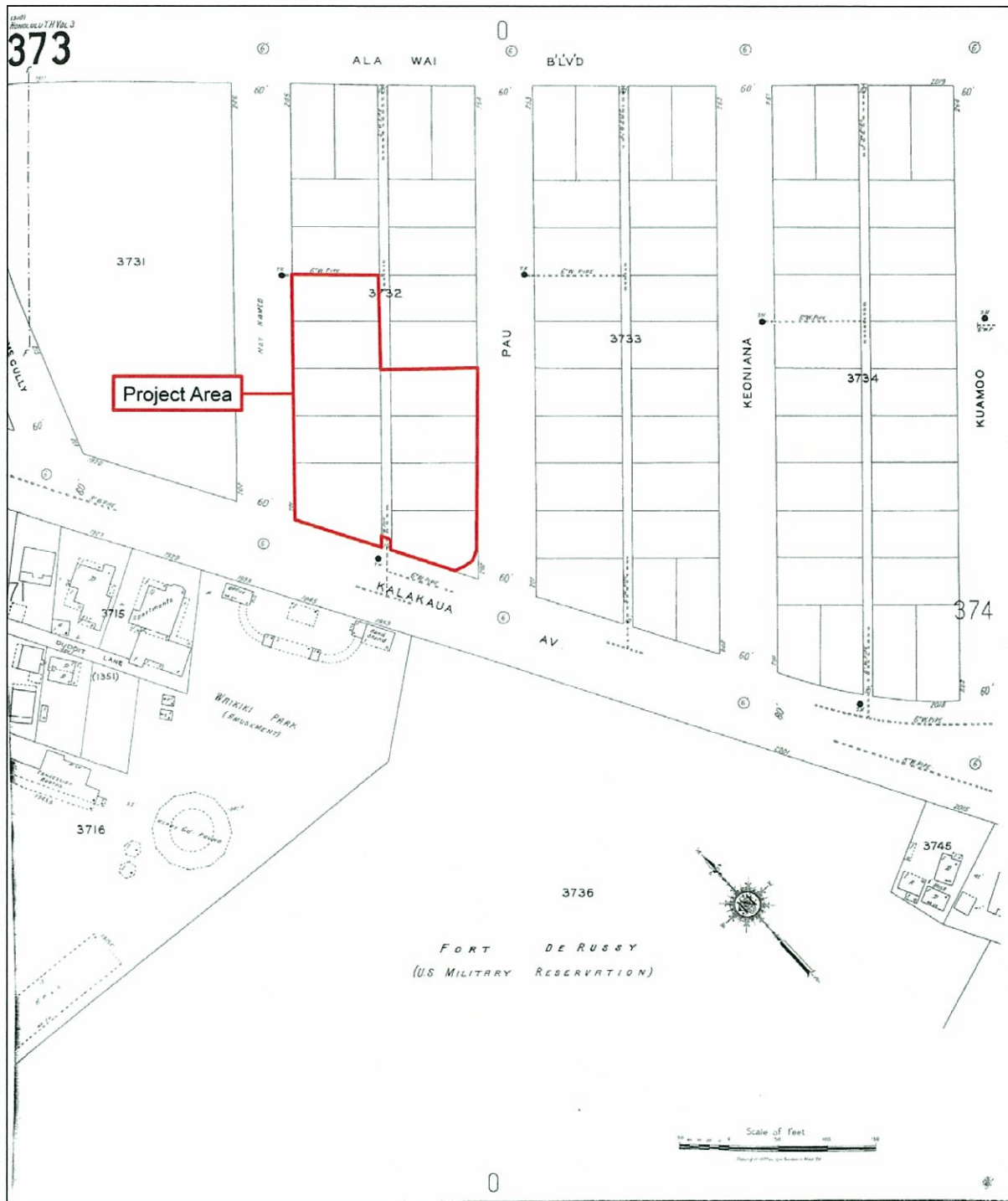


Figure 9. 1927 Sanborn Fire Insurance map of project area

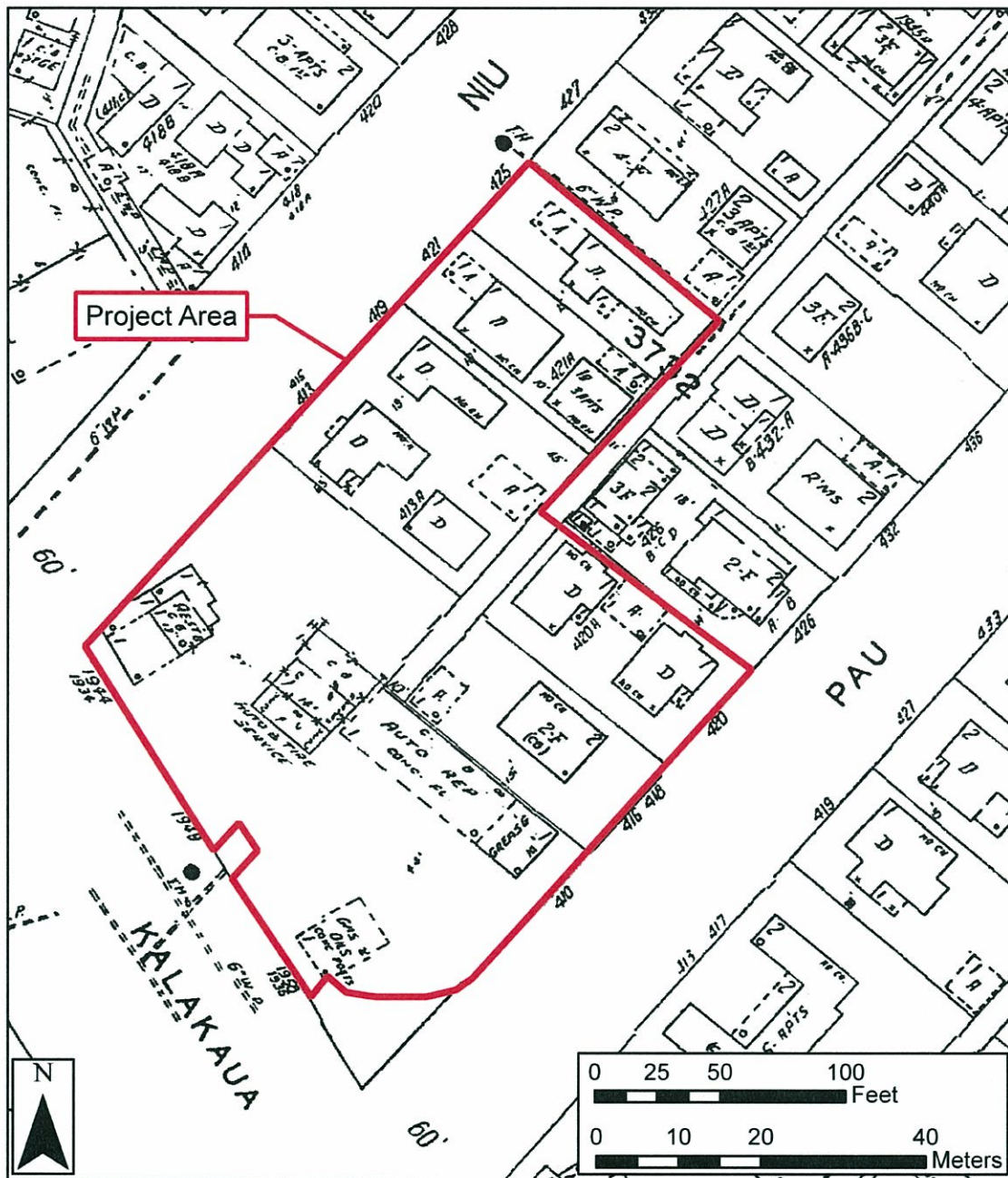


Figure 10. 1956 Sanborn Fire Insurance map of project area

and recorded in archaeological reports, usually in connection with construction activities related to urban development, or infrastructural improvements. These discoveries, which have occurred throughout Waikīkī, have included many human burials, traditional Hawaiian and historic, as well as pre-contact Hawaiian and historic cultural deposits. A full list of projects conducted in the Waikīkī area is listed in Table 1. A discussion of projects focusing on burials (Figure 11) follows.

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

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

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

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

In 1963, two human skulls and other human remains were discovered in a construction trench at 2431 Prince Edward St. (Bishop Museum site Oa-A4-23, cited in Neller 1984). Multiple burials were encountered in 1963 during excavation for the construction of the present Outrigger Canoe Club at the Diamond Head end of Kalākaua Avenue. As reported in a newspaper article on Jan. 24, 1963:

Table 1. Previous Archaeological Investigations in Waikīkī Ahupua'a

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

Reference	Type of Investigation	General Location	Findings
Rosendahl 1989	Inventory Survey, Prelim. Report	Fort DeRussy	Historic artifacts, no human remains
Athens 1990	Letter	TMK: 2-6-023:025	Letter to SHPD listing human remains at IARII lab from Pacific Beach Hotel, and Barbers Point Generating Station.
Hurst 1990	Historical Literature Search	Waikikian Hotel	Background and planning document. No fieldwork was done.
Chigioji 1991	Assessment	2 parcels, TMK 2-6-24:65-68 and 80-83, TMK 2-6-24:34-40 & 42-45	Formerly a corner of the 'Āinahau estate; remainder of parcels, former 'auwai, kalo and rice fields; test excavations and specific sampling strategy recommended.
Davis 1991	Monitoring Report	Fort DeRussy	See also Davis 1989. Subsurface features and material remains date to early post-contact times (c. 1780s to 1790s) through the mid-19th century.
Kennedy 1991	Monitoring Report	TMK: 2-6-022:014 IMAX theatre location	Pollen and bulk-sediment ¹⁴ C samples from ponded sediments were recovered. The three ¹⁴ C dates and pollen sequence were inverted.
SHPD 1991	Public Inquiry	TMK: 2-6-024:036	Bones were determined to be non-human and part of the extensive fill material present
Simons et al. 1991	Interim Field Study, Monitoring & Data Recovery	Moana Hotel Area	8 burials, preliminary osteological analysis indicates pre-contact type; pre- and post artifactual material recovered.
Hurlbett 1992	Monitoring Report	TMK: 2-6-008:001	Site -2870 (3 burials) found by Neller in 1980. This report is on testing and monitoring in same area.
Pietrusewsky 1992a	PA Report	Moana Hotel	Right half of human mandible found by hotel guest.
Pietrusewsky 1992b	PA Report	Lili'uokalani Gardens Site, Hamohamo	Human Remains from the Lili'uokalani Gardens Site, Hamohamo, Waikīkī, O'ahu
Rosendahl 1992	Monitoring Report	Hilton Hawaiian Village	Identified 12 historic refuse pits, 3 historic to modern trenches.

Reference	Type of Investigation	General Location	Findings
Streck 1992	Memorandum for Record	Fort DeRussy	Human burial discovery (believed to be late prehistoric Hawaiian) during data recovery excavations, May, 20, 1992.
Cleghorn 1993	Inadvertent Discovery of Human Remains	Waikīkī Aquarium	Remains of one human individual, mandible identified.
Dagher 1993	Inadvertent Discovery of Human Remains	Waikīkī Aquarium	Human remains of at least one person identified, excavation recommended.
Dega & Kennedy 1993	Inadvertent Discovery of Remains	Waikīkī Aquarium	Discovery of unidentified bone fragments, all remains turned over to SHPD.
Hammatt & Chiogioji 1993	Archaeological Assessment	16-Acre Portion of the Ala Wai Golf Course	Not associated with any know surface archaeological site, however prehistoric and early historic occupation layers associated with lo'i system remain intact below modern fill. Specific sampling strategy and potential burial testing recommended.
Maly et al. 1994	Archaeological and Historical Assessment Study	Convention Center Project Area	Recommend subsurface testing to determine presence or absence of cultural deposits and features.
McMahon 1994	SHPD Burial Report	Intersection of Kalākaua and Kuamo'o Streets	Inadvertent Burial Discovery: misc. bones uncovered in back dirt pile during construction. Follow up by CSH.
Hammatt & Shideler 1995	Sub-surface Inventory Surface	Hawai'i Convention Center Site, 1777 Kalākaua Ave.	No further work recommended.
Jourdane 1995	Inadvertent Discovery of Human Remains	Paoakalani Avenue	Human skeletal remains discovered in planted strip between street and sidewalk fronting hotel.

Reference	Type of Investigation	General Location	Findings
Simons et al. 1995	Data Recovery Excavations	Fort DeRussy	Historic and prehistoric artifacts, and midden materials collected from 7 occupation layers. 6 prehistoric cultural features recorded: 'auwai bunds and channels, fishpond walls and sediments, a possible lo'i, and hearths.
Cleghorn 1996	Inventory Survey	TMK: 2-6-016:23, 25, 26, 28, 61, 69	7 backhoe trenches excavated, no sites located.
Grant 1996	Historical Reference	Waikīkī	Historical information about Waikīkī prior to 1900.
Hammatt & Shideler 1996	Data Recovery	Hawai'i Convention Center Site	No clear evidence that Kuwili Pond sediments present in project area; no further work recommended.
McDermott et al. 1996	Inventory Survey	'Āinahau Estate	Buried remnants of 'auwai and lo'i and human burial found. ¹⁴ C dates
Denham et al. 1997	Data Recovery Report	Fort DeRussy	Excavations conducted at fishponds, ¹⁴ C dates mid-17th C.
Denham & Pantaleo 1997	Monitoring and Excavations Report	Fort DeRussy	Final Report does not include SHPD recommendations. 10 subsurface features and 9 burial locations found. ¹⁴ C dates
Beardsley & Kaschko 1997	Monitoring and Data Recovery Report	Pacific Beach Hotel Office Annex	Traditional Hawaiian cultural deposits and 2 human burials. 3 ¹⁴ C dates
Hammatt & Chiogioji. 1998	Assessment	King Kalākaua Plaza Phase II	No surface archaeological sites, documented human burials, presence of subsurface cultural deposits (both of pre-contact Hawaiian and historic provenance).
Hammatt & McDermott 1999	Burial Disinterment Plan and Report	Kalākaua Avenue	Two human burials found
Perzinski et al. 1999	Monitoring Report	Along Ala Wai Blvd., Kalākaua Ave., Ala Moana Blvd., & 'Ena Rd.	Two human burials found (1 preceding monitoring); pockets of undisturbed layers still exist. Burial #2 previously disturbed.
Rosendahl 1999	Interim Report: Inventory Survey	Fort DeRussy	This area is part of the old shoreline.

Reference	Type of Investigation	General Location	Findings
Hammatt & Chiogioji 2000	Archaeological Assessment	Honolulu Zoo Parcel	Majority of zoo parcel unlikely to yield significant cultural deposits. However, strong possibility of significant subsurface cultural deposits in the SW portion. Monitoring is recommended in this area.
LeSuer et al. 2000	Inventory Survey	King Kalākaua Plaza Phase II	Site -5796 has been adversely affected by land alteration of the project area. Site -4970, has been adequately documented.
Perzinski et al. 2000	Burial Findings	Kalākaua Ave. between Kai'ulani & Monsarrat Avenues	44 sets of human remains; 37 disinterred, 7 left in place; believed to be Native Hawaiian, interred prior to 1820.
Cleghorn 2001	Mitigation	Burger King Construction Site	Concerning three incidents of uncovered human remains while locating a buried sewer-line for the ABC's store.
Corbin 2001	Inventory Survey	Hilton Waikikian Property	No arch. sites were found during excavations of the area
Elmore & Kennedy 2001	Burial Report	Royal Hawaiian Hotel	Human remains found during trench excavations for conduit. The in situ remains were left in place, while the disturbed remains were re-interred with the others.
McGuire & Hammatt 2001	Cultural Assessment for Waikīkī Beach Walk Project	Along Lewers St., Beach Walk, Kālia Rd. & Saratoga Rd.	Primary cultural concern identified as inadvertent burial discovery. Cultural monitoring recommended for all subsurface work within project area.
Perzinski & Hammatt 2001a	Monitoring Report	Kapi'olani Bandstand	A charcoal layer was observed, concentrated on the SW side of the bandstand; recovered indigenous basalt lamp with a handle, from the SE end of the bandstand.
Perzinski & Hammatt 2001b	Monitoring Report	Kapi'olani Park	No cultural layer, artifacts, midden or human burials were encountered during the excavations.
Perzinski & Hammatt 2001c	Monitoring Report	Kalākaua Avenue from the Natatorium to Poni Mo'i Road	No cultural layer, artifacts, midden or human burials were encountered during the excavations.

Reference	Type of Investigation	General Location	Findings
Rosendahl 2001	Assessment Study	Outrigger Beach Walk	Assessment of previous archaeology and historical literature.
Winieski & Hammatt 2001	Monitoring Report	TMK: 1-2-6-025:000	There is a possibility that Hawaiian or Historic materials as well as human burials may still be present within the project area.
Borthwick et al. 2002	Inventory Survey	71,000 sq. ft. parcel, TMK: 2-6-016:002	No burials were found during testing; absence of dry jaucas sand deposits indicate that burial finds are unlikely in project area.
Bush et al. 2002	Monitoring Report	Kalākaua Avenue, between Ala Moana Blvd. and Kapahulu Ave.	Encountered 4 human burials, probably pre-contact Native Hawaiians; several historic trash pits; entire pig within an imu pit (estimated date, A.D. 1641-1671); gleyed muck associated with former ponds.
Calis 2002	Monitoring Report	Lemon Road	No historic deposits, major previous disturbance
Elmore & Kennedy 2002	Monitoring Report	Fort DeRussy	No findings.
Mann & Hammatt 2002	Monitoring Report	Lili'uokalani Avenue and Uluniu Avenue	5 burial finds of 6 individuals; two historic trash pits.
Putzi & Cleghorn 2002	Monitoring Report	Hilton Hawaiian Village	No findings during monitoring of trench excavations for sewer connections.
Winieski, Perzinski, Shideler et al. 2002	Monitoring Report	Kalākaua Ave. between Ka'iulani and Monsarrat Avenues.	44 human burials encountered, 37 disinterred; buried habitation layer identified, with traditional Hawaiian artifacts, midden, firepits, & charcoal; fragment of light gauge rail, remnant of Honolulu Transit trolley system, observed; low energy alluvial sediments associated with the now channelized muliwai Kukaunahi also observed.
Winieski, Perzinski, Souza et al. 2002	Monitoring Report	Kūhiō Beach	Skeletal remains of 10 individuals, six disinterred, only 2 in situ. 4 indigenous artifacts, none in situ. Discontinuous cultural layer, historic seawall.

Reference	Type of Investigation	General Location	Findings
Bush et al. 2003	Monitoring Report	International Marketplace	Historic trash found.
Tome & Dega 2003	Monitoring Report	Waikīkī Marriot	One isolated not in situ possible human bone fragment found. Recommends monitoring during future work.
Tulchin & Hammatt 2003	Archaeological & Cultural Impact Assessment	2284 Kalākaua Ave.	Notes possibility of burials in the project area; recommends an inventory survey with subsurface testing.
Freeman et al. 2005	Archaeological Inventory Survey	Hobron Lane	Four sites identified during subsurface testing; 1 disturbed burial; 1 coffin burial with two individuals; 1 cultural deposit; and, 1 fishpond sediment
O'Hare et al. 2005	Archaeological Inventory Survey	Kaio'o Drive	Site 50-80-14-6848, a pre-contact firepit radiocarbon dated to AD 1470-1660, was recorded.
O'Leary et al. 2005	Archaeological Inventory Survey	Former Waikiki 3 Theater	A likely pre-Contact Native Hawaiian human burial (SIHP # 50-80-14-6819) was identified
Bell & McDermott 2007	Archaeological Inventory Survey	Former Wave Waikiki	Two traditional Hawaiian burials of undetermined age (SIHP # 50-80-14-6873 & SIHP # 50-80-14-6875) and a subsurface cultural layer, of pre- and post-Contact origin (SIHP # 50-80-14-6874) were identified.

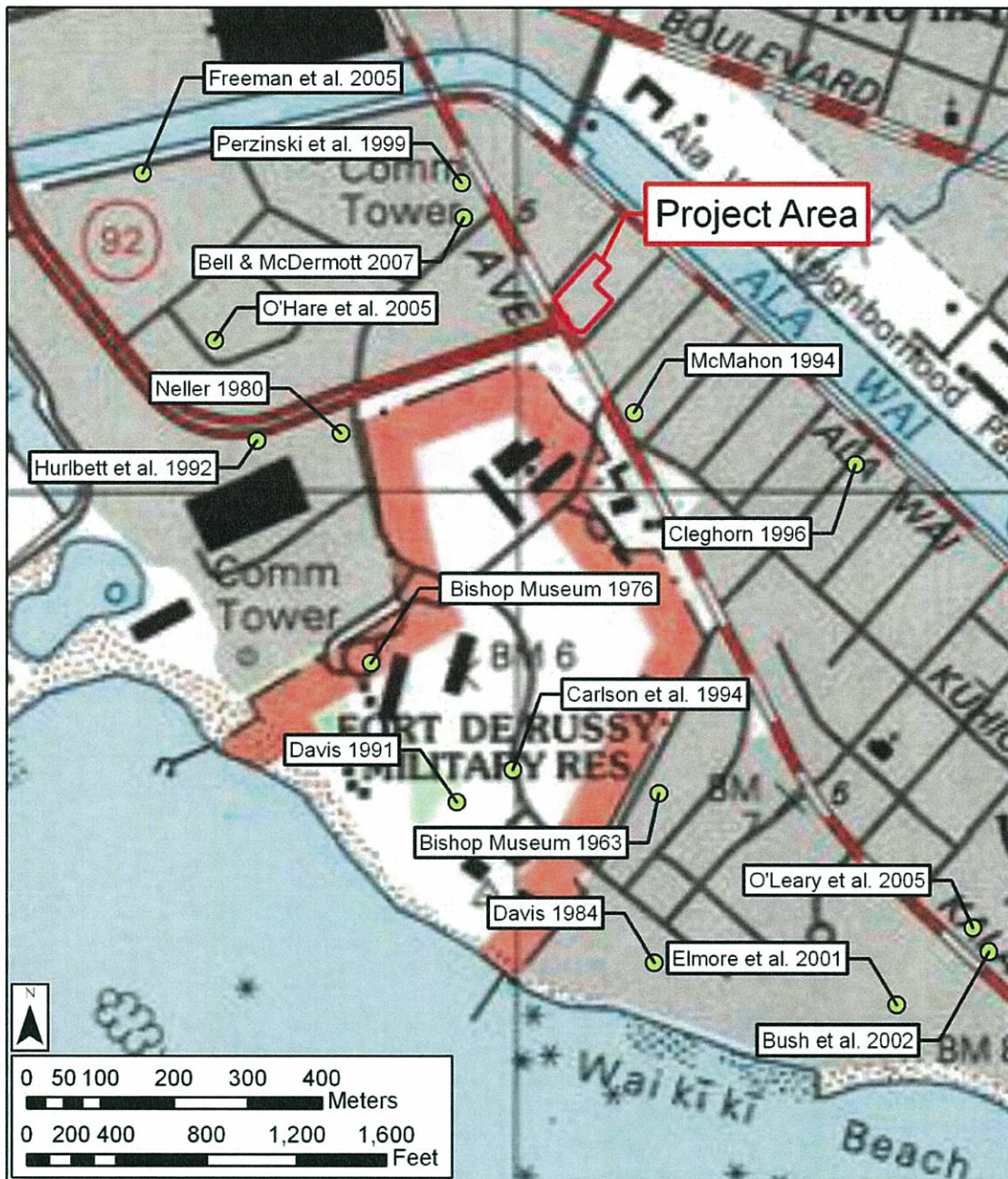


Figure 11. Previous archaeological studies in the vicinity of the project area focusing on the locations of burials

The Outrigger Canoe Club yesterday dedicated its new site [on land adjacent to and leased from the Elks Club], an ancient Hawaiian burial ground in Waikīkī. . .

Robert Bowen of the Bishop Museum has been working closely with Ernest Souza, Hawaiian Dredging superintendent, on the removal of skeletons unearthed on the site, between the Colony Surf and the Elks Club. . . .

Most of the bodies were buried in the traditional hoolewa position, with the legs bound tightly against the chest.

One of the skeletons, Bowen said, shows evidence of a successful amputation of the lower forearm, indicating that the Hawaiians knew this kind of operation before the arrival of Europeans.

The ages of the skeletons ranged from children to 40-year-old men and women. The average life span of the Hawaiians at the time was about 32 years [*Honolulu Star-Bulletin*; Jan. 24, 1963: 1A].

A total of 27 burials were encountered (Yost 1971: 28). Apparently, no formal archaeological report on the burials was produced.

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

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

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

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

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

It is suspected that other important historic archaeological sites exist in the highly developed concrete jungle of Waikīkī, with discrete, dateable trash deposits

related to the different ethnic and social groups that occupied Waikīkī over the last 200 years [Neller 1980:5].

Between December 1981 and February 1982, archaeologists from the Bishop Museum led by Bertell Davis conducted a program of excavations and monitoring during construction of the new Halekūlani Hotel (Davis 1984). Six human burials were recovered along with "animal burials [and] cultural refuse from prehistoric Hawaiian firepits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). Age analysis of volcanic glass recovered from the site led Davis to conclude: "For the first time we can now empirically date . . . settlement in Waikīkī to no later than the mid-1600s" (Neller 1980:5). Just as significant to Davis was the collection of historic era material at the Halekūlani site; he states:

[The] Halekūlani excavations clearly demonstrate...that there is a definite need to consider historic-period archaeology as a legitimate avenue of inquiry in Hawaiian research. Furthermore, archaeology in the urban context can yield results every bit as significant as in less developed areas. Development in the 19th and early 20th centuries clearly has not destroyed all archaeological resources in Waikīkī, Honolulu, or in any of the other urbanized areas of Hawai'i [Neller 1980:5].

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

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

During 1985 and 1986, archaeologists from Paul H. Rosendahl, Ph.D. Inc. conducted archaeological monitoring at the site of the Mechanical Loop Project at the Hilton Hawaiian Village, Waikīkī. Much of this project area was disturbed by historic and modern construction and modification. Fifteen subsurface features were uncovered during the monitoring, all of which were determined to be historic trash pits or trenches. The dating of these features was based on dating the artifactual material they contained. All 15 features are thought to post-date 1881 based on this artifact analysis. The three partial burials reported by Neller (1980) were found within this project area (see above). No further burials were encountered during the PHRI field work (Hurlbett et. al. 1992).

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

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

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

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

The work at Fort DeRussy continued in 1992 when BioSystems researchers built upon Davis' work (Simons et al. 1995). BioSystems research documents the development and expansion of the fishpond and 'auwai system in this area. The 'auwai system was entered on the State Inventory of Historic Places (SIHP) as State Site 50-80-14-4970. As indicated on the 1881 map by S. E. Bishop discussed above, this 'auwai enters the Fort DeRussy grounds through the present project area). Remains of the fishpond and 'auwai deposits, as well as habitation deposits, were documented below modern fill deposits. This research, along with that of Davis (1991), clearly demonstrates that historical document research can be an effective guide to locating late prehistoric/early historic subsurface deposits, even amidst the development of Waikīkī.

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

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

In 1993, during construction activities at the Waikīkī Aquarium fragmentary human remains were discovered scattered in a back dirt pile, although no burial pit was identified (Dega and Kennedy 1993).

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

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

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

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

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

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

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

In April 1999, two human burials were inadvertently encountered near the intersection of Ena Road and Kalākaua Avenue during excavation activities for the first phase of the Waikīkī Anti-Crime Lighting Improvements Project (Perzinski et al. 1999).

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

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

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

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

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

In 2001 and 2002, CSH (Mann and Hammatt 2002) performed archaeological monitoring for the installation of 8- and 12-inch water mains on Uluniu Avenue and Lili'uokalani Avenue. During the course of monitoring, five burials finds, consisting of six individuals, were recorded within the project area. Four burial finds were recorded on Uluniu Avenue; three of these inadvertent finds were found in fill sediment. Due to the nature of the three burial finds in fill, it was concluded that no State Site number(s) be assigned to these three previously disturbed burials. The only primary in situ burial encountered on Uluniu Avenue was assigned State Site #50-80-14-6369. The fifth burial, consisting of two individuals in fill material, was recorded from Lili'uokalani Avenue. Since three burials had been found in the immediate vicinity during a

previous project (Winieski et al. 2002b) and had been assigned to Site #50-80-14-5859, the two new individuals were recorded as Feature H of this previously recorded site.

In 2004, Cultural Surveys Hawai'i conducted an archaeological inventory survey and cultural impact evaluation for the Ala Wai Gateway project site (Freeman et al. 2005). The project site comprised TMK 2-6-011:001, 002, 004, 32, 37, and 40, which are bounded by Ala Wai and Ala Moana boulevards, Hobron Lane, and Līpe'epe'e Street. Four historic properties were documented in the survey: Site 50-80-14-6700, a disturbed set of ethnicity undetermined, human skeletal remains; Site 50-80-14-6701, a historic coffin burial, with two individuals, ethnicity undetermined; Site 50-80-14-6702 a culturally enriched buried A horizon; and, Site 50-80-14-6703, a fishpond remnant.

In 2005, Cultural Surveys Hawai'i conducted an archaeological inventory survey of a 1-acre parcel at 2284 Kalākaua Avenue, the site of the former Waikiki 3 Theater (O'Leary et al. 2005). A pre-Contact Native Hawaiian burial (SIHP No. 50-80-14-6819) was encountered during subsurface testing in the southeastern corner of the project close to Kalākaua Avenue and Dukes Lane. The burial was found at approximately 150 cms (4.9 ft. below surface) within organically stained (very dark grey to black) wetland agricultural soils present throughout the project area.

In 2007, Cultural Surveys Hawai'i conducted an archaeological inventory survey of a 2.3-acre parcel located at the corner of Kalākaua Avenue and Ena Road (Bell & McDermott 2007). Two traditional Hawaiian burials of undetermined age (SIHP # 50-80-14-6873 & SIHP # 50-80-14-6875) and a subsurface cultural layer, of pre- and post-Contact origin (SIHP # 50-80-14-6874) were identified.

3.4 Background Summary and Predictive Model

The *ahupua'a* of Waikīkī in the centuries before the arrival of Europeans was a well-used locale with abundant natural and cultivated resources – including an expansive system of irrigated taro fields and numerous fishponds – supporting a large population that included the highest-ranking *ali'i* (Hawaiian royalty). In the second half of the nineteenth century, after a period of depopulation and desuetude, Waikīkī was reanimated by the Hawaiian *ali'i* and the foreigners residing there, and by farmers continuing to work the irrigated field system that had been converted from taro to rice. This farming continued up to the first decades of the twentieth century when the newly-constructed Ala Wai Canal drained the remaining ponds and irrigated fields of Waikīkī.

The present project area is located on the *mauka* fringe of a portion of Waikīkī that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds. Also located in this portion of Waikīkī were wetland and dry land agricultural fields, and habitation sites. Land Commission Award documents from the mid-nineteenth century record continuing Native Hawaiian habitation and taro cultivation in parcels adjacent to the present project area. However, nineteenth and twentieth century maps indicate that the project area consisted of undeveloped marshland, suggesting that it was not actively utilized for traditional Hawaiian habitation or agriculture during this time period. By 1927 the project area was drained and filled in during a push to urbanize Waikīkī. By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes.

Previous archaeological studies have documented subsurface cultural deposits and human burials – both pre-contact Hawaiian and historic – in the vicinity of the project area. These findings confirm the traditional Hawaiian and historic activities indicated in the vicinity of the project area through historic documents (LCAs, maps, etc.).

Based on background research it is possible that intact pre-Contact and early contact cultural deposits associated with Hawaiian habitation, agriculture, and burial interment are lying undisturbed beneath fill layers within the project area. Other cultural deposits, including historic trash pits, associated with early twentieth century commercial and residential sites may also be present.

Section 4 Results of Fieldwork

Ra'imana Hunkin, B.A., and Doug Thurman, B.A., assisted project director Jon Tulchin, B.A., with the field effort, which required 12 person-days to complete. Fieldwork took place between November 8th and November 15th 2007, under the general supervision of Hallett H. Hammatt, Ph.D. (principal investigator). Fieldwork in this report has been performed under CSH's annual archaeological research permit, No. 07-19, issued by DLNR / SHPD.

A 100 percent pedestrian inspection of the project area's surface confirmed that there were no surface historic properties within the project area. As there were no surface historic properties present, the inventory survey's historic property identification efforts focused on the identification of subsurface cultural deposits through a regimen of subsurface testing.

4.1 Subsurface Testing

4.1.1 Stratigraphic Summary

Subsurface testing consisted of the excavation of 17 backhoe trenches (Figure 12). Trenches were distributed throughout the project area to provide representative coverage and assess the stratigraphy and potential for subsurface historic properties for all areas of the project area. The test trenches generally measured 6 m in length, 0.8 m in width, and were excavated down to the water table (approximately 2 m). Certain areas could not be tested due to the presence of subsurface concrete slabs, a utility easement that ran through the middle of the project area, as well as an existing two-story commercial building housing a Local Motion surf shop located in the southern end of the project area (see Figure 12).

Based on backhoe testing results, the stratigraphy within the project area is largely as expected. The following paragraphs provide an overview and summary of the backhoe testing results. For detailed information regarding each of the excavated trenches, please refer to the trench profiles, sediment descriptions, and photographs, which follow this more general summary discussion.

A stratigraphic profile was taken at each backhoe trench. In general the observed and documented stratigraphy consisted of varying fill layers, including historic fill associated with the draining and filling of Waikīkī, overlying naturally occurring alluvial sediment. It is believed that the historic fill layers consist of dredge material collected during the construction of the Ala Wai Canal. Two types of dredge material were observed; a thick layer of crushed coral fill overlying a thinner layer of pump dredge, consisting of wet clays containing abundant micro striations, which is indicative of pump dredge deposits. These observations agree with the USDA soil data for the project area and its vicinity (Foote et al. 1972). All excavations were backfilled after completion of stratigraphic documentation.

No subsurface historic properties were observed during the course of subsurface testing.

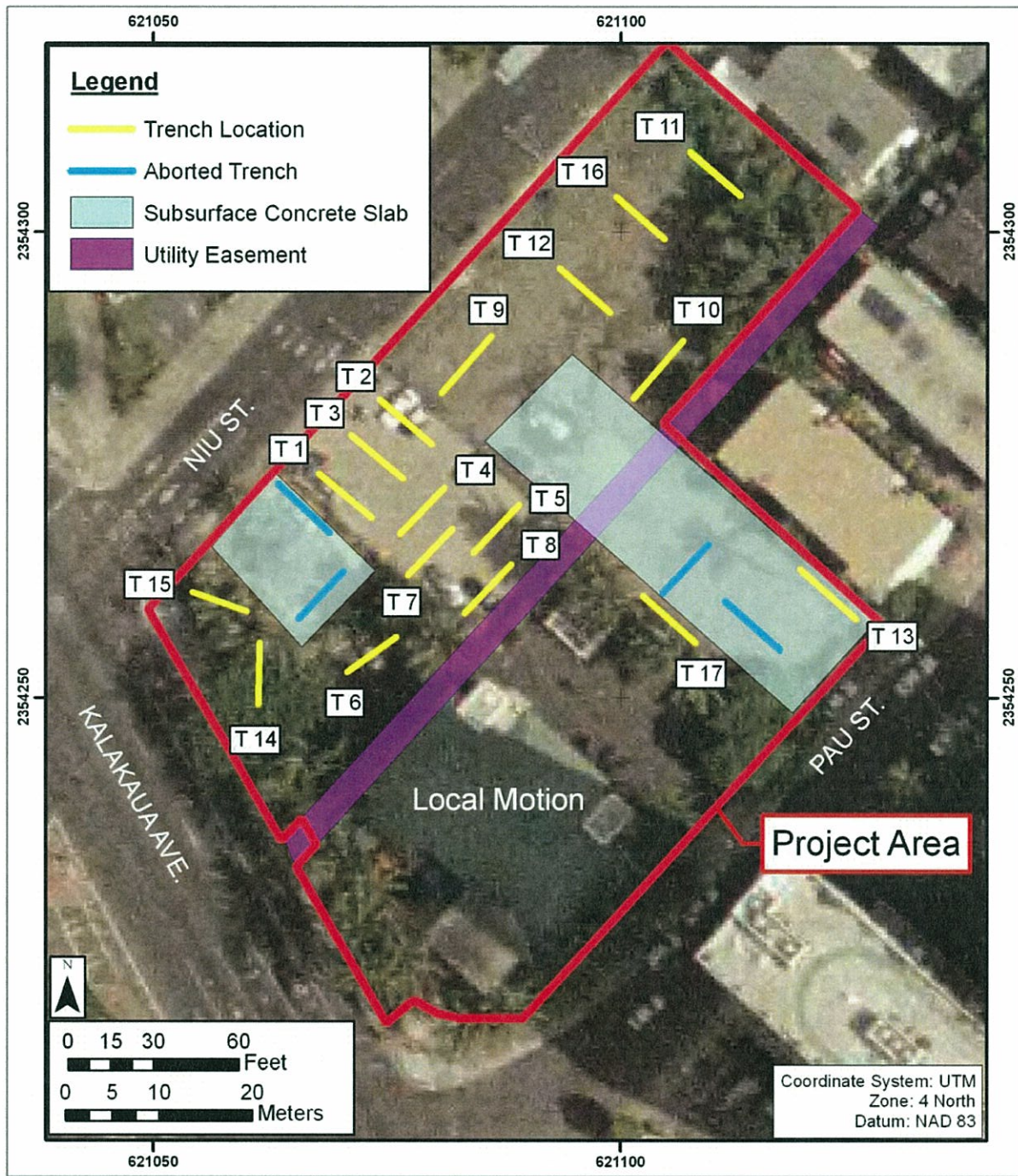


Figure 12. Aerial photograph showing the locations of Trenches 1-17

4.1.2 Trench Documentation

4.1.2.1 Trench 1

Length:	6.0 m
Width:	0.9 m
Maximum Depth:	2.4 m
Orientation:	NW-SE

The stratigraphy of Trench 1 (Figure 13, Figure 14, & Table 2) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 1.

4.1.2.2 Trench 2

Length:	6.0 m
Width:	0.8 m
Maximum Depth:	2.1 m
Orientation:	NW-SE

The stratigraphy of Trench 2 (Figure 15, Figure 16, & Table 3) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Trench excavation was stopped once limestone bedrock was encountered.

No cultural material was observed during the excavation of Trench 2.



Figure 13. Photograph of Trench 1, northeast sidewall, view to east

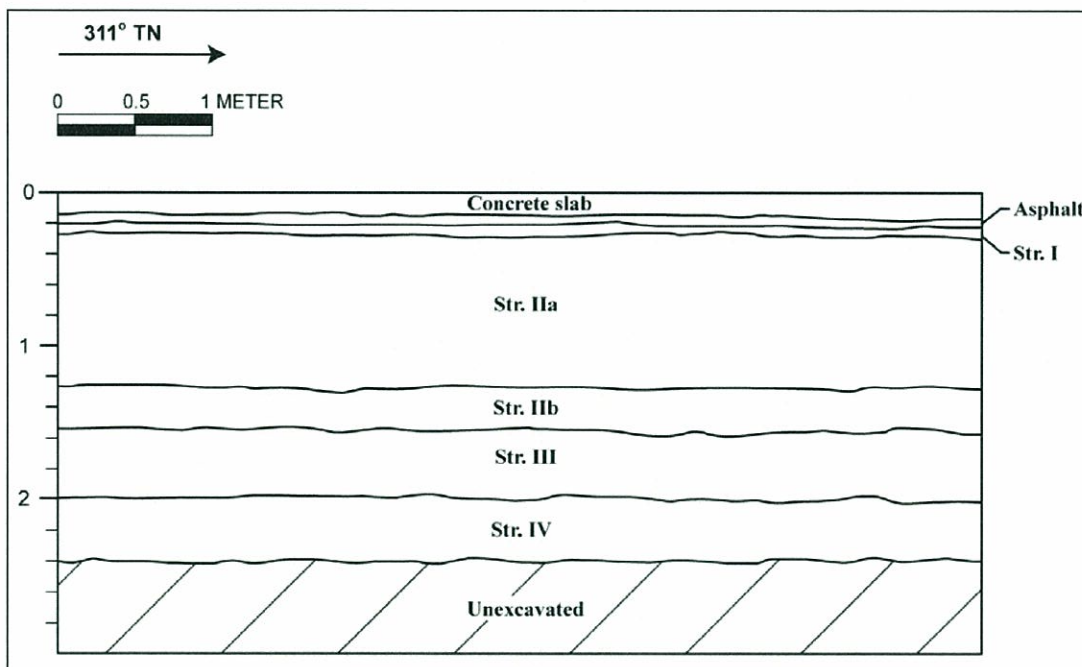


Figure 14. Stratigraphic profile of Trench 1, northeast sidewall

Table 2. Strata Observed at Trench 1

Stratum	Depth (cmbs)	Description
I	20-30	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	20-130	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	130-160	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	160-200	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	200-240*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 15. Photograph of Trench 2, northeast sidewall, view to north

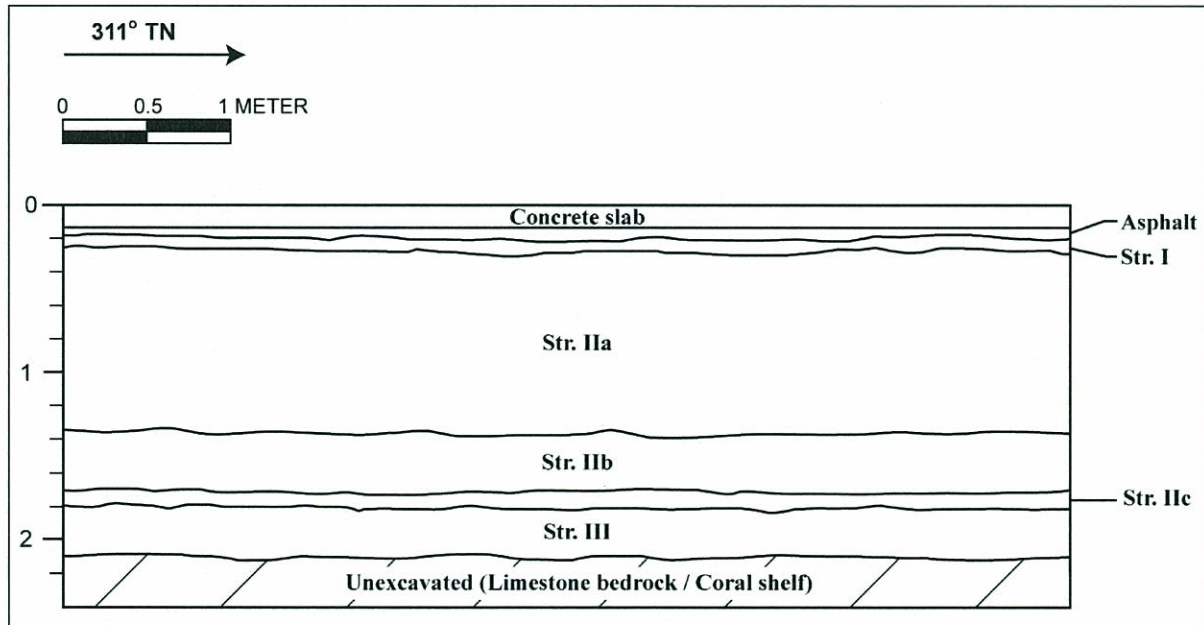


Figure 16. Stratigraphic profile of Trench 2, northeast sidewall



Figure 17. Photograph of Trench 3, northeast sidewall, view to east

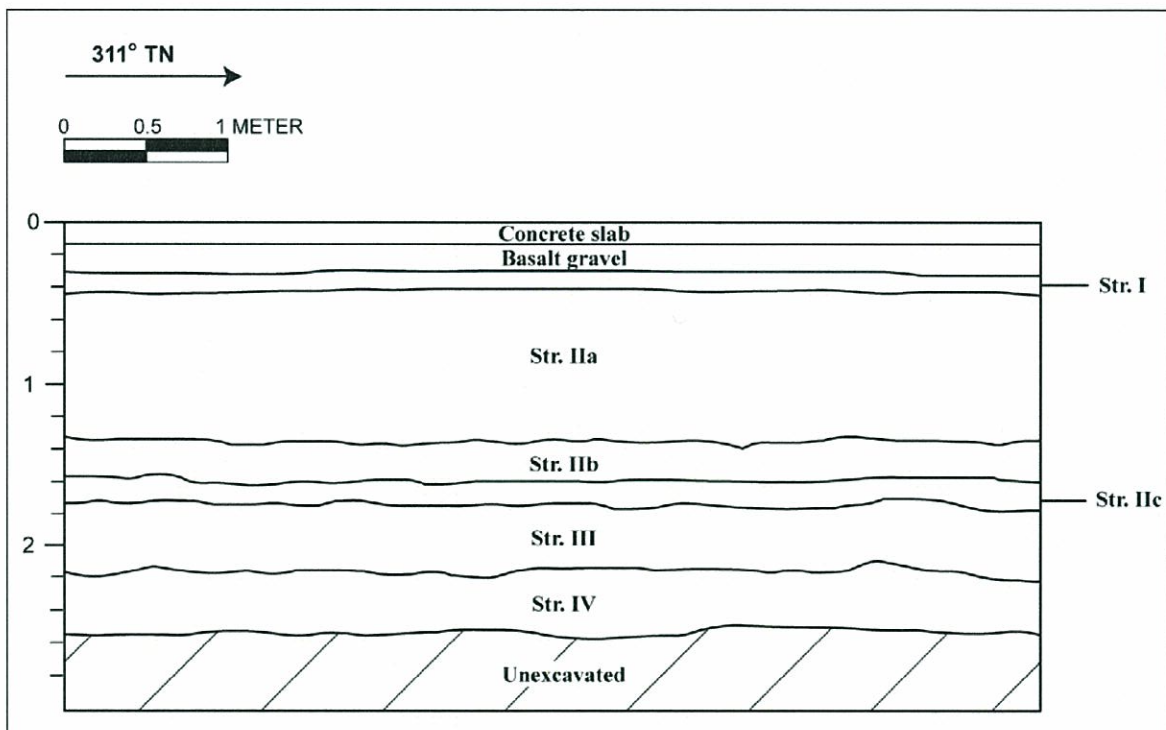


Figure 18. Stratigraphic profile of Trench 3, northeast sidewall

Table 4. Strata Observed at Trench 3

Stratum	Depth (cmbs)	Description
I	30-40	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	30-130	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	130-155	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
IIc	155-170	Fill; GLEY 2 3/10B, very dark bluish gray; silty clay sand; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal.
III	170-215	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	215-250*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 19. Photograph of Trench 4, southeast sidewall, view to south

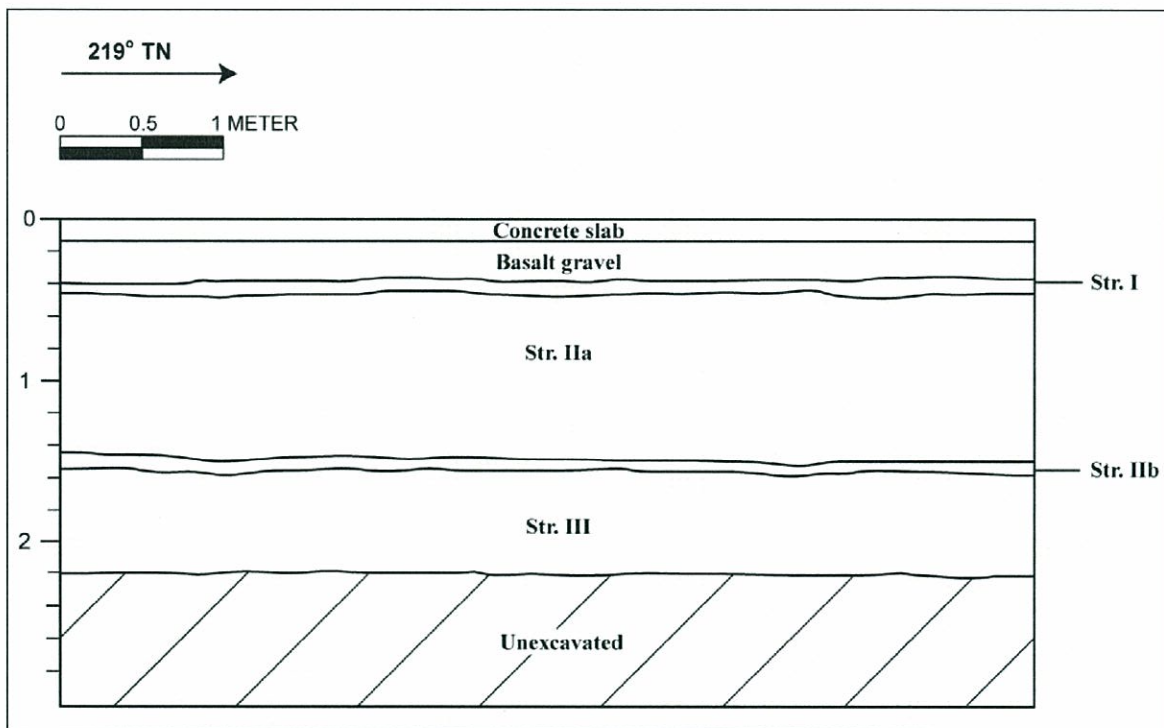


Figure 20. Stratigraphic profile of Trench 4, southeast sidewall

Table 5. Strata Observed at Trench 4

Stratum	Depth (cmbs)	Description
I	40-50	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	50-150	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	145-160	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	155-220	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.

* Base of Excavation

4.1.2.5 Trench 5

Length:	6.0 m
Width:	0.8 m
Maximum Depth:	2.6 m
Orientation:	NE-SW

The stratigraphy of Trench 5 (Figure 21, Figure 22, & Table 6) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 5.

4.1.2.6 Trench 6

Length:	6.0 m
Width:	0.9 m
Maximum Depth:	2.5 m
Orientation:	NE-SW

The stratigraphy of Trench 6 (Figure 23, Figure 24, & Table 7) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 6.



Figure 21. Photograph of Trench 5, southeast sidewall, view to west

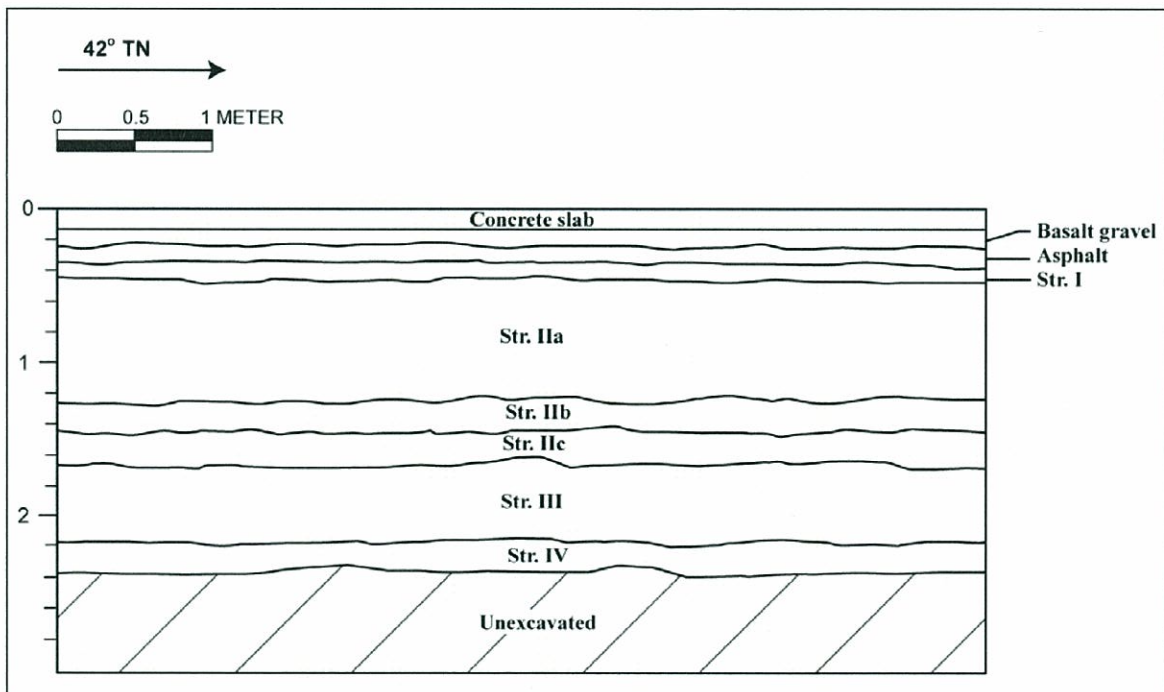


Figure 22. Stratigraphic profile of Trench 5, southeast sidewall

Table 6. Strata Observed at Trench 5

Stratum	Depth (cmbs)	Description
I	40-50	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	50-130	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	130-150	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
IIc	150-170	Fill; GLEY 2, 3/10B, very dark bluish gray; silty clay sand; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal.
III	170-220	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	220-240*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 23. Photograph of Trench 6, northwest sidewall, view to northwest

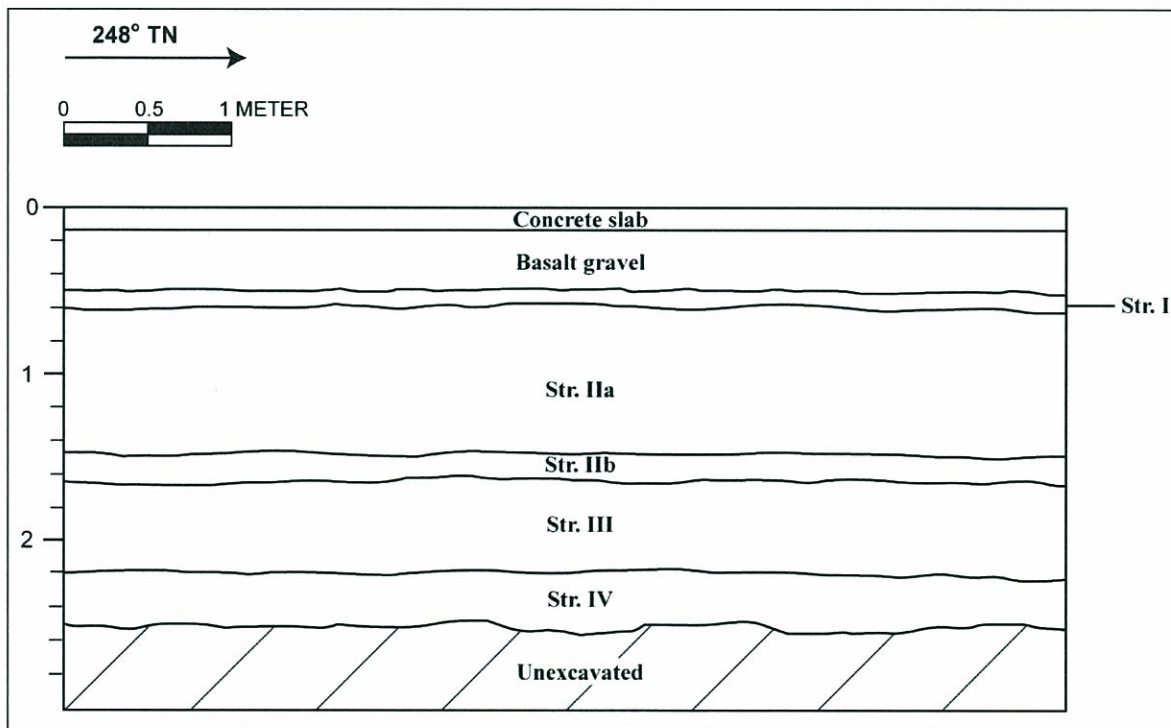


Figure 24. Stratigraphic profile of Trench 6, northwest sidewall

Table 7. Strata Observed at Trench 6

Stratum	Depth (cmbs)	Description
I	50-60	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	60-150	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	150-170	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
III	170-220	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	220-250*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation

4.1.2.7 Trench 7

Length:	4.5 m
Width:	0.8 m
Maximum Depth:	2.3 m
Orientation:	NE-SW

The stratigraphy of Trench 7 (Figure 25, Figure 26, & Table 8) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 7.

4.1.2.8 Trench 8

Length:	6.0 m
Width:	0.8 m
Maximum Depth:	2.2 m
Orientation:	NE-SW

The stratigraphy of Trench 8 (Figure 27, Figure 28, & Table 9) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 8.



Figure 25. Photograph of Trench 7, southeast sidewall, view to southeast

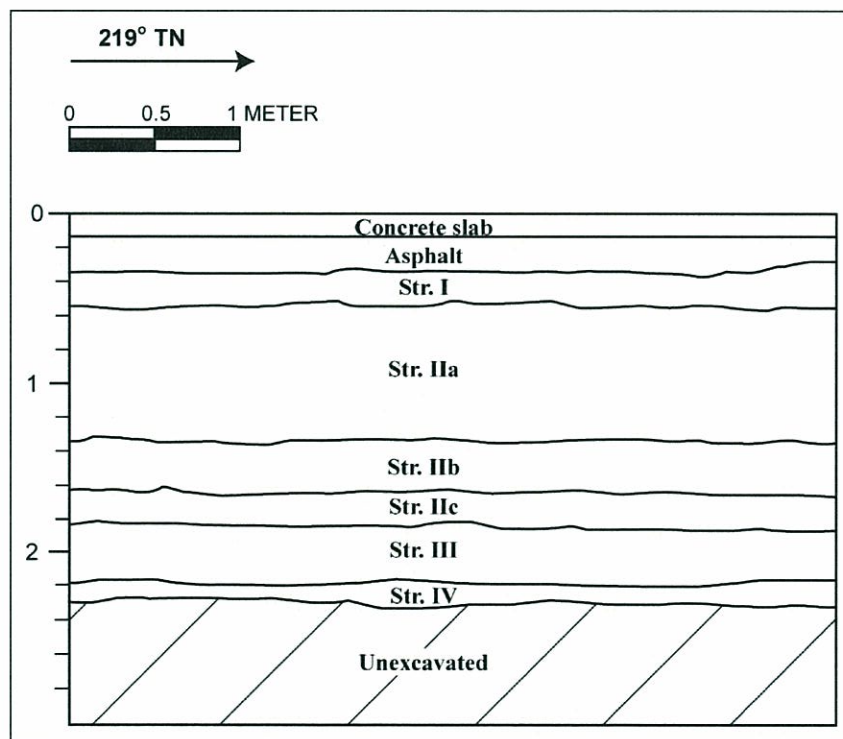


Figure 26. Stratigraphic profile of Trench 7, southeast sidewall

Table 8. Strata Observed at Trench 7

Stratum	Depth (cmbs)	Description
I	35-55	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	55-135	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	135-165	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
IIc	165-185	Fill; GLEY 2 3/10B, very dark bluish gray; silty clay sand; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal.
III	185-220	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	220-230*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 27. Photograph of Trench 8, southeast sidewall, view to southeast

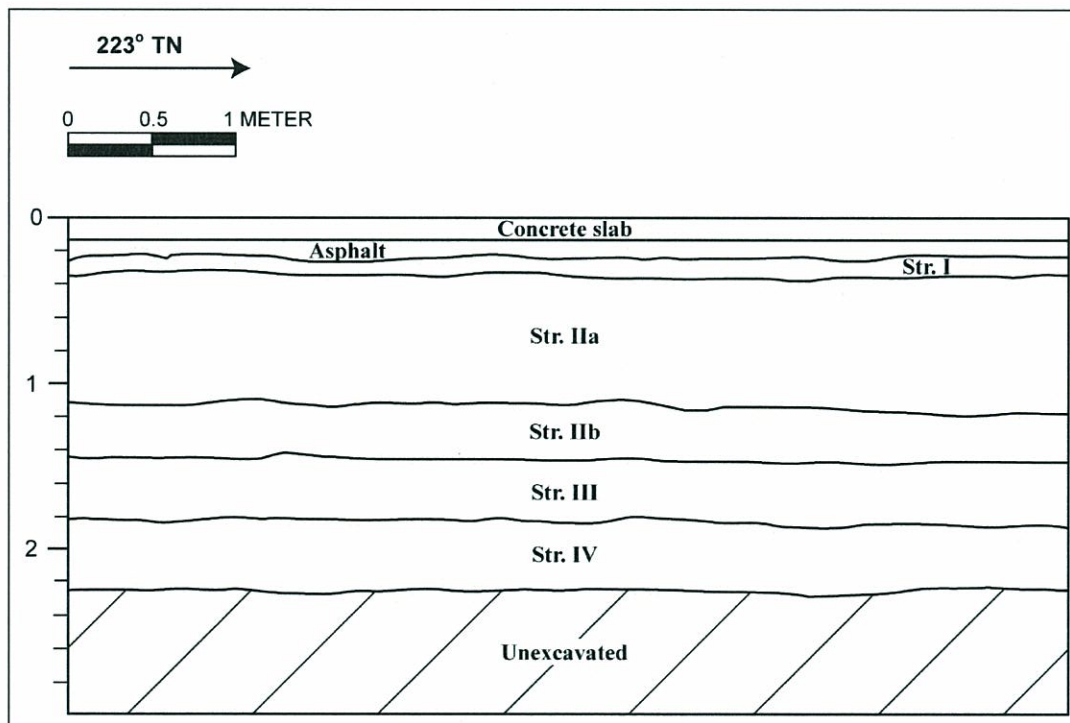


Figure 28. Stratigraphic profile of Trench 8, southeast sidewall

Table 9. Strata Observed at Trench 8

Stratum	Depth (cmbs)	Description
I	25-35	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading for parking lot.
IIa	30-120	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	115-150	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
III	145-185	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	185-220*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation

4.1.2.9 Trench 9

Length:	6.0 m
Width:	0.8 m
Maximum Depth:	2.1 m
Orientation:	NE-SW

The stratigraphy of Trench 9 (Figure 29, Figure 30, & Table 10) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 9.

4.1.2.10 Trench 10

Length:	6.0 m
Width:	0.8 m
Maximum Depth:	2.2 m
Orientation:	NE-SW

The stratigraphy of Trench 10 (Figure 31, Figure 32, & Table 11) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III).

No cultural material was observed during the excavation of Trench 10.



Figure 29. Photograph of Trench 9, southeast sidewall, view to southeast

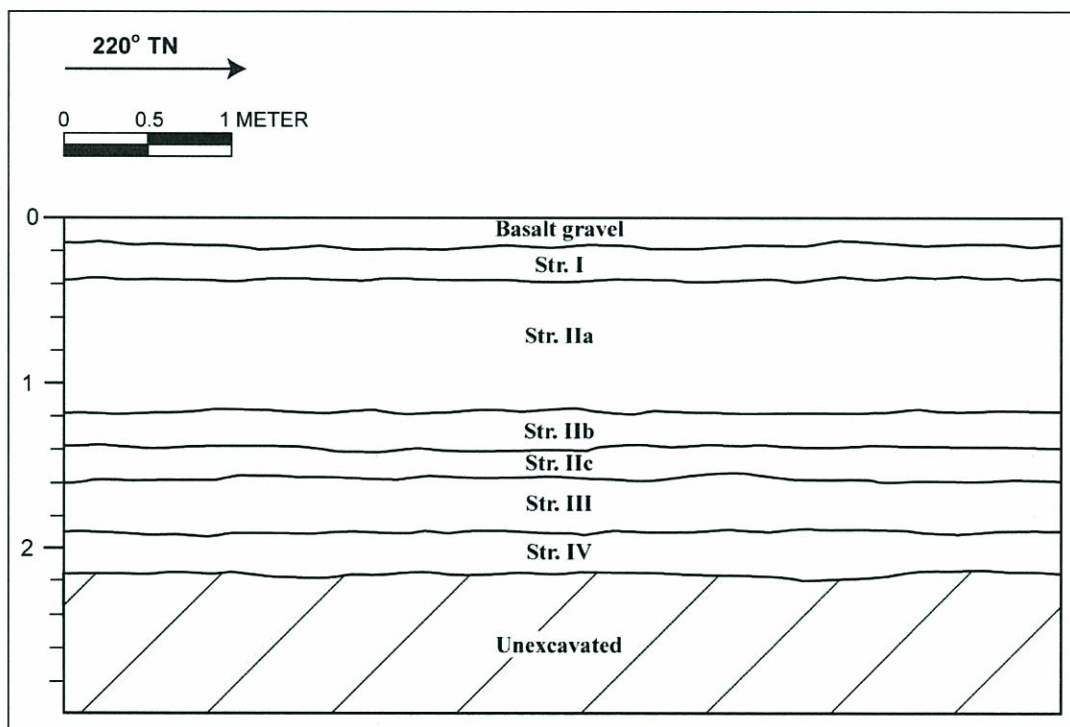


Figure 30. Stratigraphic profile of Trench 9, southeast sidewall

Table 10. Strata Observed at Trench 9

Stratum	Depth (cmbs)	Description
I	20-40	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading of parcel.
IIa	40-120	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	120-140	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
IIc	140-160	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	160-190	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	190-210*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 31. Photograph of Trench 10, southeast sidewall, view to southeast

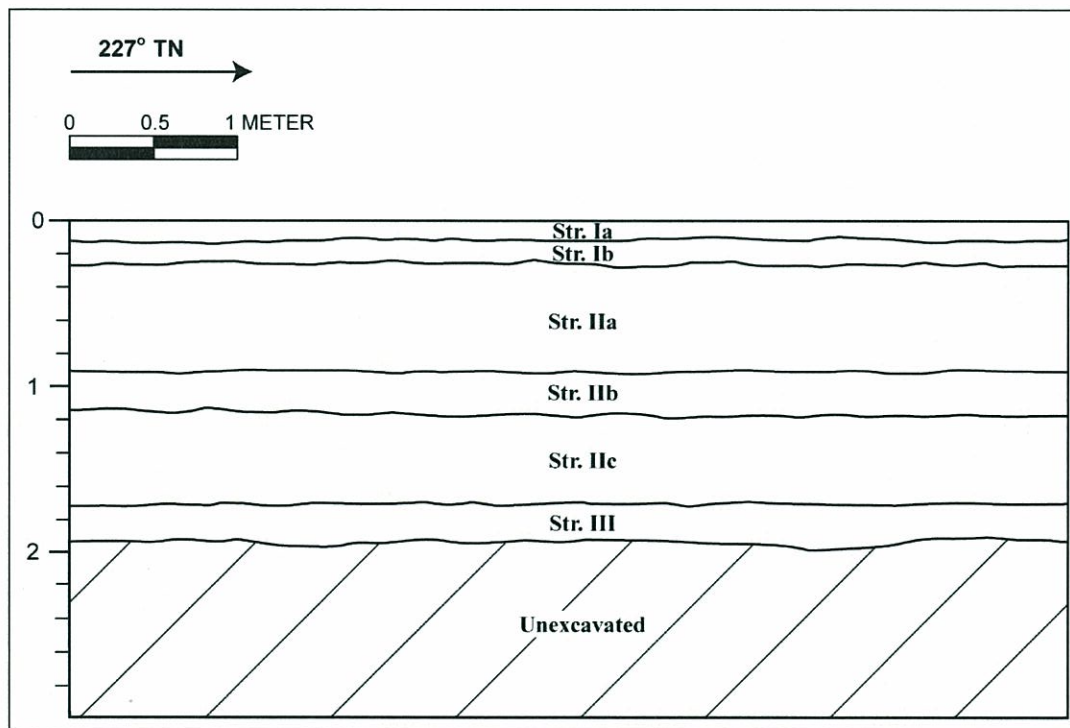


Figure 32. Stratigraphic profile of Trench 10, southeast sidewall

Table 11. Strata Observed at Trench 10

Stratum	Depth (cmbs)	Description
Ia	0-10	Fill; 10 YR 3/2, very dark grayish brown; silt loam; weak fine crumb structure; dry loose consistency; non plastic; weak cementation; terrestrial origin; abrupt boundary; smooth topography. Modern A horizon consisting of imported construction fill associated with the leveling and grading of the parcel.
Ib	10-30	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading of parcel.
IIa	30-90	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	90-110	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
IIc	110-170	Fill; GLEY 2 7/5PB, light bluish gray; silty clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Contains 50% crushed coral. Imported pump dredge material associated with the dredging of the Ala Wai Canal.
III	170-190*	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.

* Base of Excavation

4.1.2.11 Trench 11

Length:	6.0 m
Width:	1.0 m
Maximum Depth:	1.8 m
Orientation:	NW-SE

The stratigraphy of Trench 11 (Figure 33, Figure 34, & Table 12) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 11.

4.1.2.12 Trench 12

Length:	6.0 m
Width:	1.0 m
Maximum Depth:	2.0 m
Orientation:	NW-SE

The stratigraphy of Trench 12 (Figure 35, Figure 36, & Table 13) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III).

No cultural material was observed during the excavation of Trench 12.



Figure 33. Photograph of Trench 11, southwest sidewall, view to southwest

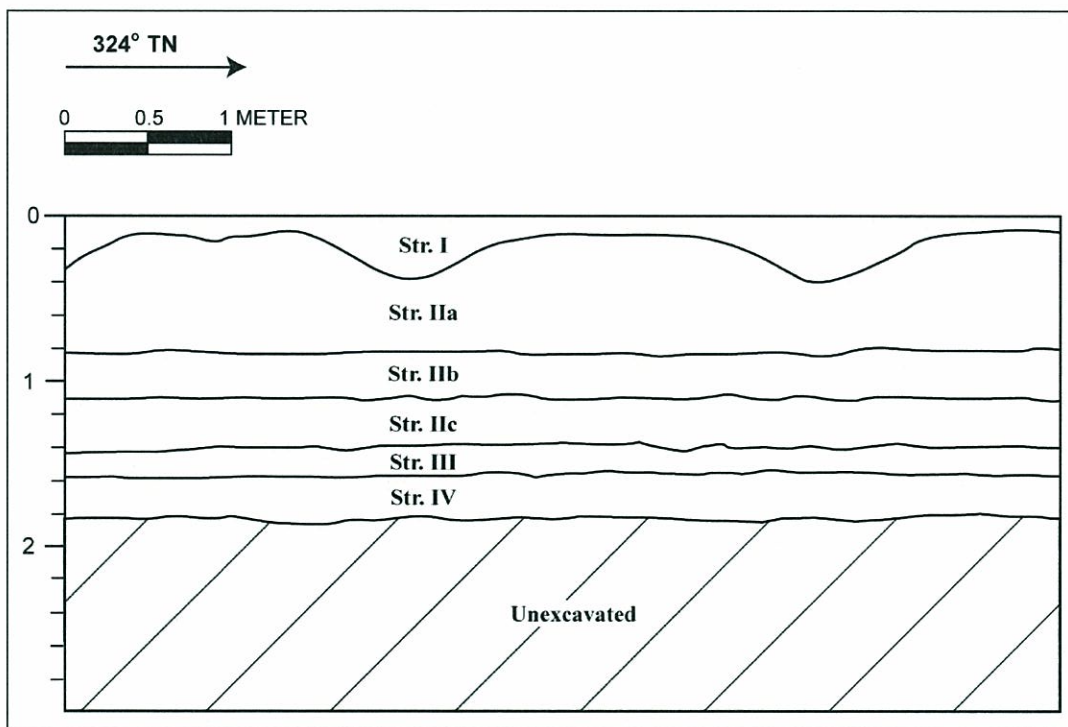


Figure 34. Stratigraphic profile of Trench 11, southwest sidewall

Table 12. Strata Observed at Trench 11

Stratum	Depth (cmbs)	Description
I	0-40	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; wavy topography. Imported construction fill associated with leveling and grading of parcel.
IIa	40-80	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	80-110	Fill; 10 YR 6/3, pale brown; sandy clay; strong, medium, blocky structure; moist firm consistency; very plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin brown bands, which is indicative of pump dredge deposits.
IIc	110-140	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	140-160	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	160-180*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 35. Photograph of Trench 12, northeast sidewall, view to northeast

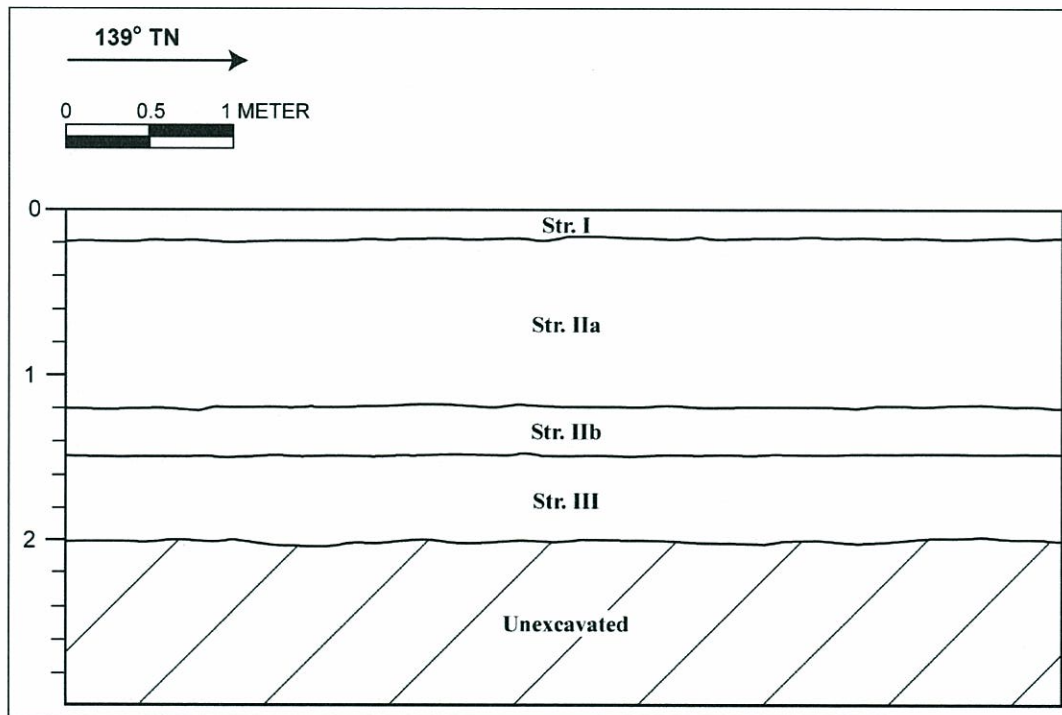


Figure 36. Stratigraphic profile of Trench 12, northeast sidewall

Table 13. Strata Observed at Trench 12

Stratum	Depth (cmbs)	Description
I	0-20	Fill; 10 YR 5/2, grayish brown; silt; structureless; dry loose consistency; non plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Contains 40% basalt gravel. Imported construction fill associated with leveling and grading of parcel.
IIa	20-120	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	120-150	Fill; GLEY 2 7/5PB, light bluish gray; silty clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Contains 50% crushed coral. Imported pump dredge material associated with the dredging of the Ala Wai Canal.
III	150-200*	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.

* Base of Excavation

4.1.2.13 Trench 13

Length:	5.0 m
Width:	0.9 m
Maximum Depth:	0.6 m
Orientation:	NW-SE

No stratigraphy was observed in Trench 13 due to the presence of subsurface concrete slabs approximately 60 cm below the existing ground surface (Figure 37 & Figure 38).

No cultural material was observed during the excavation of Trench 13.

4.1.2.14 Trench 14

Length:	6.0 m
Width:	0.9 m
Maximum Depth:	2.3 m
Orientation:	N-S

The stratigraphy of Trench 14 (Figure 39, Figure 40, & Table 14) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 14.



Figure 37. Photograph of Trench 13, southeast sidewall, view to southeast

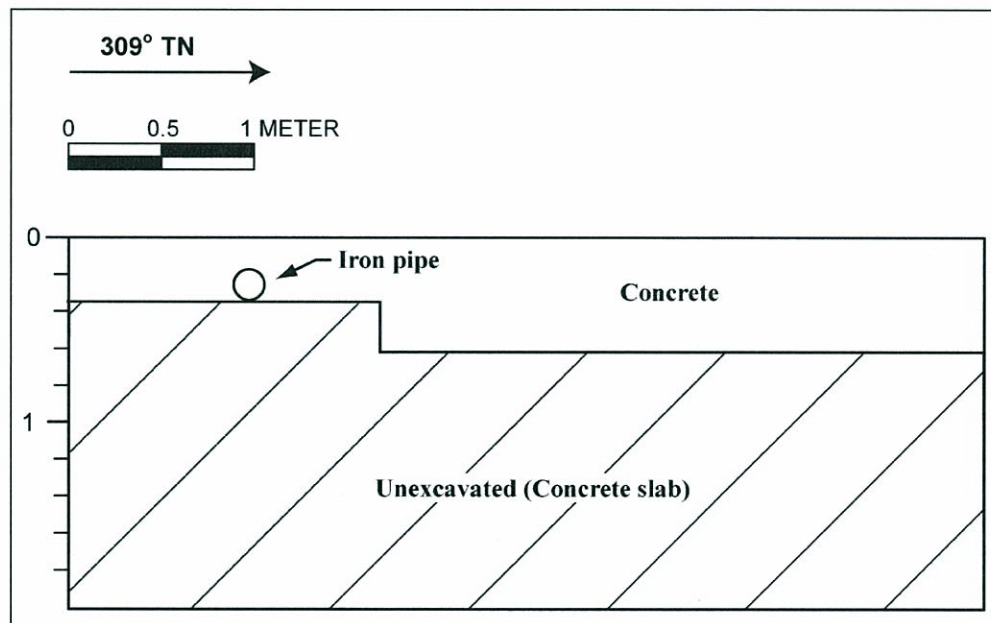


Figure 38. Stratigraphic profile of Trench 13, southeast sidewall



Figure 39. Photograph of Trench 14, west sidewall, view to southwest

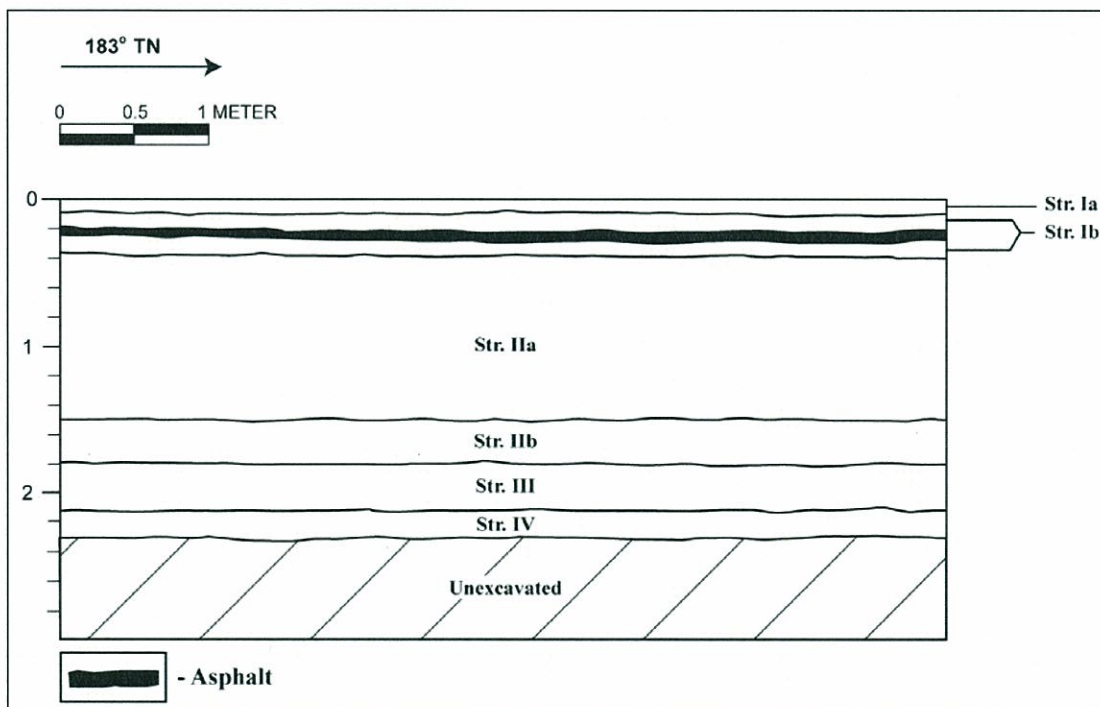


Figure 40. Stratigraphic profile of Trench 14, west sidewall

Table 14. Strata Observed at Trench 14

Stratum	Depth (cmbs)	Description
Ia	0-10	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading of parcel.
Ib	10-40	Fill; 10 YR 5/6, yellowish brown; silty sand; structureless; dry loose consistency; non plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported construction fill associated with the leveling and grading of the parcel. A 10 cm thick layer of asphalt, probably a remnant of an old parking lot or drive way, runs through the middle of this stratum.
IIa	40-150	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	150-180	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	180-210	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	210-230*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation

4.1.2.15 Trench 15

Length:	4.0 m
Width:	0.9 m
Maximum Depth:	2.2 m
Orientation:	NW-SE

The stratigraphy of Trench 15 (Figure 41, Figure 42, & Table 15) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III). Underlying the buried A horizon was a layer of clay loam sludge (Stratum IV) formed by the natural decomposition of the limestone bedrock below.

No cultural material was observed during the excavation of Trench 15.

4.1.2.16 Trench 16

Length:	6.0 m
Width:	0.9 m
Maximum Depth:	2.0 m
Orientation:	NW-SE

The stratigraphy of Trench 16 (Figure 43, Figure 44, & Table 16) consisted of modern imported construction fill (Stratum I), followed by historic dredge material (Stratum II) overlying a buried A horizon (former land surface) consisting of naturally deposited alluvial sediment and decomposing organic matter (Stratum III).

No cultural material was observed during the excavation of Trench 16.



Figure 41. Photograph of Trench 15, southwest sidewall, view to south

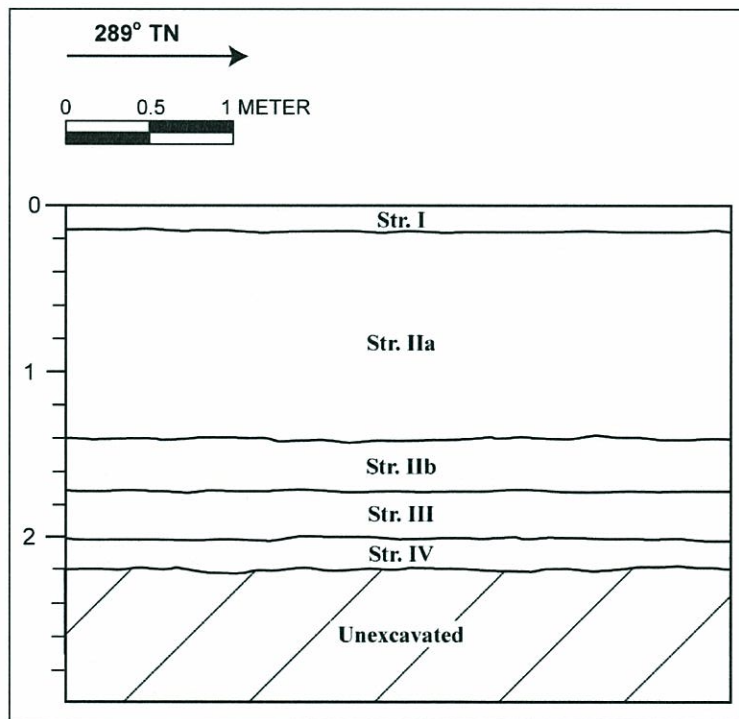


Figure 42. Stratigraphic profile of Trench 15, southwest sidewall

Table 15. Strata Observed at Trench 15

Stratum	Depth (cmbs)	Description
Ia	0-15	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; smooth topography. Imported construction fill associated with leveling and grading of parcel.
IIa	15-140	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	140-170	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	170-200	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.
IV	200-220*	C horizon (decomposing bedrock); GLEY 2 5/5B, bluish gray; sandy clay; structureless; wet sticky consistency; slightly plastic; no cementation; mixed origin. Sandy clay sludge formed by naturally decomposing limestone bedrock.

* Base of Excavation



Figure 43. Photograph of Trench 16, northeast sidewall, view to east

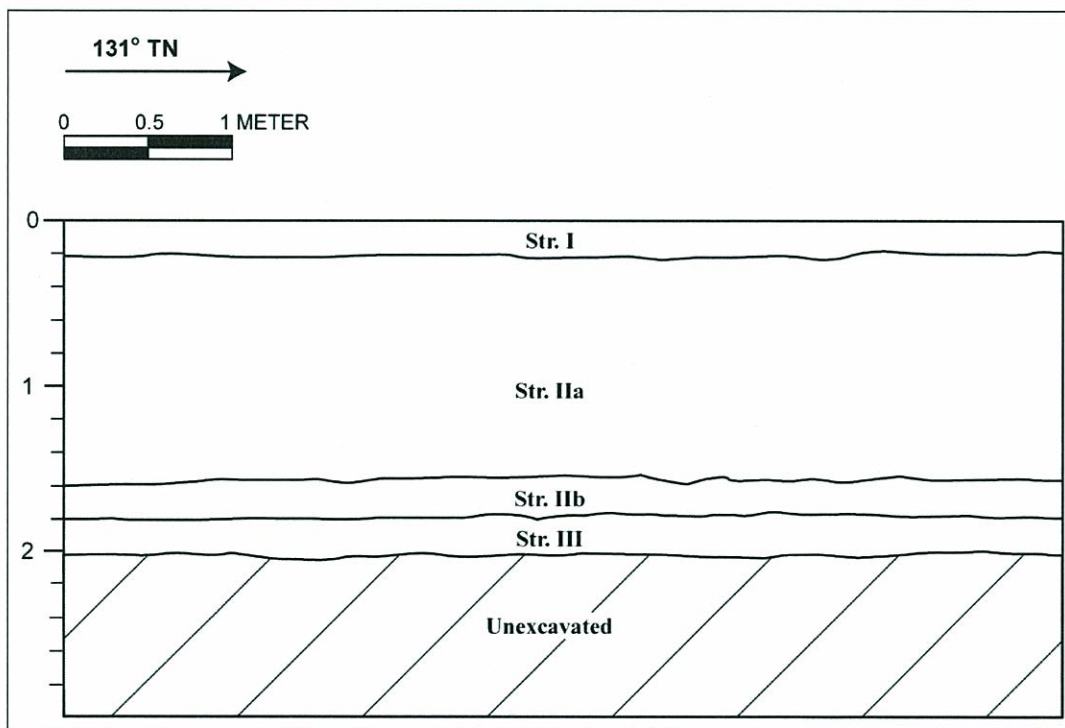


Figure 44. Stratigraphic profile of Trench 16, northeast sidewall

Table 16. Strata Observed at Trench 16

Stratum	Depth (cmbs)	Description
I	0-20	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; wavy topography. Imported construction fill associated with leveling and grading of parcel.
IIa	20-150	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	150-180	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	180-200*	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.

* Base of Excavation

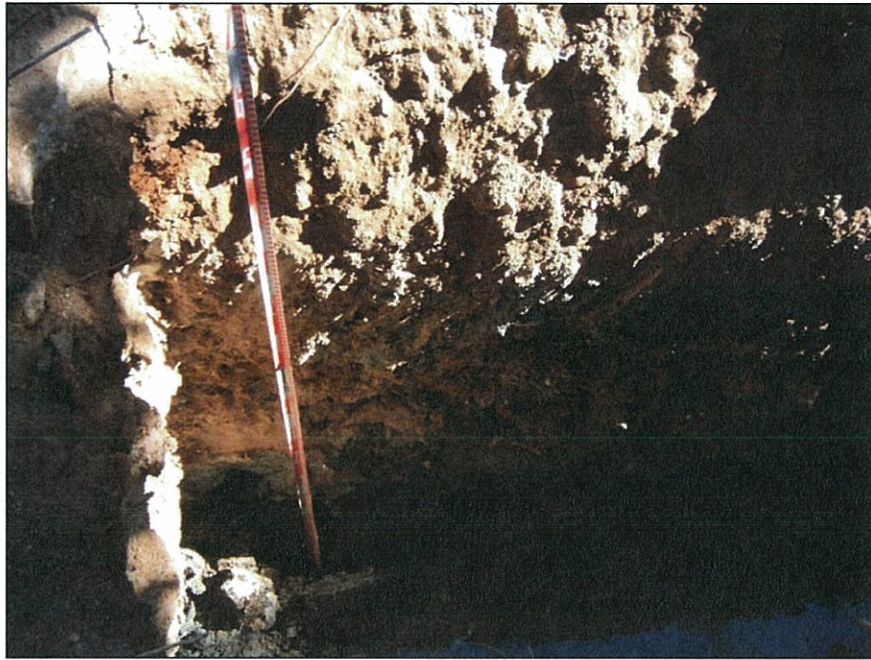


Figure 45. Photograph of Trench 17, northeast sidewall, view to northeast

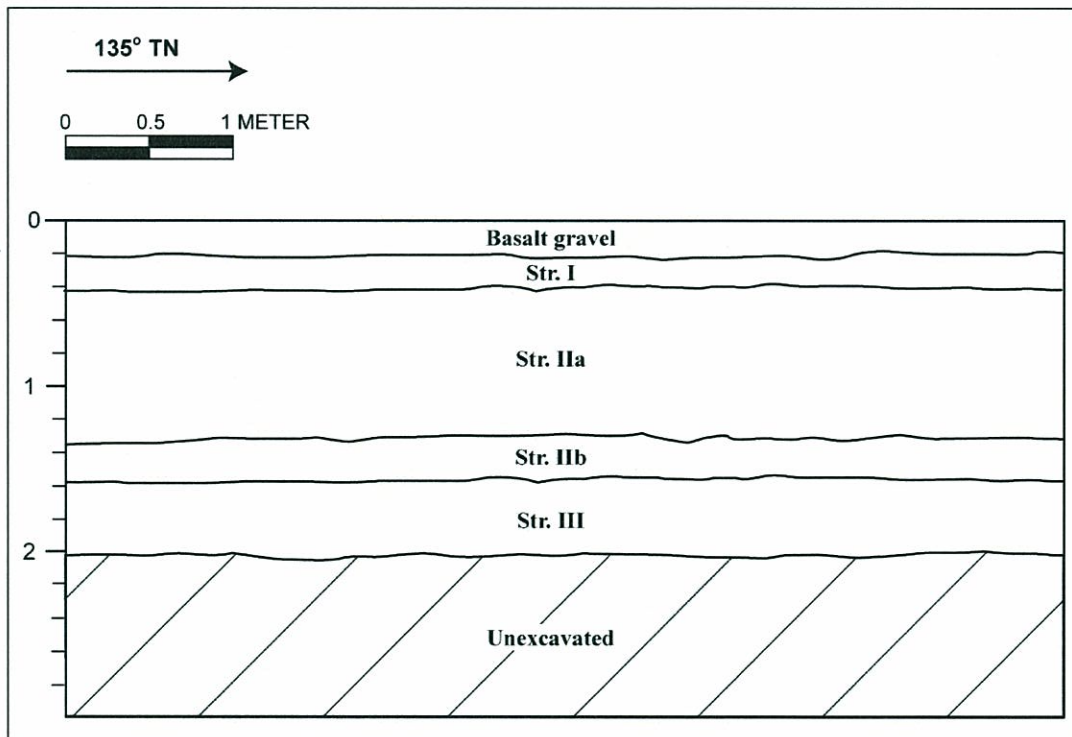


Figure 46. Stratigraphic profile of Trench 17, northeast sidewall

Table 17. Strata Observed at Trench 17

Stratum	Depth (cmbs)	Description
I	20-40	Fill; 10 YR 4/6, red; clay loam; moderate medium blocky structure; dry weakly coherent consistency; slightly plastic; no cementation; terrestrial origin; abrupt boundary; wavy topography. Imported construction fill associated with leveling and grading of parcel.
IIa	40-130	Fill; 10 YR 5/6, light yellowish brown; gravel; structureless; dry loose consistency; non plastic; no cementation; marine origin; abrupt boundary; smooth topography. Contains 40% sand. Crushed coral fill associated with the historic draining and filling of Waikiki, most likely dredge material from the construction of the Ala Wai Canal.
IIb	130-160	Fill; GLEY 2 7/5PB, light bluish gray; clay; strong, medium, blocky structure; wet sticky consistency; plastic; no cementation; mixed origin; abrupt boundary; smooth topography. Imported pump dredge material associated with the dredging of the Ala Wai Canal. Contains abundant micro striations, defined by thin black bands, which is indicative of pump dredge deposits.
III	160-200*	Buried A horizon (former land surface); 10 YR 3/2, very dark grayish brown; silt loam; moderate, medium, crumb structure; moist very friable consistency; plastic; no cementation; mixed origin; clear boundary; wavy topography. Contains abundant land snail shells, roots, and wood fragments. Marsh sediment formed by alluvial deposits and decomposing organic matter.

* Base of Excavation

Section 5 Summary and Interpretation

In compliance with and to fulfill applicable Hawai'i state historic preservation legislation, CSH completed what began as an archaeological inventory survey investigation of the project area, but because no historic properties were located, this investigation became an archaeological assessment, per the language of HAR Chapter 13-13-275-5. Per the Hawai'i state requirements for archaeological assessments, this report includes the results of historical and archaeological background research and fieldwork. The background research focused on summarizing the project area's pre-Contact and historic land use, cultural significance, and types and locations of potential historic properties within the project area and its vicinity.

The present project area is located on the *mauka* fringe of a portion of Waikīkī that, in traditional Hawaiian times and before the massive drainage accomplished by the Ala Wai Canal, comprised a complex of numerous large fishponds. Also located in this portion of Waikīkī were wetland and dry land agricultural fields, and habitation sites. Land Commission Award documents from the mid-nineteenth century record continuing Native Hawaiian habitation and taro cultivation in parcels adjacent to the present project area. However, nineteenth and twentieth century maps indicate that the project area consisted of undeveloped marshland, suggesting that it was not actively utilized for traditional Hawaiian habitation or agriculture during this time period. By 1927 the project area was drained, filled in, and subdivided during a push to urbanize Waikīkī. By 1956 the project area was completely developed and was being utilized for both residential and commercial purposes.

Previous archaeological studies have documented subsurface cultural deposits and human burials – both pre-Contact Hawaiian and historic – in the vicinity of the project area. These findings confirm the traditional Hawaiian and historic activities indicated in the vicinity of the project area through historic documents (LCAs, maps, etc.).

As part of the field effort, carried out between November 8th and November 15th 2007, CSH conducted a systematic pedestrian inspection of the project area. No surface historic properties were identified. CSH also excavated seventeen (17) backhoe trenches to prospect for subsurface cultural deposits, including human burials. No subsurface historic properties were observed. In general the observed and documented stratigraphy consisted of varying fill layers, including historic fill associated with the draining and filling of Waikīkī, overlying naturally occurring alluvial sediment.

The fieldwork results support the background research, which indicates that the project area consisted of marshland that was not intensively utilized until the mid-twentieth century when Waikīkī became urbanized following the draining and filling of the area initiated in the 1920's. However, background research also indicates extensive traditional Hawaiian agriculture and habitation in the immediate vicinity of the project area, as evidenced by the presence of fishponds, wetland agricultural fields, and habitation sites. Due to the proximity of this traditional Hawaiian occupation, it is still possible that intact pre-Contact and early contact cultural deposits associated with Hawaiian habitation, agriculture, and burial interment are lying undisturbed beneath the fill layers within the project area. It should be noted that typically cultural deposits associated with traditional Hawaiian habitation and burial interment are located in Jaucas sand deposits, which were not observed within the project area, thus while there is the

potential to encounter these types of cultural deposits, it is unlikely. The naturally deposited soils observed in the project area consisted of a loam formed by the alluvial deposit of sediment and the decomposition of organic matter. This soil would have been excellent for agriculture and thus makes the potential for encountering cultural deposits associated with traditional Hawaiian agriculture more likely. Additionally, cultural deposits, including historic trash pits, associated with early twentieth century commercial and residential sites may also be present.

Section 6 Project Effect and Mitigation Recommendations

6.1 Project Effect

Based on the current investigation, there are no historic properties recommended Hawai'i Register-eligible within the project's Area of Potential Effect (APE). Accordingly, based on the available information, it is recommended that the proposed project will have no effect on significant (i.e. Hawai'i Register-eligible) historic properties. A project specific effect determination of "no historic properties affected" is warranted for the project.

6.2 Mitigation Recommendations

The proposed 1944 Kalākaua Avenue Project will not have an adverse impact to any historic properties and no further work is recommended for the project.

In the unlikely event that previously unidentified subsurface historic properties are encountered by project construction, the project proponents should immediately stop work in the vicinity and contact SHPD's O'ahu Office [Tel. (808) 692-8015].

6.3 Disposition of Materials

No cultural materials were collected during this archaeological assessment.

Section 7 References Cited

Acson, Veneeta

1983 *Waikiki: Nine Walks Through Time*. Island Heritage Limited, Norfolk Island, Australia.

Armstrong, R. Warwick (ed.)

1973 *Atlas of Hawai'i*. University of Hawaii Press, Honolulu, HI.

Athens, Stephen

1990 *Letter: Inventory of Human Skeletal Remains from Hawaii at IARII*. International Archaeological Research Institute Inc., Honolulu, Hawai'i.

Bath, Joyce, and Carol Kawachi

1989 *Ala Wai Golf Course Burial: Site 80-14-4097 ME#89-0252 Mānoa, Honolulu District, O'ahu TMK 2-7-36:15*. Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

Beardsley, Felicia, and Michael Kaschko

1997 *Archaeological Monitoring and Data Recovery Pacific Beach Hotel Office Annex, Waikiki, O'ahu*. International Archaeological Research Institute, Inc., Honolulu, HI.

Beckwith, Martha

1940 *Hawaiian Mythology*. Yale University Press, New Haven, CT.

Bell, Matthew and Matt McDermott

2007 Archaeological Inventory Survey Report for the Allure Waikīkī Development, Waikīkī Ahupua'a, Honolulu (Kona) District, O'ahu TMK [1] 2-6-13: 1, 3, 4, 7, 8, 9, 11 and 12. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Bernice Pauahi Bishop Museum

1984 *Burial Remains Waikiki Ahupua'a Maunahua to Waikiki (incl. Manoa) at Bishop Museum Kona*. Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

1981 *Interim Progress Report on Archaeological Testing, Excavations, and Monitoring at the Halekulani Hotel*. Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

Borthwick, Douglas, Anthony Bush, Rodney Chiogioji, Hallett Hammatt

2002 *Archaeological Inventory Survey of an Approximately 71,000-sq.ft. Parcel in Waikiki, Waikiki Ahupua'a, Kona District, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Bowen, Robert N.

1974 Appendix A: Mokapu: Its Historical and Archaeological Past. IN *Early Hawaiians: An Initial Study of Skeletal Remains from Mokapu, Oahu*, by Charles E. Snow. The University Press of Kentucky, Lexington, KY.

Bush, Anthony, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report for the Waikiki Anticrime Lighting Improvement Project Phase II (TMK 2-6-1, 2-6-2, 2-6-3, 2-6-5, 2-6-6, 2-6-25, 2-6-16, 2-6-18, 2-6-19, 2-6-22, 2-6-23, 2-6-26, 2-6-27)*. Cultural Surveys Hawaii, Inc.: Kailua, HI.

Bush, Anthony, John P. Winieski, Hallett H. Hammatt

2003 *Archaeological Monitoring Report for Excavations for the New International Market Place Sign Project, Waikiki, O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Calis, Irene

2002 *An Archaeological Monitoring Report for ABC Store No. 35 Lemon Road Fence Wall Construction Project Waikiki Ahupua'a, Honolulu District, O'ahu Island, Hawai'i*. Scientific Consultant Services, Honolulu, Hawai'i.

Carlson, Ingrid, Sara Collins, and Paul Cleghorn

1994 *Report of Human Remains found during the Realignment of Kalia Road, Fort DeRussy, Waikiki, O'ahu*. BioSystems Analysis, Kailua, HI.

Center for Oral History, Social Science Research Institute

1985 *Waikiki, 1900-1985: Oral Histories Volumes I-IV*. University of Hawai'i-Manoa, Honolulu, Hawai'i.

Chamberlain, Levi

1957 *Tour Around O'ahu: 1828*, in *Sixty-fifth Annual Report of the Hawaiian Historical Society for the Year 1956*, pp. 2541. Hawaiian Historical Society, Honolulu, HI.

Chiogioji, Rodney

1991 *An Archaeological Assessment of Two Parcels in Waikiki Ahupua'a*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Cleghorn, June Noelani Johnson

1987 *Hawaiian Burial Reconsidered: An Archaeological Analysis*. Unpublished Master's Thesis. University of Hawaii, Honolulu, HI.

Cleghorn, June

1993 *Inadvertent Discovery of Human Remains at the Waikiki Aquarium Renovation Project, Waikiki, Kona, O'ahu, TMK: 3-1-31: 006*. State Historic Preservation Division, Honolulu, Hawai'i.

Cleghorn, Paul

1996 *The Results of an Archaeological Inventory Survey at the Proposed Kalakaua Plaza, Waikiki, O'ahu, Hawai'i (TMK 2-6-16:23, 25-26, 28, 61, and 69)*. Pacific Legacy, Inc., Kailua, HI

2001 *FINAL: Archaeological Mitigation near Waikiki Burger King Construction Site TMK: 2-6-026:012 & 013, Kona District, Waikiki Ahupua'a, Island of O'ahu Letter to Mr. Paul Kosasa (ABC Stores)*. Pacific Legacy, Kailua, Hawai'i.

Corbin, Alan B.

- 2001 *FINAL: Appendix C: Subsurface Archaeological Inventory Survey-Hilton Waikikian Property, Land of Waikiki, Honolulu (Kona) District, Island of O'ahu (TMK: 2-6-9-.2, 3, 10)*. Pacific Health Research Institute, Honolulu, Hawai'i.

Dagher, Cathleen

- 1993 *Inadvertent Discovery of Human Remains at the Waikiki Aquarium Renovation Project, Waikiki, Kona, O'ahu, TMK: 3-1-31: 006*. State Historic Preservation Division, Honolulu, Hawai'i.

Davis, Bertell

- 1991 *Archaeological Monitoring of Environmental Baseline Survey and Excavations in Hawaiian Land Commission Award 1515 ('Apana 2) at Fort DeRussy, Waikiki, O'ahu*. State Historic Preservation Office manuscript.
- 1989 *Subsurface Archaeological Reconnaissance Survey and Historical Research at Fort DeRussy, Waikiki, O'ahu, Hawai'i*. International Archaeological Research Institute, Inc., Honolulu, HI.
- 1984 *The Halekūlani Hotel Site: Archaeological and Historical Investigations in Waikiki, O'ahu, Hawai'i*. B.P. Bishop Museum, Honolulu, HI.

Dega, Michael, and Joseph Kennedy

- 1993 *Archaeological Report Concerning the Inadvertent Discovery of Remains at the Waikiki Aquarium (TMK: 3-1-31:06) Waikiki Ahupua'a Kona District, Island of Oahu*. Archaeological Consultants of Hawaii, Inc., Haleiwa, HI.

Denham, Timothy, and Jeffrey Pantaleo

- 1997 *Archaeological Monitoring and Investigations During Phase I: Kalia Road Realignment and Underground Utilities, Fort DeRussy, Waikiki, O'ahu*. Biosystems Analysis, Kailua, Hawai'i.

Denham, Timothy, Jeffrey Pantaleo, Thomas L. Jackson, William Fortini, Alan Ziegler, Gail Murakami, Linda Scott-Cummings, Paul Tichenal

- 1997 *Archaeological Data Recovery Excavations at the Fort DeRussy Military Reservation, Waikiki, Island of O'ahu, State of Hawai'i*. GANDA Biosystems, Honolulu, Hawai'i.

Elmore, Michelle, and Joseph Kennedy

- 2002 *An Archaeological Monitoring Report for the Installation of a Security Fence at Fort DeRussy, Waikiki Ahupua'a, Honolulu District, Island of O'ahu*. Archaeological Consultants of the Pacific, Haleiwa, Hawai'i.
- 2001 *A Report Concerning the Inadvertent Discovery of Human Remains at the Royal Hawaiian Hotel, (TMK: (1)2-6-02:5, in Waikiki Ahupua'a, Honolulu District, Island of O'ahu*. Archaeological Consultants of Hawaii, Inc, Haleiwa, HI.

Emerson, N.B.

- 1902 *A Preliminary Report on a Find of Human Bones Exhumed in the Sands of Waikiki, in Tenth Annual Report of the Hawaiian Historical Society for the Year 1901, pp.18-20*. Hawaiian Historical Society, Honolulu, HI.

Foote, Donald E., E.L. Hill, S. Nakamura, and F. Stephens

1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai and Lanai, State of Hawaii*. U.S. Dept. of Agriculture, U.S. Government Printing Office, Washington, D.C.

Freeman, Sallee, Matt McDermott, Constance O'Hare, and Hallett H. Hammatt

2005 *Archaeological Inventory Survey and Cultural Impact Evaluation for the Ala Wai Gateway Project Site, Kālia, Waikīkī, O'ahu (TMK [1] 2-6-011: 001, 002, 004, 032, 037, and 040)*. Cultural Surveys Hawai'i Inc., Kailua, HI.

Giambelluca, T.W., Nullet, M.A., and T.A. Shroeder

1986 *Hawaii Atlas, Report R76*, Hawaii Division of Water and Land Development, Department of Land and Natural Resources, Honolulu.

Grant, Glen

1996 *Waikiki Yesteryear*. Mutual Publishing, Honolulu.

Griffin, Agnes

1987 *Kalakaua Avenue Gas Pipe Excavation Burial Recovery, Waikiki, C. Honolulu, O'ahu (TMK: 2-6-01:12)*. State Medical Officer's office memorandum to Department of Land and Natural Resources, Honolulu, HI.

Hammatt, Hallett H., Rodney Chiogioji

2006 *Archaeological Literature Review and Field Inspection of a 2.3-acre Project Area in Waikīkī Ahupua'a, Kona District, Island of O'ahu [TMK 2-6-13:1,3,4,7,8,9,11 and 12]*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

2000 *Archaeological Assessment of the Honolulu Zoo Parcel, Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1998 *Archaeological Assessment of King Kalakaua Plaza Phase II, Waikiki, Island of O'ahu, (TMK 2-6-18:10, 36, 42, 52, 55, 62, 63, 64, 73, & 74)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1993 *An Archaeological Assessment of a 16-Acre Portion of the Ala Wai Golf Course in the Ahupua'a of Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, Hallett H., Matt McDermott

1999 *DRAFT: Burial Disinterment Plan and Report, State Site Numbers 50-80-14-5744-1 and -2 found During Anti-Crime Street Lighting Improvements Beneath Kalakaua Avenue, Waikiki, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Hammatt, Hallett H., David W. Shideler

1996 *Archaeological Data Recovery at the Hawai'i Convention Center Site, Waikiki, Kona District, O'ahu ((TMK 2-3-35:001)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

1995 *Archaeological Sub-surface Inventory Survey at the Hawai'i Convention Center Site, Waikiki, Kona District, O'ahu (TMK 2-3-35:001)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Honolulu Star Bulletin

1928 The Whole World Knows Waikiki. 17 October:2:1-16. Honolulu.

Hurlbett, Robert, et al.

1992 *Archaeological Monitoring of Mechanical Loop Excavations Hilton Hawaiian Village, Land of Waikīkī, Honolulu (Kona) District, Island of O'ahu.* State Historic Preservation Office, Honolulu, HI.

Hurst, Gwen

1990 *Historical Literature and Documents Search, Archaeological Testing and Subsequent Procedures for the Proposed Redevelopment of the Waikikian Hotel.* Bernice Pauahi Bishop Museum, Honolulu, Hawai'i.

'I, 'ī, John Papa

1959 *Fragments of Hawaiian History as Recorded by John Papa 'I'ī.* Bishop Museum Press, Honolulu, HI.

Johnson, Donald D.

1991 *The City and County of Honolulu: A Governmental Chronicle.* University of Hawai'i Press, Honolulu, HI.

Jourdane, Elaine

1995 *Inadvertent discovery of Human Skeletal Remains At Waikīkī, Sunset Hotel, Waikīkī, Kona, O'ahu.* Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

Kennedy, Joseph

1991 *Archaeological Monitoring Report for the proposed IMAX Theater Project.* Archaeological Consultants Hawai'i, Haleiwa, Hawai'i.

LeSuer, C. Celeste, Matt McDermott, Rodney Chiogioji, Hallett H. Hammatt

2000 *Draft: An Archaeological Inventory Survey of King Kalakaua Plaza Phase II, Waikiki, Waikiki Ahupua'a, Kona District, Island of O'ahu, Hawai'i.* Cultural Surveys of Hawai'i, Kailua, Hawai'i.

Maly, Kepa, Leta J. Franklin, Paul H. Rosendahl

1994 *Archaeological and Historical Assessment Study Convention Center Project Area, Land of Waikiki, Kona District, Island of O'ahu.* Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

Mann, Melanie, and Hallett H. Hammatt

2002 *Archaeological Monitoring Report for the Installation of 12- and 8-inch Water Mains on Lili'uokalani Avenue and Uluniu Avenue, Waikīkī Ahupua'a, Kona District, Island of O'ahu (TMK 2-6-023, 24, and 26).* Cultural Surveys Hawai'i, Inc., Kailua, HI.

McAllister, J.G.

1933 *Archaeology of O'ahu.* B.P. Bishop Museum Bulletin, No.104.

McDermott, Matthew, Rodney Chiogioji, and Hallett Hammatt

1996 *An Archaeological Inventory Survey of Two Lots (TMK 2-6-24:65-68 and 80-83 and TMK 2-6-24:34-40 and 42-45) in Waikiki Ahupua'a, O'ahu, Hawai'i.* Cultural Surveys Hawaii, Inc., Kailua, HI.

McGuire, Ka'ohulani and Hallett H. Hammatt

- 2001 *A Traditional and Cultural Practices Assessment for a Proposed Outrigger Hotels Hawai'i Property Redevelopment in Waikiki, Kona District, island of O'ahu.* Cultural Surveys of Hawai'i, Kailua, Hawai'i.

McMahon, Nancy

- 1994 *Inadvertent Burial Discovery on April 28, 1994, Waikiki, Kona, O'ahu-- Intersection of Kalākaua and Kuamo'o Streets.* State Historic Preservation Office, Kapolei, HI.

Menzies, Archibald

- 1920 *Hawai'i Nei 128 Years Ago.* Honolulu.

Mitchell, Aulii and Hallett H. Hammatt

- 2006 *Cultural Impact Assessment Of a 2.3-acre Project Area, Waikiki Ahupua'a, Kona District, O'ahu (TMK 2-6-13: 1,3,4,7,8,9,11, and 12).* Job Code: WAIKI 4. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Nakamura, Barry Seichi

- 1979 *The Story of Waikiki and the "Reclamation" Project.* Unpublished M.A. thesis, Department of History, University of Hawaii, Honolulu.

Neller, Earl

- 1984 *An Informal Narrative Report on the Recovery of Human Skeletons From a Construction Site in Waikiki on Paoakalani Street, Honolulu, Hawai'i.* State Historic Preservation Office, Kapolei, HI.
- 1981 *An Archaeological Reconnaissance of the New Construction at the Halekulani Hotel, Waikiki.* State Historic Preservation Division, Honolulu, Hawai'i.
- a. *The Kālia Burial Site #50-OA-2870: Rescue Archaeology in Waikiki, Hawai'i.* State Historic Preservation Program, Kapolei, HI.

O'Hare, Constance, David Shideler and Hallett H. Hammatt

- 2005 *Archaeological Inventory Survey for the 116-unit Kaio'o Multifamily Condominium Project, Waikiki Ahupua'a, Honolulu (Kona) District, O'ahu Island, TMK (1) 2-6-012:037-044, 055-058.* Cultural Surveys Hawai'i, Kailua, HI.

O'Leary, Owen, Rodney Chiogioji, Douglas F. Borthwick, and Hallett H. Hammatt

- 2005 *Archaeological Inventory Survey of a 1-Acre Parcel, 2284 Kalākaua Avenue, Waikiki, Kona District, Island of O'ahu.* Cultural Surveys Hawai'i, Kailua, HI.

Perzinski, David, Matt McDermott Rodney Chiogioji, and Hallett H. Hammatt

- 1999 *Archaeological Monitoring Report for Anti-Crime Street Lighting Improvements Along Portions of Ala Wai Boulevard, Kalākaua Avenue, Ala Moana Boulevard and 'Ena Road, Waikiki, O'ahu.* Cultural Surveys Hawai'i, Kailua, HI.

Perzinski, Mary, Hallett H. Hammatt

- 2001a *Archaeological Monitoring Report for the Kapiolani Bandstand Redevelopment Project, Waikiki, Waikiki Ahupua'a, Kona District, O'ahu (TMK 3-1-43).* Cultural Surveys Hawai'i, Kailua, Hawai'i.

2001b *Archaeological Monitoring Report for the Re-Internment Facility for the Waikiki Iwi Kupuna, Kapiolani Park, Waikiki, Island of O'ahu (TMK: 3-1-43:1)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

2001c *Archaeological Monitoring Report for Street Light Improvements Along a Portion of Kalakaua Avenue Between the Natatorium to Poni Mo'i Road, Waikiki, Island of O'ahu (TMK 3-1-031, 032 & 043)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Perzinski, Mary, David W. Shideler, John Winieski, Hallett H. Hammatt

2000 *Burial Findings During the Excavation of a 16th Watermain on an Approximately 915 Meter (3,000 Ft.) Long portion of Kalakaua Avenue Between Kai'ulani and Monsarrat Avenues Associated with the Kuhio Beach Extension/Kalakaua Promenade Project, Waikiki Ahupua'a, Kona District, Island of O'ahu, (TMK 2-6-1, 2-6-22, 2-6-23, 2-6-26, 2-6-27, and 3-1-43)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Pietrusewsky, Michael

1992a *A Mandible Fragment found at the Sheraton Moana Surf rider Hotel, Waikiki*. State Historic Preservation Division, Honolulu, Hawai'i.

1992b *Human Remains from the Lili'uokalani Gardens Site, Hamohamo, Waikiki, O'ahu*. State Historic Preservation Division, Honolulu, Hawai'i.

Putzi, Jeffrey L., Paul Cleghorn

2002 *Archaeological Monitoring of Trench Excavations for Sewer Connections Associated with the Hilton Hawaiian Village Improvements*. Pacific Health Research Institute, Hilo, Hawai'i.

Riford, Mary F.

1989 *Pre-Field Background Literature Search for Archaeological Resources at the Proposed Waikiki Landmark Property*. Bernice Pauahi Bishop Press, Honolulu, Hawai'i.

Rosendahl, Paul

2001 *Archaeological Assessment Study Waikiki Beach Walk Project, Land of Waikiki, Honolulu (Kona) District, Island of O'ahu Technical Report for EIS*. Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

1999 *Interim Report: Hale Koa Hotel Subsurface Inventory Survey-Luau Facility, Kalia, Land of Waikiki, District of Kona, Island of O'ahu*. Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

1992 *Archaeological Monitoring of Mechanical Loop Excavations Hilton Hawaiian Village*. Pacific Health Research Institute, Hilo, Hawai'i.

1989 *Preliminary Report Upon Completion of Field Work Hale Koa Hotel Site Subsurface Inventory Survey Kalia, Land of Waikiki, District of Kona*. Paul H. Rosendahl, Ph.D. Inc., Hilo, Hawai'i.

Simons, Jeannette A., S. Antonio-Miller, D. Trembly, and L. Somer

1991 *Archaeological monitoring and data recovery at the Moana Hotel Historical Rehabilitation Project, O'ahu, Waikiki*. Applied Research Group, Bishop Museum, Honolulu, HI.

Simons, Jeannette A., Paul Cleghorn, R. Jackson, T. Jackson

- 1995 *DRAFT Archaeological Data Recovery Excavations at Fort DeRussy, Waikīkī, O'ahu, Hawai'i*. Manuscript on file at the State Historic Preservation Office, Kapolei, HI.

State Historic Preservation Division (SHPD)

- 1991 *Non Human Bones found in Waikiki*. State Historic Preservation Division, Honolulu, Hawai'i.
- 1987 *Kalakaua Avenue Gas Pipe Excavation Burial*. State Historic Preservation Division, Honolulu, Hawai'i.

Streck, Charles

- 1992 *Human Burial Discovery during Archaeological Data Recovery Excavations at Fort DeRussy, Waikiki, O'ahu Island, Hawai'i, 20 May 1992*. State Historic Preservation Division, Honolulu, Hawai'i.

Tome, Guerin and Michael Dega

- 2003 *Archaeological Monitoring Report for Construction Work at the Waikiki Marriot, Waikiki, Manoa Ahupua'a, Honolulu District, O'ahu Island, Hawai'i*. Scientific Consultant Services, Honolulu, Hawai'i.

Tulchin, Jon and Hallett H. Hammatt

- 2003 *Archaeological and Cultural Impact Assessment of a 1-Acre Parcel, 2284 Kalakaua Avenue, Waikiki, Kona District, Island of O'ahu*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Tulchin, Todd, David W. Shideler and Hallett H. Hammatt

- 2006 *Archaeological Inventory Survey Plan For a 2.3-acre Project Area, Waikīkī Ahupua'a, Kona District, O'ahu TMK [1] 2-6-13: 1, 3, 4, 7, 8, 9, 11 and 12)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.

Vancouver, George

- 1798 *A Voyage of Discovery to the North Pacific Ocean, and Round the World...Performed in the years 1790-1795*. Robinsons and Edwards, London.

Winieski, John P., and Hallett H. Hammatt

- 2001 *Archaeological Monitoring Report for the Public Baths Waste Water Pumping Station Force Main Replacement, Waikīkī, Honolulu, O'ahu, Hawai'i (TMK 2-6-25, 26, & 27, and 3-1-31, 43)*. Cultural Surveys Hawai'i, Kailua, HI.

Winieski, John, Mary Perzinski, David Shideler, and Hallett H. Hammatt

- 2002 *Archaeological Monitoring Report for the Installation of a 16-Inch Water Main on an Approximately 915 Meter (3,000 Ft) Long Portion of Kalākaua Avenue Between Ka'iulani and Monsarrat Avenues Associated with the Kūhiō Beach Extension/Kalākaua Promenade Project, Waikīkī Ahupua'a, Kona District, Island of O'ahu (TMK 2-6-1-, 2-6-22, 2-6-23, 2-6-26, 2-6-27, 3-1-43)*. Cultural Surveys Hawai'i, Kailua, HI.

Appendix A LCA Documentation



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Articles Information Samples Gallery About Us Contact Us

Mahele Database Boundary Commission Land Grants Royal Patents **Review Cart & Checkout**

DOCUMENT DELIVERY Change password Log out

Mahele Database Documents
Number: 01409

Claim Number:	01409	
Claimant:	Nakoko	
Other claimant:		
Other name:		
Island:	Oahu	
District:	Kona	
Ahupuaa:	Waikiki	
Ili:	Kalia, Aikahi^o	
Apana:	2	Awarded: 1
Loi:	2	FR:
Plus:		NR: 100v3
Mala Taro:		FT: 12v3
Kula:		NT: 333v3
House lot:	1	RP: 4154

Kihapai/Pakanu:	Number of Royal Patents:	1
Salt lands:	Koele/Poalima:	No
Wauke:	Loko:	No
Olona:	Lokoia:	No
Noni:	Fishing Rights:	No
Hala:	Sea/Shore/Dunes:	No
Sweet Potatoes:	Auwai/Ditch:	No
Irish Potatoes:	Other Edifice:	No
Bananas:	Spring/Well:	No
Breadfruit:	Pigpen:	No
Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	Yes
Bitter Melon/Gourd:	Stream/Muliwai/River:	Yes
Sugar Cane:	Pali:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	1 house

No. 1409, Nakoko
N.R. 100-102v3

To the Land Commissioners, Greetings and peace: I, the undersigned, hereby tell of my claims for one lo'i, named Aikahi, also a house lot at Kalia, in Waikiki, Island of Oahu.
 NAKOKO
 Residence: Kapapala

F.T. 12v3

Cl. 1409, Nakoko, October 11, 1848

Kawao, sworn. This land is in the ili of Aikahi, Waiiti, Oahu, in two lots.

1. House lot, Kalia, partly fenced and one house on it.

Mauka is Kekuanaoa's waste land

Waiaiaae is Paele's

Makai is Kaluahinenui's

Honolulu, Kimo's.

2. Kalo land in Aikahi, two patches and an auwai.

Mauka is Lilikalani's

Waiaiaae, Kuluwailehua's

Makai, Peleuli's

Honolulu, Kaluahinenui's.

I gave claimant these lands in time of Kaaumanu I and he has held them in peace ever since. I am konohiki of them under Victoria.

N.T. 333v3

No. 1409, Nakoko, October 11, 1848

Kawao, sworn. I have seen his interest at Kapapala in Waikiki. The house lot is Makai at Kealia in Waikiki.

1. One house lot:

Mauka, Kekuanaoa's place

Waiaiaae, Paele's place

Makai, Kaluahinenui's place

Honolulu, Kimo's place

One side of the property has been enclosed while the other is open.

2. Two patches and a stream:

Mauka, Lilikalani's place

Waiaiaae, Paele's place

Makai, Peleuli's place

Honolulu, Kaluahinenui's place.

All of these interests have been from me given at the time of Kaahumanu I and since that time to the present, he has lived there peacefully without any objections. I am the konohiki for this place since Kaahumanu I to the present time. Pikoia is the landford.

[Award 1409; R.P. 4154; Kalia Waikiki Kona; 1 ap.; 2.92 Acs]



Number: 08559B*O

Claim Number:	08559B*O		
Claimant:	Lunalilo, William C.		
Other claimant:	Kanaina, Charles for King		
Other name:			
Island:	Oahu		
District:	Kona, Koolauloa		
Ahupuaa:	Waikiki, Kapahulu, Kaalaea, Laie, Pahipahialua, Kapaka		
Ili:	Kamoku, Pau, Kalauakou, Laiewai, Laiemaloo,		
Apana:	9	Awarded:	1
Loi:		FR:	
Plus:		NR:	
Mala Taro:		FT:	551v3, 82v16
Kula:		NT:	185v10
House lot:		RP:	5688, 7394, 7531, 7635, 7
Kihapai/Pakanu:		Number of Royal Patents:	12
Salt lands:		Koele/Poolima:	No
Wauke:		Loko:	No
Olonā:		Lokoia:	No

Noni:	Fishing Rights:	No
Haia:	Sea/Shore/Dunes:	No
Sweet Potatoes:	Auwai/Ditch:	No
Irish Potatoes:	Other Edifice:	No
Bananas:	Spring/Well:	No
Breadfruit:	Pigpen:	No
Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	No
Bitter Melon/Gourd:	Stream/Muliwai/River:	No
Sugar Cane:	Pali:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	'ili and ahupua'a claims

**No. 8559B*O, (W.C. Lunalilo) C. Kanaina
F.T. 551-552v3**

W.H. Uana, sworn, says he knows the house lot of Lunalilo, in Kaluaaha, Molokai. It is bounded:

Mauka by the public road

On the Halawa side by a fish pond of the government called "Neaupala"

Makai by the sea beach

On Kaiuaakoi side by a government fish pond called "Kaluaaha."

This lot formerly was ordered to be enclosed by Hoapili wahine and Kekaulohe when Eseta Kipa was Governess of Molokai. The people of Kekaulohe's lands erected a stone house on this lot in the year 1835. It is now in possession of Lunalilo as heir of Kekaulohe.

E. Kipa, sworn says, she knows the lot. I was Governess of Molokai under Hoapili wahine &

Kekauluohi in former times, and by their orders enclosed this lot and built a stone house on it with the labor of the people of their own lands. When the government sold the land of "Kaluaaha" to the Missionaries, I heard Kalolou come and ask permission from Kanaina to live in the stone house, which permission she got.

(A. Paki sets up a claim for this lot as heir of Kalaolou.)

L. Haalelea, sworn says, he knows the house lot claimed by Lunaliilo in Kailua, Hawaii. It is bounded:

On Kiholo side by the church lots
 Makai by the public road
 On Keauhou side by a road leading mauka
 Mauka by some house lots.

It is enclosed by a wall. This lot I have heard belonged formerly to Keaho, the father of Mahuka. I have heard that when Keaho died he left this lot to Kekauluohi, and I have recently seen a letter from Mahuka to W.C. Lunaliilo requesting him to allow Mahuka to retain charge of this lot under Lunaliilo. In 1843 I was at Kailua & Kekauluohi was there. I then saw the later Governor Adams give her some money which he said was rent received for this same lot. Part of this lot is claimed by the heir of W.P. Leleiohoku. There is a fence remaining though and dividing the lot into two parts.

F.T. 82-84v16 and N.T. 82-84v16

No. 8559B, William C. Lunaliilo

Polea, sworn says, he knows the lots claimed by William C. Lunaliilo, at Lahaina, Maui.

The first called Luaehu, is bounded as follows:

Mauka by Kaiheekai and Hiram's land
 Olowalu by King's land
 Makai by Sea beach
 Kaanapali by Polea and M.J. Nouliou [Nowlien].

The second in Pakala is bounded as follows:

Mauka by Public street
 Olowalu by Kaiheekai's land
 Makai by H.S. Swinton's and others' land

Kaanapali by Public road.

The third lot called Hawaikaekae is also bounded as follows:

Mauka by Kalateikio's land
Olowalu by Public road
Makai by Aialoa Kahiko street
Kaanapali by Daniela II's land.

This lot is disputed by Manuahina the wife of George Shaw, whose claim in right of her father. She has already got an award for a part of this lot.

The fourth lot in Paunau is bounded as follows:

Mauka by Keaweihuehu's and Kahula's land
Olowalu by Keaweluaole's land
Makai by Old road
Kaanapali by Street leading to Lahainaluna.

The fifth lot called Loinui is bounded as follows:

Mauka by Keaweluaole; Kauhi and Kalolou's land
Olowalu by Mr. Baldwins
Makai by Old road
Kaanapali by Kamakinui's land.

The sixth lot in Aki is bounded as follows:

Mauka by Kaweka's land
Olowalu by Wahie's land
Makai by Main road
Kaanapali by M.I. Nowlein's land.

The seventh lot in Puunoa is bounded as follows:

Mauka by Main road
Olowalu by Iosua Kaeo
Makai by Iosua Kaeo
Kaanapali by King's land.

The eighth lot in Kelawea is bounded as follows:

Mauka by Lahainaluna

Olowalu by Road from the beach
 Makai by Keleikini and Kahookano's lands
 Kaanapali by A stream.

All these lots have descended to William C. Lunaliilo from his mother, Kekauluchi, and are now in the hands of his lunas. The lot in "Pakala" is disputed by Paki and others.

N.T. 619-620v3

No. 8559, [C. Kanaina], Section 49, C. Kanaina, From pg. 597 Vs. No. 2619 Pahau

C. Kanaina has come before the land commissioners and stated, "I am opposing Pahau's interest in section 2 consisting of nine patches They are in my land which is the lele Opukaala of the Pau ili land in Waikiki.

Here is the reason Pahau had acquired that land. Kaaha had given land to him and when he /Kaaha / died all of the lands in Pau were returned to Wm C. Lunaliilo; therefore, I feel that these patches in that section should be returned to me permanently, or else they should be divided between him and me.

Postponed until they make their own settlements and present the best one to the land officers who will approve it.

N.T. 185-187v10

No. 8559B, William Charles Kanaina, [for Lunaliilo], Honolulu, 24 April 1850

COPY

Greetings to you Highness, John Young, the Minister of Interior.

My desire is to have the government claim separated from my lands; therefore I hereby give some of my land for the government to have forever and the same shall apply to mine. Here are the names of my lands:

Kawela ahupuaa, Hamakua, Hawaii.

Waikaekoe ahupuaa, Hamakua, Hawaii.

Makapala ahupuaa, Kohala, Hawaii.

Kehena ahupuaa, Kohala, Hawaii.
Puhau ili of Iole, Kohala, Hawaii.
Puakoa ili of Waimea, Kohala, Hawaii.
Honuainonui ahupuaa, Kona, Hawaii.
Puapuanui ahupuaa, Kona, Hawaii.
Lehuulanui ahupuaa, Kona, Hawaii.
Kawainui ahupuaa, Kona, Hawaii.
Lanihaunui ahupuaa, Kona, Hawaii.
Pakinili ahupuaa, Kau, Hawaii.
Hanuapo ahupuaa, Kau, Hawaii.
Kahanalea ahupuaa, Puna, Hawaii.
Keahialaka ahupuaa, Puna, Hawaii.
Keaau ahupuaa, Puna, Hawaii.
Makahanaioa ahupuaa, Hilo, Hawaii.
Pepekeo ahupuaa, Hilo, Hawaii.

Kaapuhu ahupuaa, Kipahulu, Maui.
2 Waiehu, Puuli, West Maui.
Ahipuli ili for Waiehu, West Maui.
Pepee ili for Wailuku, West Maui.
Honolua ahupuaa, Kaanapali, Maui.
Kalimaoha ahupuaa, Lahaina, Maui.
Polanui ahupuaa, Lahaina, Maui.
Kuholilea ahupuaa, Lahaina, Maui.

Waialua ahupuaa, Kona, Molokai.
Kawela ahupuaa, Kona, Molokai.

Pau ili for Waikiki in Manoa, Kona, Oahu.
Kamoku ili for Waikiki in Manoa, Kona, Oahu.
Kaluaokau ili for Waikiki in Manoa, Kona, Oahu.
Kapahulu ili for Waikiki in Manoa, Kona, Oahu.
Kaalaea ahupuaa, Koolaupoko, Oahu.
Kapaka ahupuaa, Koolauloa, Oahu.
Laiewai ahupuaa, Koolauloa, Oahu.
Laiemaloo ahupuaa, Koolauloa, Oahu.
Pahipahialua, Koolauloa, Oahu.

Kahili, Koolauloa [sic], Koolau, Kauai.
Kalihiwai, Koolauloa [sic], Koolau, Kauai.
Pilauiwai, Koolauloa [sic], Koolau, Kauai.
Manuahi Ili, Kona, Kauai.
Waipouli ahupuaa, Puna, Kauai.

These lands listed above shall be for me fee simple forever, it would not be right for the government to claim my land.

The following lands, I shall give to the government fee simple forever.

Kapulena ahupuaa, Hamakua, Hawaii.
Kukuihaele ahupuaa, Hamakua, Hawaii.
Auau ahupuaa, Kohala, Hawaii.
Keopuhukahi ahupuaa, Kona, Hawaii.
Papaakoko Ili of Honokohau, Kona, Hawaii.
Ninole ahupuaa, Kau Hawaii.
Laepeo ahupuaa, Puna, Hawaii.
Koea 1 ahupuaa, Puna, Hawaii.
Koea 2 ahupuaa, Puna, Hawaii.
Laeapuki ahupuaa, Puna, Hawaii.
Kaiuiki ahupuaa, Hilo, Hawaii.
Kahuku ahupuaa, Hilo, Hawaii.

Waiahoa ahupuaa, Kula, Maui.
Kou Ili of Waiehu Puaii, Komohana Maui.
Kapoino Ili of Waiehu Puaii, Komohana, Maui.
Halelena Ili of Waiehu Puaii, Komohana, Maui.
Keokamu Ili of Waiehu Puaii, Komohana, Maui.
Waihee ahupuaa, Lahaina, Maui.

Mahana ahupuaa, Lanai.

Kamalomaio ahupuaa, Puna, Kauai.
Kumukumu ahupuaa, Koolau, Kauai.

I've given the lands listed above to the government forever, all of them are for the government.

Please consider my request with compassion for me.
With appreciation, I am,
William Charles Lunaliilo, Charles Kanaina (child guardian)
Department of Interior, 6 April 1852.

This is a try copy of Lunaliilo's division with the government,
A.G. Thruston, Secretary

N.T. 450v10

No. 8559B, William C. Lunaliilo, Protested by Kaai

Mahuna, sworn, it is true my own place was written in the bill of sale to C. Kanaina, the place is just mauka of the land in Kailua of Kona, Hawaii, over which there is a dispute by Kaai. That is the lot I have transmitted to him, Kanaina, but I have not seen the property Kaai has at this present time; however, I had seen my parents living on this land at the time [of] Kaahumanu I. I had gone on a tour. Houses had been built, but I have not lived there since that time to the present, nor have I seen this lot over which there is a dispute with Kaai.

C. Kanaina, relates - the witnesses for this land on which Kaai and I are working are dead; although, I had thought they (two) would be my witnesses, but today they have denied by claim to this place. It is true this place had been for their father, Keoho, where he lived until he had died and they (two) are his own children, but I am demanding according to the old bequest of Keaho to M. Kekauluohi as well as by many other statements.

Naea, sworn, I have seen Kaai's place in Keopu of Kona, Hawaii, which is a house lot.

Mauka by Mahuka's lot
South Kona by a road
Makai by Government road
Kohala by vacant lot.

Land from Keoho (his father) upon his (Keoho) death in 1833. Keoho had obtained it long ago as idle land.

Kaai has always lived there peacefully to the present time.

Now C. Kanaina has offered a protest, I do not know the reason for it.

Kioloa, sworn, all of the statements above are true. I have known in the same way. I have not known the place was for C. Kanaina. It had been for Keoho, Kaai's father and now Kaai is the true claimant of this place.

[Award 8559B; (Oahu); R.P. 7635; Kamoku Waikiki (apana 30); R.P. 8193, 8311 & 8416; Pau Waikiki (apana 29)(see Kapaehulu award); R.P. 8434; Pau Waikiki Kona; (ap. 29); R.P. 8124; Kapaehulu Kona; 1 ap.; 31.50 Acs (apana 32); R.P. 8165; Kapaehulu Kona; 2 ap.; 2,184.44 Acs (apana 32); R.P. 8514; Kaea Kapaehulu Waikiki; 1 ap.; 6.16 Acs; R.P. 7652; Kaluakou Waikiki (apana 31); R.P. 7531; Kaalaea Koolaupoko; 1 ap.; 1340 Acs;(apana 33); R.P. 7494; Laie-wai Koolauloa (apana 35); Laie-maloo Koolauloa (apana 36); R.P. 5688; Pahipahialua Koolauloa (apana 37); 704 Acs; no R.P.; Kapaka Koolauloa (apana 34); (Maui) R.P. 8395; Polanui Lahaina; 1 ap.; 440 Acs (apana 25); R.P. 8129; Honolulu Kaanapali; 1 ap.; 3860 Acs (ahupua'a, apana 23); R.P. 7664; Pepee Wailuku; R.P. 8396; 1 ap.; 255.7 Acs; Kaliimaohe Lahaina; 2 ap.; 4.93 Acs; (apana 24); R.P. 8397; Kuholiiea Lahaina; 2 ap.; 184.5 Acs; (apana 26); R.P. 5637; Paunau Lahaina; 1 ap.; 2 roods 24 perkas (apana 4); R.P. 5639; Aki Lahaina; 1 ap.; 16 perkas (apana 6); no R.P.; Paeohi Lahaina; 1 ap.; 1 Ac. 52 rods; R.P. 5699; Loiniu (Luaehu Waianae) Lahaina; 2 ap.; 2.75 Acs 37 rods; R.P. S8550/S8546 & S8537. Kaapahu Kipahulu; 1 ap.; (ahupuaa, apana 19); Waiehu 2 Wailuku; no R.P. Ahikuli Waiehu; (Hawaii) R.P. 478; Pakiniiki Kau; 1 ap.; 2357 Acs; Makaanaloa Hilo; 2 ap.; 7600 Acs; R.P. 7049; Honuapo Kau; 1 ap.; ahupuaa 2200 Acs; Honuaino nui; 1 ap.; 262 Acs; R.P. 7454; Kawainui iki Kona; 1 ap.; 380 Acs; R.P. 7455; Lehuula nui; 1 ap.; 290 Acs; Lehuula nui; 1 ap.; 2840 Acs; Puapuaanui Kona; 1 ap.; 370 Acs; R.P. 7680; Kahena 2 N. Kohala; 1 ap.; (ap.4); ahupuaa; Puako S. Kohala; 1 ap.; Iliaina (Ap.6); Kahaualea Puna; 1 ap.; 26,000; Keahialaka Puna; 1 ap.; 5562 Acs; Pepeekeo Hilo; Keaau Puna; 1 ap.; 64,275 Acs; Kawela Hamakua; R.P. 7434; Honuainonui N. Kona; R.P. 7456; Lanihau Nui Kona; R.P. 8452; Waikoekoe Hamakua; no R.P.; Makapala Kohala; R.P. 7192 Makaanaloa Hilo; 2 ap.; 7600 Acs; (Molokai) R.P. 7655; Waialua; R.P. 7656 Kawela; (Kauai) R.P. 8173; Kalihiwai Halelea; no R.P. Manuahi Hanapepe; R.P. 8323; Kahili Koolau; R.P. 7060; Pilaa Koolau; R.P. 7373; Waipouli Puna; See 8559 to C. Kanaina who is awarded a property at Ukumehame under 8559B; see also Award 277]

Mahela Database Documents
Number: 02083

Claim Number:	02083		
Claimant:	Kahiloaho		
Other claimant:			
Other name:			
Island:	Oahu		
District:	Kona		
Ahupuaa:	Waikiki		
Ili:	Kamookahi, Kanukukahi, Piinaio, Mooiki, Piinao		
Apana:	3	Awarded:	1
Loi:	3	FR:	
Plus:		NR:	350v3
Mala Taro:		FT:	
Kula:		NT:	638v3
House lot:	1	RP:	3923
Kihapai/Pakanu:		Number of Royal Patents:	1
Salt lands:		Koele/Poalima:	No
Wauke:		Loko:	No
Olona:		Lokoia:	No
Noni:		Fishing Rights:	No
Hala:		Sea/Shore/Dunes:	No
Sweet Potatoes:		Auwai/Ditch:	No
Irish Potatoes:		Other Edifice:	No
Bananas:		Spring/Well:	No
Breadfruit:		Pigpen:	No

Coconut:	Road/Path:	No
Coffee:	Burial/Graveyard:	No
Oranges:	Wall/Fence:	No
Bitter Melon/Gourd:	Stream/Muliwai/River:	No
Sugar Cane:	Pali:	No
Tobacco:	Disease:	No
Koa/Kou Trees:	Claimant Died:	No
Other Plants:	Other Trees:	
Other Mammals: No	Miscellaneous:	

**No. 2083, Kahiloaho
N.R. 350v3**

I, the one those name is below, hereby state my claim for two lo'i. One is at Aipae, and another Kaulukukahi /and also/ my house lot and five ponds. This is my claim of which I am telling you keiki, two lo'i at Mookahi.
KAHILOAHO X, his mark
Waikiki, Oahu, 23 December 1847

N.T. 638v3

No. 2083, Kahiloaho, July 3, 1850

Ku, sworn, I have seen his land at Waikiki - 3 sections in the ili below:

Section 1 - 1 patch in Mooiki ili.
Section 2 - 2 patches in Mookahi ili.
Section 3 - House lot in Kalia ili.

He received section 1 from Kamakahonu, the konohiki, in 1844. It had been from the king to Kamakahonu; Section 2, from Kaaukualii in 1834; section 3, an idle land on which he worked 1838, before the death of Kinau and he has lived there comfortably to the present time. No objections.

1. The boundaries are:
Mauka, Kahanaumaikai
Waiatae, Kamakahonu
Makai, Kaiakoili
Honolulu, Kauhoa.

2.
Mauka, Kanemakua
Waiatae, Haumalu
Makai, Kumoanahulu
Honolulu, Keaka.

2. Kaluahunenui's land is around completely.

Haumalu, sworn, Everything which has been mentioned above is true. I have known in the way.

[Award 2083; R.P. 3923; Kamookahi Waikiki Kona; 2 ap.; .44 Ac.; Kanukukahi Waikiki Kona; .34 Ac.; Piinaio Waikiki Kona; 1 ap.; 1.73 Acs]

Appendix H

Phillip Rowell and Associates

47-273 'D' Hui Iwa Street

Kaneohe, Hawaii 96744

Phone: (808) 239-8206

FAX: (808) 239-4175

mail:prowell@hawaiiantel.net

December 21, 2007

Mr. Jim Park
c/o Patrick Seguirant Architect
91-1030 Kaihi Street
Ewa Beach, HI 96706

**Re: Traffic Impact Assessment Report
Proposed Retail Store
1944 Kalakaua Avenue
Honolulu, Hawaii**

Dear Mr. Park:

Phillip Rowell and Associates have completed the following Traffic Impact Assessment Report for the proposed retail store in Waikiki. The report is presented in the following format:

- A. Project Location and Description
- B. Purpose and Objective of Study
- C. Methodology
- D. Description of Existing Streets and Intersection Controls
- E. Existing Peak Hour Traffic Volumes
- F. Level-of-Service Concept and Existing Levels-of-Service
- G. 2010 Background Traffic Projections
- H. Project Trip Generation
- I. 2010 Background Plus Project Traffic Projections
- J. Impact Analysis of 2010 Conditions
- K. Mitigation
- L. Other Issues
- M. Summary and Conclusions

A. Project Location and Description

1. The proposed project is located in the northeast quadrant of the intersection of Kalakaua Avenue at Niu Street in the Waikiki area of Honolulu. A preliminary site plan is provided as Attachment A.
2. The project is a two-story building. The ground floor will be 5,000 square feet of retail and the second floor will be a 5,000 square foot restaurant.
3. Parking will be provided on site. The existing parking lot for the adjacent Local Motion will be expanded to include the area north of the proposed project and east of Niu Street.
4. Access to and egress from the project will be via a existing driveway along the west site of Pau Street and a new driveway along the east side of Niu Street. The existing driveway to the parking lot along the north side of Kalakaua Avenue approximately midway between Pau Street and Niu Street will be removed.

B. Purpose and Objective of Study

1. Quantify and describe the traffic related characteristics of the proposed project.
2. Identify potential deficiencies adjacent to the project that will impact traffic operations in the vicinity of the proposed project.

C. Methodology

1. *Define the Study Area*

The first step in defining the study area was to estimate the number of peak hour trips that the proposed project will generate. The study area was defined based on information provided by the project architect following discussion with the Traffic Review Branch of the Department of Planning and Permitting. It was determined that the study area would include the following intersections:

- Kalakaua Avenue at Niu Street
- Kalakaua Avenue at Pau Street

2. *Analyze Existing Traffic Conditions.*

Existing traffic volumes at the study intersections were obtained from traffic counts performed on Thursday November 8, 2007 and Friday November 9, 2007. The intersection configurations and right-of-way controls were verified at the time of the surveys. Existing traffic operating conditions of the study intersection were determined using the methodology described in the 2000 *Highway Capacity Manual (HCM)*¹.

3. *Estimate Horizon Year Background Traffic Projections*

The year 2010 was used as the horizon year. This does not necessarily represent the project completion date. It represents a date for which future background traffic projections were estimated.

Background traffic conditions are defined as future traffic conditions without the proposed project and are estimated by superimposing traffic generated by related projects in the vicinity onto existing traffic volumes.

4. *Estimate Project-Related Traffic Characteristics*

The number peak-hour trips that the proposed project will generate was estimated using standard trip generation procedures outlined in the *Trip Generation Handbook*² and data provided in *Trip Generation*³. These trips were distributed and assigned based on the available approach and departure routes.

¹ *Highway Capacity Manual*, Institute of Transportation Engineers, Washington, D.C., 2000

² *Trip Generation Handbook*, Institute of Transportation Engineers, Washington, D.C., 1998

³ *Trip Generation*, Institute of Transportation Engineers, Washington, D.C., 2003

5. *Analyze Project Related Traffic Impacts*

The project-related traffic was then superimposed on 2010 background traffic volumes at the study intersections to estimate 2010 background plus project traffic projections. The traffic impacts of the project were assessed by analyzing the changes in traffic volumes and levels-of-service at the study intersections. The purpose of this analysis was to identify potential operational deficiencies in the vicinity of the proposed project.

D. Description of Existing Streets and Intersection Controls

A schematic diagram indicating the existing lane configurations and right-of-way controls of the study intersections is presented as Attachment B.

In the vicinity of the project, Kalakaua Avenue provides four eastbound lanes and one westbound lane for buses only. Pau Street is a two-lane one-way northbound roadway and Niu Street is a two-lane one-way southbound street. The intersections of Kalakaua Avenue at Niu Street and Kalakaua Avenue at Pau Street are both signalized.

E. Existing Peak Hour Traffic Volumes

The existing traffic volumes are based on traffic counts completed in November 8 and 9, 2007 (Thursday and Friday, respectively). The morning and afternoon peak hour traffic volumes are summarized in Attachment B.

1. The traffic counts include buses, trucks and other large vehicles. Mopeds and bicycles were not counted.
2. All intersections were counted from 6:30 AM to 9:00 AM and from 3:30 PM to 6:00 PM on weekdays.
3. The traffic volumes shown are the peak hourly volume of each movement rather than the peak sum of all approach volumes.
4. The traffic volumes of adjacent intersections may not match the volumes shown for an adjacent intersection because the peak hours of the adjacent intersections may not coincide and there are driveways between the intersections.
5. Pedestrian activity was not significant enough to affect the level-of-service calculations.

F. Level-of-Service Concept

"Level-of-Service" is a term which denotes any of an infinite number of combinations of traffic operating conditions that may occur on a given lane or roadway when it is subjected to various traffic volumes. Level-of-service (LOS) is a qualitative measure of the effect of a number of factors which include space, speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

There are six levels-of-service, A through F, which relate to the driving conditions from best to worst, respectively. The characteristics of traffic operations for each level-of-service are summarized in Table 1. In general, LOS A represents free-flow conditions with no congestion. LOS F, on the other hand, represents severe congestion with stop-and-go conditions. Level-of-service D is typically considered acceptable for peak hour conditions in urban areas.

Corresponding to each level-of-service shown in the table is a volume/capacity ratio. This is the ratio of either existing or projected traffic volumes to the capacity of the intersection. Capacity is defined as the maximum

number of vehicles that can be accommodated by the roadway during a specified period of time. The capacity of a particular roadway is dependent upon its physical characteristics such as the number of lanes, the operational characteristics of the roadway (one-way, two-way, turn prohibitions, bus stops, etc.), the type of traffic using the roadway (trucks, buses, etc.) and turning movements.

Table 1 Level-of-Service Definitions for Signalized Intersections⁽¹⁾

Level of Service	Interpretation	Volume-to-Capacity Ratio ⁽²⁾	Stopped Delay (Seconds)
A, B	Uncongested operations; all vehicles clear in a single cycle.	0.000-0.700	<20.0
C	Light congestion; occasional backups on critical approaches	0.701-0.800	20.1-35.0
D	Congestion on critical approaches but intersection functional. Vehicles must wait through more than one cycle during short periods. No long standing lines formed.	0.801-0.900	35.1-55.0
E	Severe congestion with some standing lines on critical approaches. Blockage of intersection may occur if signal does not provide protected turning movements.	0.901-1.000	55.1-80.0
F	Total breakdown with stop-and-go operation	>1.001	>80.0

Notes:

- (1) Source: *Highway Capacity Manual*, 2000.
- (2) This is the ratio of the calculated critical volume to Level-of-Service E Capacity.

Like signalized intersections, the operating conditions of intersections controlled by stop signs can be classified by a level-of-service from A to F. However, the method for determining level-of-service for unsignalized intersections is based on the use of gaps in traffic on the major street by vehicles crossing or turning through that stream. Specifically, the capacity of the controlled legs of an intersection is based on two factors: 1) the distribution of gaps in the major street traffic stream, and 2) driver judgement in selecting gaps through which to execute a desired maneuver. The criteria for level-of-service at an unsignalized intersection is therefore based on delay of each turning movement. Table 2 summarizes the definitions for level-of-service and the corresponding delay. A subsequent calculation to determine an overall LOS was made, and these results are presented in tables to summarize traffic conditions using parameters similar to those used for signalized intersections.

Table 2 Level-of-Service Definitions for Unsignalized Intersections⁽¹⁾

Level-of-Service	Expected Delay to Minor Street Traffic	Delay (Seconds)
A	Little or no delay	<10.0
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	See note (2) below	>50.1

Notes:

(1) Source: *Highway Capacity Manual*, 2000.

(2) When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection. This condition usually warrants improvement of the intersection.

The results of the level-of-service analysis of existing conditions is presented at Attachment C. The level-of-service analysis concluded that both the study intersections operate at Level-of-Service B, during both peak periods. All lane groups operate at Level-of-Service B, or better, during the morning peak hour and Level-of-Service C, or better, during the afternoon peak hour. These conclusions are consistent with conditions observed during the traffic counts.

G. 2010 Background Traffic Projections

2010 background traffic projections are defined as future background traffic conditions without the proposed project. Background traffic projections are estimated by superimposing traffic generated by other planned development projects in the area onto the existing background traffic projections previously discussed. The following related projects were identified:

1. Allure Waikiki
2. The Grand Waikikian
3. Trump International Hotel and Tower
4. Outrigger Hotels Reconstruction

The traffic assignments of the related projects' traffic at the study intersections are shown on Attachment D.

H. Project Trip Generation

Future traffic volumes generated by the project were estimated using the procedures described in the *Trip Generation Handbook*⁴ and data provided in *Trip Generation*⁵. This method used trip generation rates to estimate the number of trips that the project will generate during the peak hours of the project and along the adjacent streets.

The assumptions used for the trip generation analysis are:

1. The ground floor of the proposed project will be 5,000 square feet of retail. For this traffic study, it was assumed that the retail area would have traffic characteristics comparable to specialty retail as described by the Institute of Transportation Engineers.
2. The second floor of the project will be a 5,000 square foot restaurant.
3. As the Institute of Transportation Engineers provides no passby trip data for the anticipated uses, no discounts for passby trips were assumed.
4. It is understood that restaurant and retail uses in Waikiki have a significant proportion of pedestrian traffic. However, the proportion of traffic has not been quantified and is not considered in the trip generation data provided by the Institute of Transportation Engineers. No discount for pedestrian traffic has been assumed. Therefore, the estimate of project generation vehicular traffic is conservative in that the estimates are higher than actual traffic anticipated.
5. The trip rates shown correspond to the peak hour of the adjacent street, which is typically between 7 and 9 am during the morning and between 4 and 6 pm during the afternoon.

The trip generation calculations are summarized in Table 3.

⁴ Institute of Transportation Engineers, *Trip Generation Handbook*, Washington, D.C., 1998, p. 7-12

⁵ Institute of Transportation Engineers, *Trip Generation*, 7th Edition, Washington, D.C., 2003

Table 3 Trip Generation Calculations for Proposed Project

Time Period	Direction	5,000 Specialty Retail (LU Code 814)			5,000 Restaurant (LU Code 931)			Totals
		Rate or % ⁽¹⁾	Units	Trips	Rate or % ⁽¹⁾	Units	Trips	
AM Peak Hour	Total	2.71	5.0	14	0.81	5.0	4	18
	In	44%		6	0%		0	6
	Out	56%		8	100%		4	12
PM Peak Hour	Total	5.02		25	7.49		37	62
	In	56%		14	67%		25	39
	Out	44%		11	33%		12	23

NOTES:
 (1) Institute of Transportation Engineers, *Trip Generation*, Seventh Edition, 2003.

As shown the proposed project will generate 6 inbound and 12 outbound trips during the morning peak hour. During the afternoon peak hour, the project will generate 39 inbound and 23 outbound trips.

The project generated traffic was distributed and assigned based on the existing approach and departure pattern of traffic at the study intersections. The project trip assignments are shown in Attachment D.

I. 2010 Background Plus Project Projections

2010 background plus project traffic projections were estimated by superimposing the peak hourly traffic generated by the proposed project on the 2010 background (without project) peak hour traffic projections. This assumes that the peak hourly trips generated by the project coincide with the peak hour of the adjacent street. This represents a worse-case condition. The resulting 2010 background plus project peak hour traffic projections are shown in Attachment J.

J. Impact Analysis of 2010 Conditions Impact Analysis of 2010 Conditions

Based on criteria recommended by the Institute of Transportation Engineers, a traffic impact study is not warranted because the project will generate only 39 inbound trips per hour during the afternoon peak hour, which is less than the 100 trips per hour required to warrant a traffic impact analysis. However, an analysis of the changes in peak hourly traffic at the study intersections and a level-of-service was performed to identify operational deficiencies adjacent to the project for 2010 background plus project conditions.

Analysis of Project's Share of Total Intersection Approach Volumes

An analysis of the project's share of 2010 background plus project intersection approach volumes at the study intersections is summarized in Table 4. The table summarizes the project's share of total 2010 peak hour approach volumes at each intersection. The conclusion of this analysis is that project generated traffic will represent a small percentage of the total traffic using the study intersections.

Table 4 Analysis of Project's Share of Total Intersection Approach Volumes ⁽¹⁾

Intersection	Period	2010 Background	2010 Background Plus Project	Trips	Percent of Total Traffic ⁽²⁾
Kalakaua Avenue at Niu Street	AM	2815	2830	15	0.5%
	PM	2890	2920	30	1.0%
Kalakaua Avenue at Pau Street	AM	2490	2505	15	0.6%
	PM	2910	2955	45	1.5%

Notes:

- (1) Volumes shown are total intersection approach volumes or projections.
 (2) Percentage of total 2010 background plus project traffic.

Level-of-Service Analysis

The results of the level-of-service analysis for 2010 conditions without and with project generated traffic is summarized in Attachment C along with the existing levels-of-service. Shown in the table are the volume-to-capacity ratios, average vehicle delays and the levels-of-service of the controlled movements.

Both the study intersections will operate at Level-of-Service B during both peak periods without and with project generated traffic.

K. Mitigation

Level-of-Service D is generally considered to be the minimum acceptable peak hour level-of-service for urban intersections.⁶ Accordingly, the levels-of-service of all movements at the study intersections are acceptable and mitigation measures are not required.

L. Other Traffic Issues

1. *Construction Traffic*

Construction traffic will cause short term impacts as this traffic ceases upon completion of the project. During construction, efforts should be made to minimize the impacts of construction traffic on the adjacent street network. Typical measures include:

- a. Limit deliveries of construction materials to off-peak periods.
- b. Prohibit on-street parking by construction workers.
- c. Do not allow closure of any traffic lanes at any time along Kalakaua Avenue as this will not only impede traffic operations but would also adversely affect the operation of the westbound bus lane.

2. *Widening Along Kalakaua Avenue*

The need for widening Kalakaua Avenue adjacent to the project is one of the issues this traffic study was to address. The level-of-service analysis concluded that the intersections operate at Level-of-Service B during the peak periods. This is a high level-of-service considering the area. Accordingly, there is no capacity related benefit to be gained from widening Kalakaua Avenue at this time. Given this conclusion and considering the negative impacts of the construction activity on bus service along the designated bus lane, it is recommended that widening be deferred until justified by capacity considerations.

⁶ Institute of Traffic Engineers *Transportation Impact Analyses for Site Development, A Recommended Practice*, Washington, D.C., 2006, p 60.

M. Summary and Conclusions

The conclusions of the traffic impact assessment are:

1. The proposed project will generate 6 inbound and 12 outbound trips during the morning peak hour. During the afternoon peak hour, the project will generate 39 inbound and 23 outbound trips. These are considered conservative estimates of the peak hour traffic that the project will generate.
2. An analysis of future traffic volumes at the study intersections estimated that project generated traffic will represent 1.5%, or less, of the peak hour traffic using the intersection.
3. The level-of-service analysis of the anticipated 2010 traffic conditions at the study intersections concluded that both intersections will operate at Level-of-Service B during both peak periods.
4. Construction deliveries should be restricted to off-peak periods, which is generally considered between 7 am and 3 pm on weekdays. No lane closures or other activities that would impede the flow of traffic, including buses, should be allowed along Kalakaua Avenue at any time during the construction period.
5. Given that the intersections are expected to operate at good levels-of-service and considering the negative impacts of the construction activity on bus service along the designated bus lane, it is recommended that widening of Kalakaua Avenue be deferred until justified by capacity considerations.

Respectfully submitted,
PHILLIP ROWELL AND ASSOCIATES



Phillip J. Rowell, P.E.
Principal

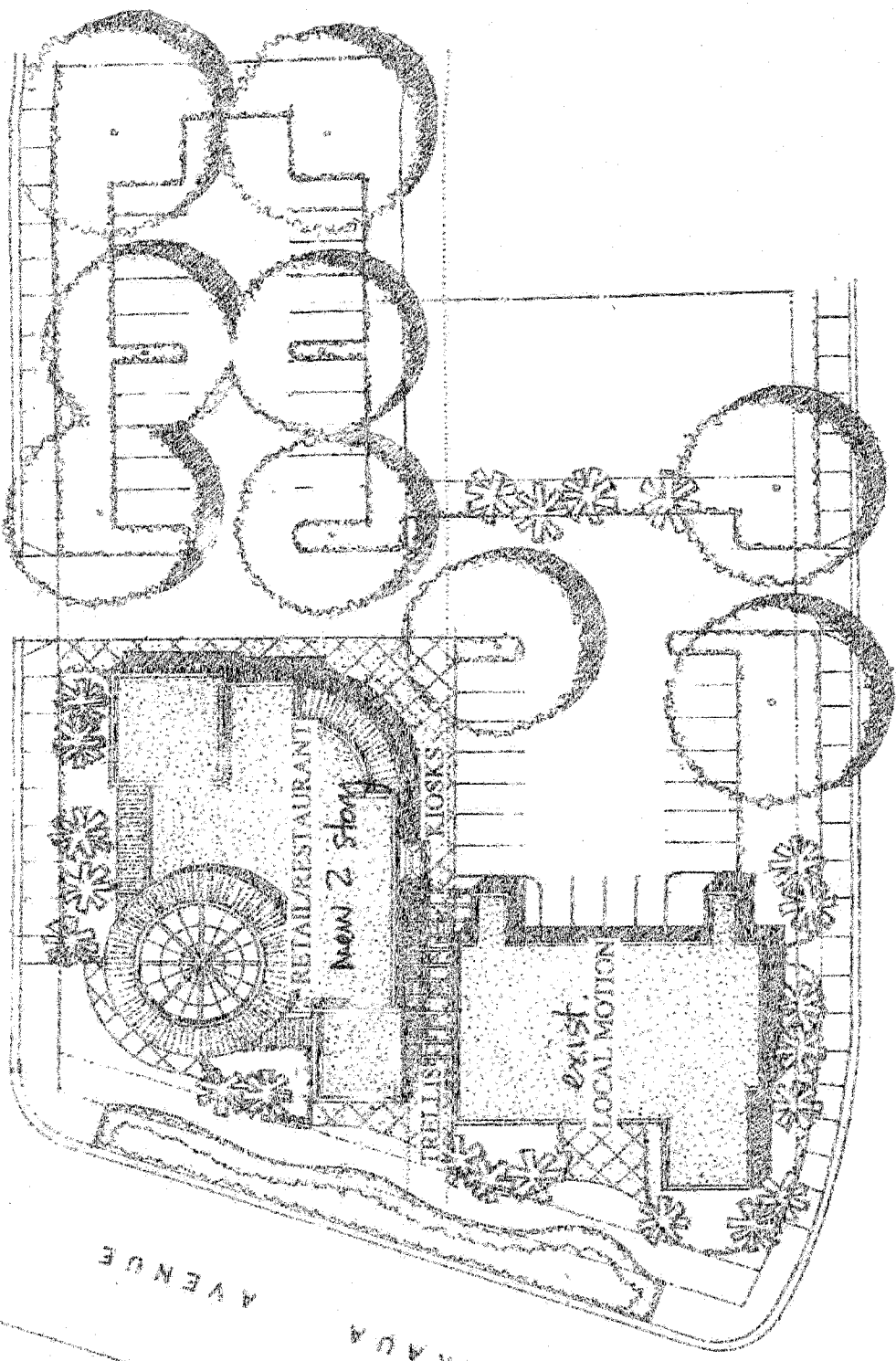
List of Attachments

- A. Preliminary Site Plan
- B. Existing Lane Configurations and Peak Hour Traffic Volumes
- C. Results of Level-of-Service Analysis (Existing, Background and Background Plus Project)
- D. Related Projects' Trip Assignments
- E. 2010 Background Peak Hour Traffic Projections
- F. Project Trip Assignments
- G. 2010 Background Plus Project Peak Hour Traffic Projections

NIU STREET ↔

PAU STREET ↔

KALAKAUA AVENUE

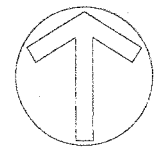


SITE PLAN

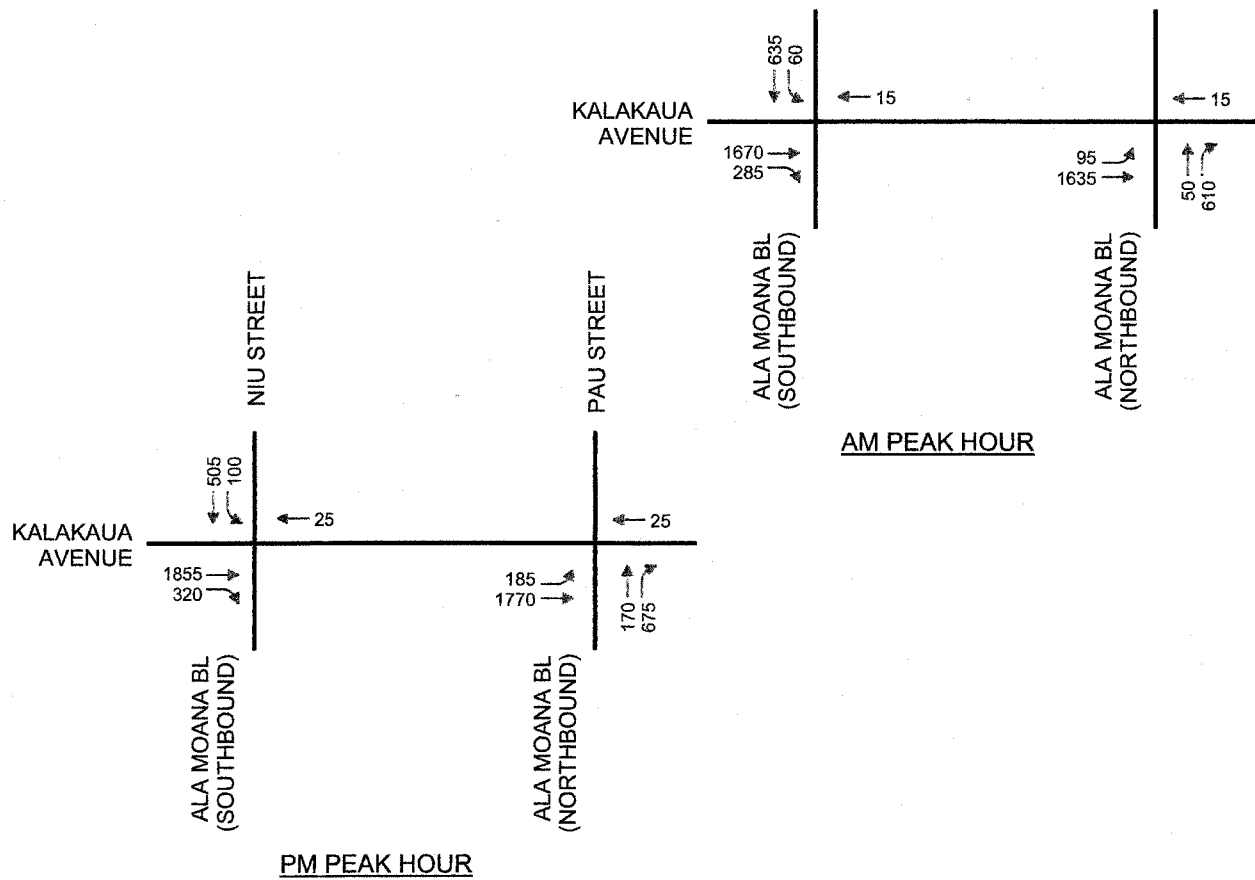
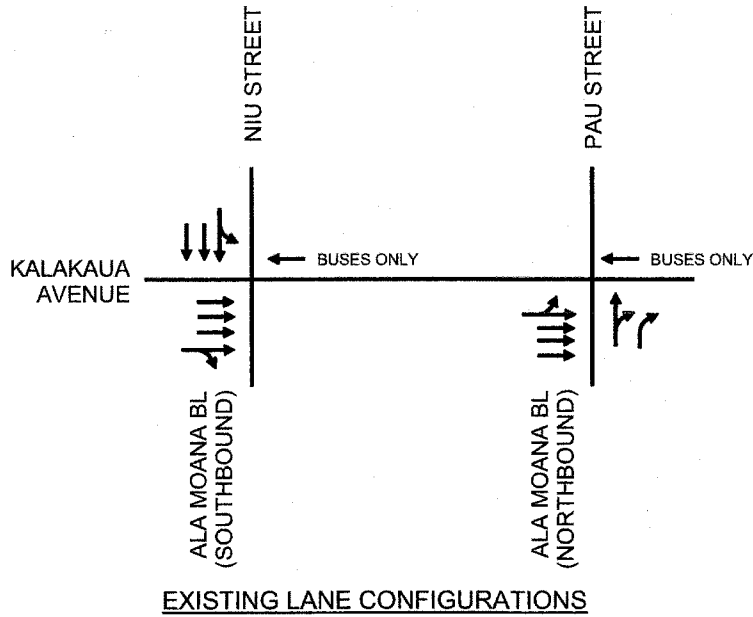
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Attachment B
EXISTING LANE CONFIGURATIONS AND
EXISTING (2007) PEAK HOUR TRAFFIC VOLUMES

Attachment C
Detailed Results of Level-of-Service Analysis

Intersection 1 Levels-of-Service Analysis for Kalakaua Avenue at Niu Street

Intersection, Approach and Movement	Existing			Background without Project			Background with Project		
	V/C ⁽¹⁾	Delay ⁽²⁾	LOS ⁽³⁾	V/C	Delay	LOS	V/C	Delay	LOS
AM Peak Hour	0.55	16.2	B	0.58	16.9	B	0.58	17.0	B
Eastbound Thru & Right	0.69	16.5	B	0.74	17.4	B	0.74	17.4	B
Westbound Thru	0.02	4.3	A	0.02	4.3	A	0.02	4.3	A
Southbound Left & Thru	0.36	15.7	B	0.37	15.7	B	0.38	15.8	B
PM Peak Hour	0.57	17.4	B	0.59	17.9	B	0.59	17.9	B
Eastbound Thru & Right	0.77	17.1	B	0.80	18.7	B	0.80	18.8	B
Westbound Thru	0.03	4.4	A	0.03	4.4	A	0.03	4.4	A
Southbound Left & Thru	0.32	15.2	B	0.32	15.3	B	0.34	15.4	B

NOTES:

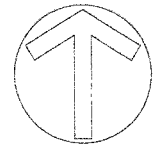
1. V/C denotes ratio of volume to capacity.
2. Delay is in seconds per vehicle.
3. LOS denotes Level-of-Service calculated using the operations method described in *Highway Capacity Manual*. LOS is based on delay.

Intersection 2 Levels-of-Service Analysis for Kalakaua Avenue at Pau Street

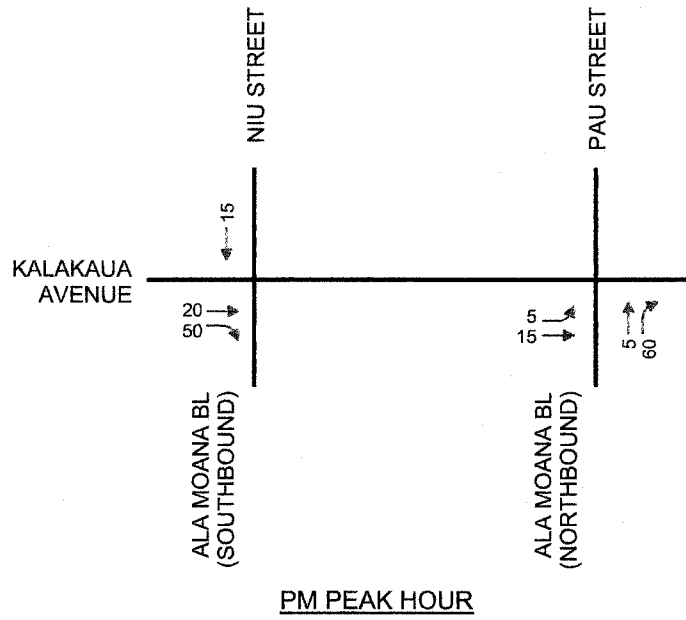
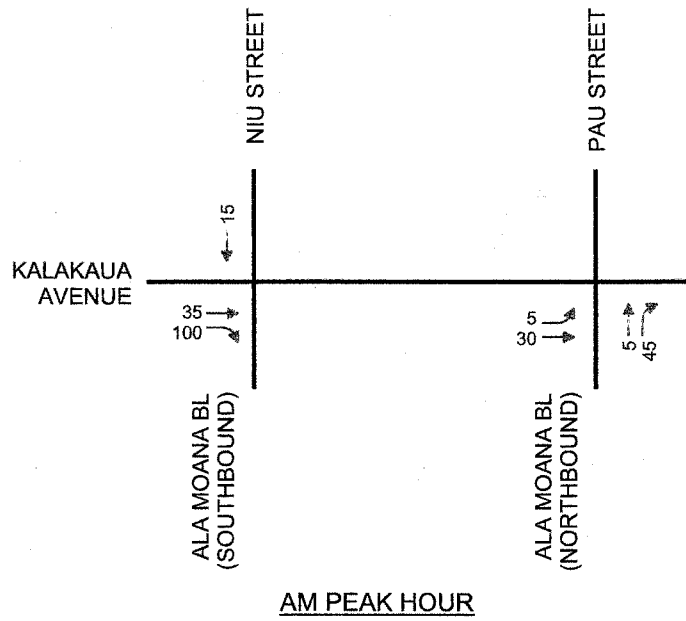
Intersection, Approach and Movement	Existing			Background without Project			Background with Project		
	V/C ⁽¹⁾	Delay ⁽²⁾	LOS ⁽³⁾	V/C	Delay	LOS	V/C	Delay	LOS
AM Peak Hour	0.64	10.0	B	0.67	10.8	B	0.67	10.9	B
Eastbound Left & Thru	0.67	6.1	A	0.68	6.4	A	0.69	6.4	A
Westbound Thru	0.02	10.3	B	0.02	10.3	B	0.02	10.3	B
Northbound Thru & Right	0.60	21.3	C	0.65	22.7	C	0.66	22.9	C
Northbound Right	0.53	19.7	B	0.57	20.6	C	0.57	20.7	C
PM Peak Hour	0.76	12.7	B	0.79	14.0	B	0.81	14.6	B
Eastbound Left & Thru	0.77	7.4	A	0.78	7.7	A	0.79	7.8	A
Westbound Thru	0.03	10.4	B	0.03	10.4	B	0.03	10.4	B
Northbound Thru & Right	0.75	26.1	C	0.81	29.5	C	0.83	30.8	C
Northbound Right	0.67	23.7	C	0.73	25.7	C	0.75	26.9	C

NOTES:

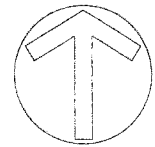
1. V/C denotes ratio of volume to capacity.
2. Delay is in seconds per vehicle.
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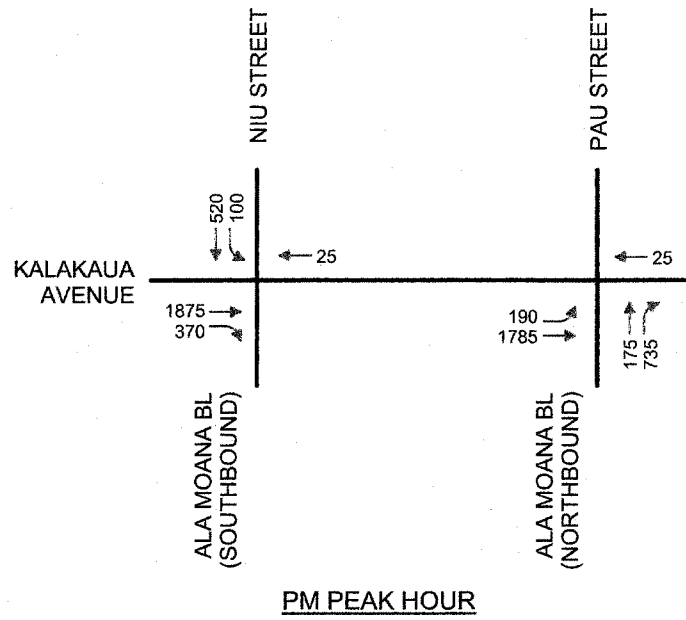
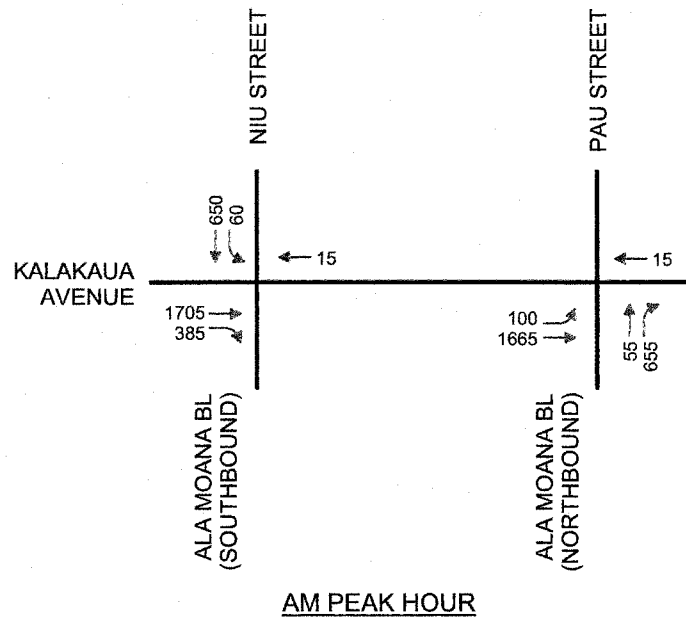
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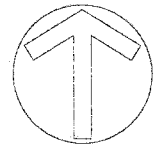
**Attachment D
RELATED PROJECTS' TRIP ASSIGNMENTS**



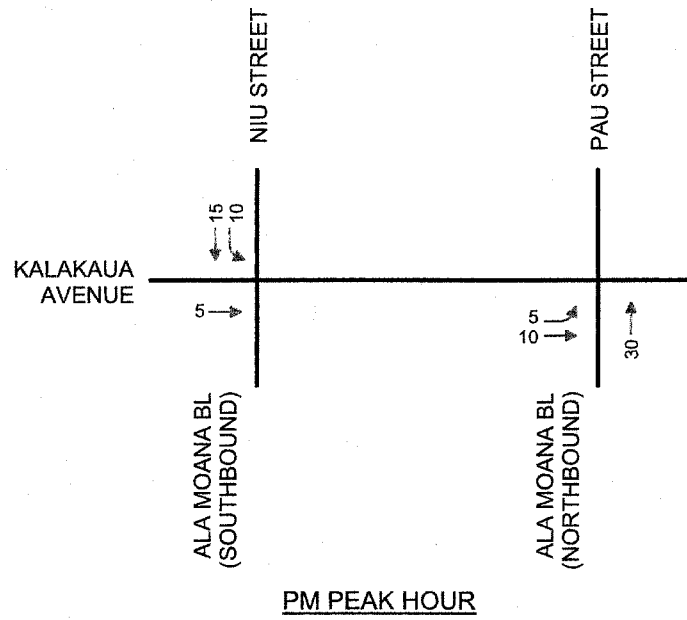
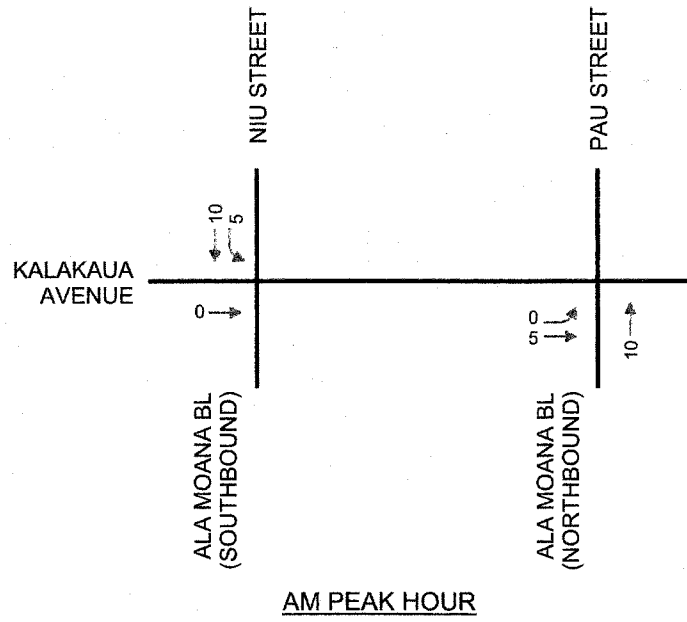
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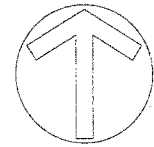
Attachment E
2010 BACKGROUND TRAFFIC PROJECTIONS



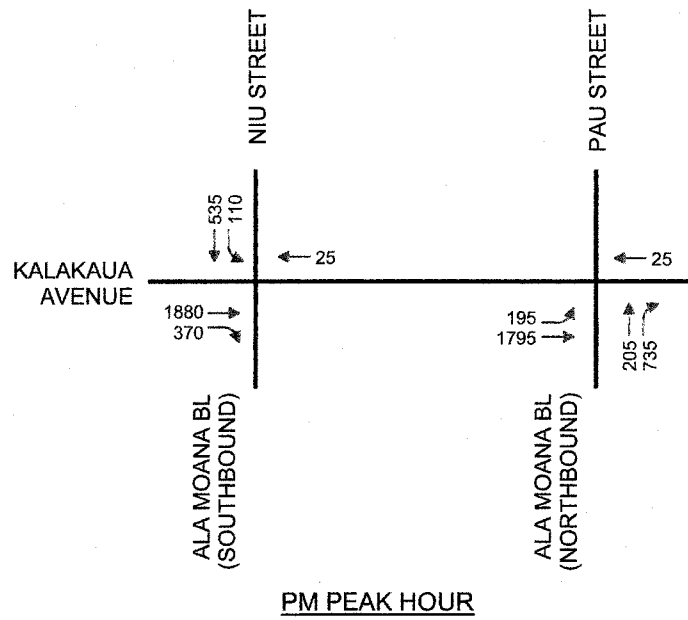
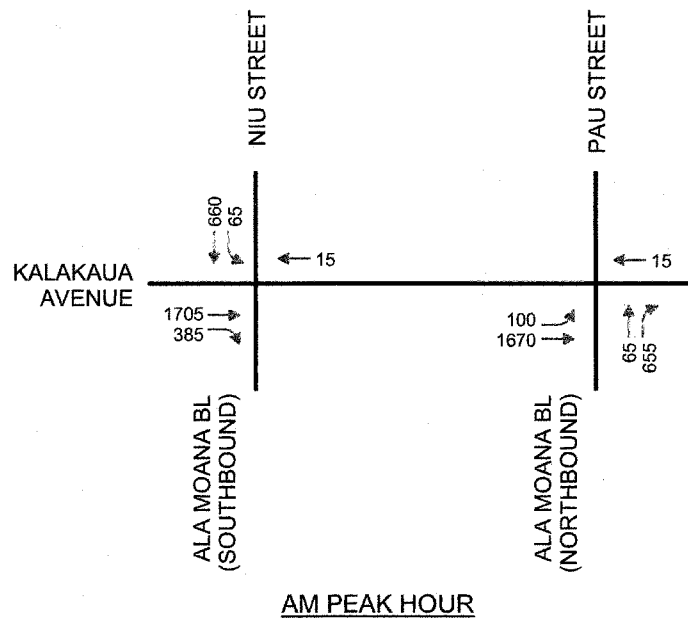
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Attachment F
PROJECT TRIP ASSIGNMENTS



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Attachment G
2010 BACKGROUND PLUS PROJECT TRAFFIC PROJECTIONS

