DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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JUN 08 2016

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2015/ED-16(JY)

May 31, 2016

Mr. Scott Glenn
Office of Environmental Quality Control
Department of Health, State of Hawaii
235 South Beretania Street, Room 702
Honolulu, Hawaii 96813

RECEIVED
'16 MAY 26 P2:46
OFC. OF ENVIRONMENTAL QUALITY CONTROL

Dear Mr. Glenn:

SUBJECT: Chapter 343, Hawaii Revised Statutes
Final Environmental Assessment (FEA)

Project:	Park Kalia
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc. (Keith Kurahashi)
Location:	2055 and 2057 Kalakaua Avenue – Waikiki
Tax Map Key:	2-6-6: 1 and 4
Proposal:	The Applicant proposes to demolish the former two-story Kyo Ya Restaurant and parking structure and construct a 26-story, 350-foot-high condo-hotel with up to 170 units, restaurant, wedding chapel, recreational facilities, parking structure, and appurtenant site improvements. The site is located along Kalakaua Avenue and adjacent to Luana Waikiki condo-hotel and Fort DeRussy.

Attached and incorporated by reference is the Final Environmental Assessment prepared by the Applicant for the Project. Based on the significant criteria outlined in Title 11, Chapter 200, Hawaii Administrative Rules, we have determined that the preparation of an Environmental Impact Statement is required. Please publish this in the **July 8, 2016**, issue of the Office of Environmental Quality Control (OEQC) "Environmental Notice".

We have enclosed two hard copies of the FEA, as well as a copy on compact disc. Also, we have attached a completed OEQC publication form and Project summary, and will submit the same publication form and Project summary via electronic mail to your office.

Should you have any further questions on this matter, please contact Joette Yago of our Urban Design Branch at 768-8034 or jyago@honolulu.gov.

Very truly yours,

George I. Atta

George I. Atta, FAICP
Director

Enclosure: FEA, two hard copies and one disk
One copy of OEQC Publication Form

FILE COPY
JUN 08 2016

APPLICANT
PUBLICATION FORM

Project Name:	**Park Kalia-Waikiki Condo-Hotel**
Project Short Name:	Park Kalia-Waikiki Condo-Hotel
HRS §343-5 Trigger(s):	Use within Waikiki Special District
Island(s):	Oahu
Judicial District(s):	First Circuit
TMK(s):	2-6-1: 1 and 4
Permit(s)/Approval(s):	Waikiki Special District Permit Grading and Building Permits
Approving Agency:	Department of Planning and Permitting City and County of Honolulu
Contact Name, Email, Telephone, Address	Joette Yago jyago@honolulu.gov (808) 768-8034 Department of Planning and Permitting City and County of Honolulu 650 South King Street, 7th Floor Honolulu, Hawaii 96813
Applicant:	Best Hospitality LLC
Contact Name, Email, Telephone, Address	Hiro Matsumura hiro@bestbridalhawaii.com (808) 926-2315 Best Hospitality LLC Waikiki Shopping Plaza 2250 Kalakaua Avenue, Suite 401 Honolulu, Hawaii 96815
Consultant:	Kusao & Kurahashi, Inc.
Contact Name, Email, Telephone, Address	Keith Kurahashi kkurahashi@hawaii.rr.com (808) 988-2231 Kusao & Kurahashi, Inc 2752 Woodlawn Drive, Suite 5-217 Honolulu, Hawaii 96822

Status (select one)	**Submittal Requirements**
____ DEA-AFNSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEA, and 4) a searchable PDF of the DEA; a 30-day comment period follows from the date of publication in the Notice.
____ FEA-FONSI	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; no comment period follows from publication in the Notice.
__X__ FEA-EISPN	Submit 1) the approving agency notice of determination/transmittal letter on agency letterhead, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEA, and 4) a searchable PDF of the FEA; a 30-day comment period follows from the date of publication in the Notice.
____ Act 172-12 EISPN ("Direct to EIS")	Submit 1) the approving agency notice of determination letter on agency letterhead and 2) this completed OEQC publication form as a Word file; no EA is required and a 30-day comment period follows from the date of publication in the Notice.
____ DEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the DEIS, 4) a searchable PDF of the DEIS, and 5) a searchable PDF of the distribution list; a 45-day comment period follows from the date of publication

	in the Notice.
____ FEIS	Submit 1) a transmittal letter to the OEQC and to the approving agency, 2) this completed OEQC publication form as a Word file, 3) a hard copy of the FEIS, 4) a searchable PDF of the FEIS, and 5) a searchable PDF of the distribution list; no comment period follows from publication in the Notice.
____ FEIS Acceptance Determination	The approving agency simultaneously transmits to both the OEQC and the applicant a letter of its determination of acceptance or nonacceptance (pursuant to Section 11-200-23, HAR) of the FEIS; no comment period ensues upon publication in the Notice.
____ FEIS Statutory Acceptance	The approving agency simultaneously transmits to both the OEQC and the applicant a notice that it did not make a timely determination on the acceptance or nonacceptance of the applicant's FEIS under Section 343-5(c), HRS, and therefore the applicant's FEIS is deemed accepted as a matter of law.
____ Supplemental EIS Determination	The approving agency simultaneously transmits its notice to both the applicant and the OEQC that it has reviewed (pursuant to Section 11-200-27, HAR) the previously accepted FEIS and determines that a supplemental EIS is or is not required; no EA is required and no comment period ensues upon publication in the Notice.
____ Withdrawal	Identify the specific document(s) to withdraw and explain in the project summary section.
____ Other	Contact the OEQC if your action is not one of the above items.

Project Summary
Provide a description of the proposed action and purpose and need in 200 words or less.

Best Hospitality, LLC proposes to construct a new 26-story, 350-foot-high condo-hotel with up to 170 units, restaurant, wedding chapel, recreational facilities, parking structure with auto lift, and appurtenant site improvements. The site is located along Kalakaua Avenue, adjacent to Fort DeRussy in Waikiki.

The 350-foot height exceeds the maximum allowable height of 25 feet and would require approval by the City Council.

FINAL ENVIRONMENTAL ASSESSMENT

PARK KĀLIA WAIKĪKĪ CONDO-HOTEL PROJECT

WAIKĪKĪ, HONOLULU, OʻAHU, HAWAIʻI | TAX MAP KEY 2-6-6: 1 & 4

applicant

BEST HOSPITALITY LLC
2250 Kalākaua Avenue, Suite 401
Honolulu, Hawaiʻi 96815

agent

KUSAO & KURAHASHI, INC.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaiʻi 96822

ʻĀINA PILINA HUAKAʻI

PARK KĀLIA WAIKĪKĪ

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LIST OF ACRONYMS AND ABBREVIATIONS

BMP	Best Management Practices
BWS	City Board of Water Supply
City	City and County of Honolulu
CUP	Conditional Use Permit
CSH	Cultural Surveys Hawaii, Inc.
DDC	City Department of Design and Construction
DES	City Department of Environmental Services
DLNR	State Department of Land and Natural Resources
DOE	State Department of Education
DOH	State Department of Health
DP	Development Plan
DPP	City Department of Planning and Permitting
DPR	City Department of Parks and Recreation
Draft EA	Draft Environmental Assessment
DTS	Department of Transportation Services
EIS	Environmental Impact Statement
EISPN	Environmental Impact Statement Preparation Notice
FAR	Floor Area Ratio
FIRM	Flood Insurance Rate Map
ft	Foot or feet
GET	General Excise Tax
gpd	gallons per day
HABS	Historic American Building Survey
HAR	Hawai‘i Administrative Rules
HECO	Hawaiian Electric Company
HFD	Honolulu Fire Department
HRS	Hawai‘i Revised Statutes
LEED	Leadership in Energy and Environmental Design
LUO	Land Use Ordinance
NPDES Permit	National Pollutant Discharge Elimination System Permit
OHA	State Office of Hawaiian Affairs
OIBC	State O`ahu Island Burial Council
PUCDP	Primary Urban Center Development Plan
ROH	Revised Ordinances of Honolulu
SHPD	State Historic Preservation Division
State	State of Hawaii
TMP	Traffic Management Plan
WSD	Waikīkī Special District

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FINAL ENVIRONMENTAL ASSESSMENT

PARK KĀLIA WAIKĪKĪ CONDO-HOTEL PROJECT

WAIKĪKĪ, HONOLULU, OʻAHU, HAWAIʻI | TAX MAP KEY 2-6-6: 1 & 4

1. GENERAL INFORMATION

A.	APPLICANT/LESSEE	Best Hospitality LLC c/o Hiro Matsumura Waikīkī Shopping Plaza 2250 Kalākaua Avenue, Suite 401 Honolulu, Hawaiʻi 96815
B.	OWNER	Best Hospitality LLC c/o Hiro Matsumura Waikīkī Shopping Plaza 2250 Kalākaua Avenue, Suite 401 Honolulu, Hawaiʻi 96815
C.	ACCEPTING AUTHORITY	Department of Planning and Permitting 650 So. King Street, 7th Floor Honolulu, Hawaiʻi 96813
D.	TAX MAP KEYS	2-6-6: 1 and 4
E.	AGENT	Kusao & Kurahashi, Inc. Planning and Zoning Consultants 2752 Woodlawn Drive, Suite 5-202 Honolulu, Hawaiʻi 96822
F.	LOCATION	2055 and 2057 Kalākaua Avenue Honolulu, Hawaiʻi (Figure 1, Location and Zoning Map)
G.	LOT AREA	28,761 sf
H.	ZONING	Resort Mixed Use Precinct (Figure 1)
I.	STATE LAND USE	Urban

J.	DEVELOPMENT PLAN Land Use Map: Public Infrastructure Map:	 Commercial (Figure 2) No improvements affecting the Project Site (Figure 3)
K.	SPECIAL DISTRICT	Waikīkī Special District (Figure 4) Waikīkī Special District – Heights (Figure 5)
L.	EXISTING USE	Former Kyo-ya Restaurant and Parking Structure

FIGURE 1 LOCATION AND ZONING MAP

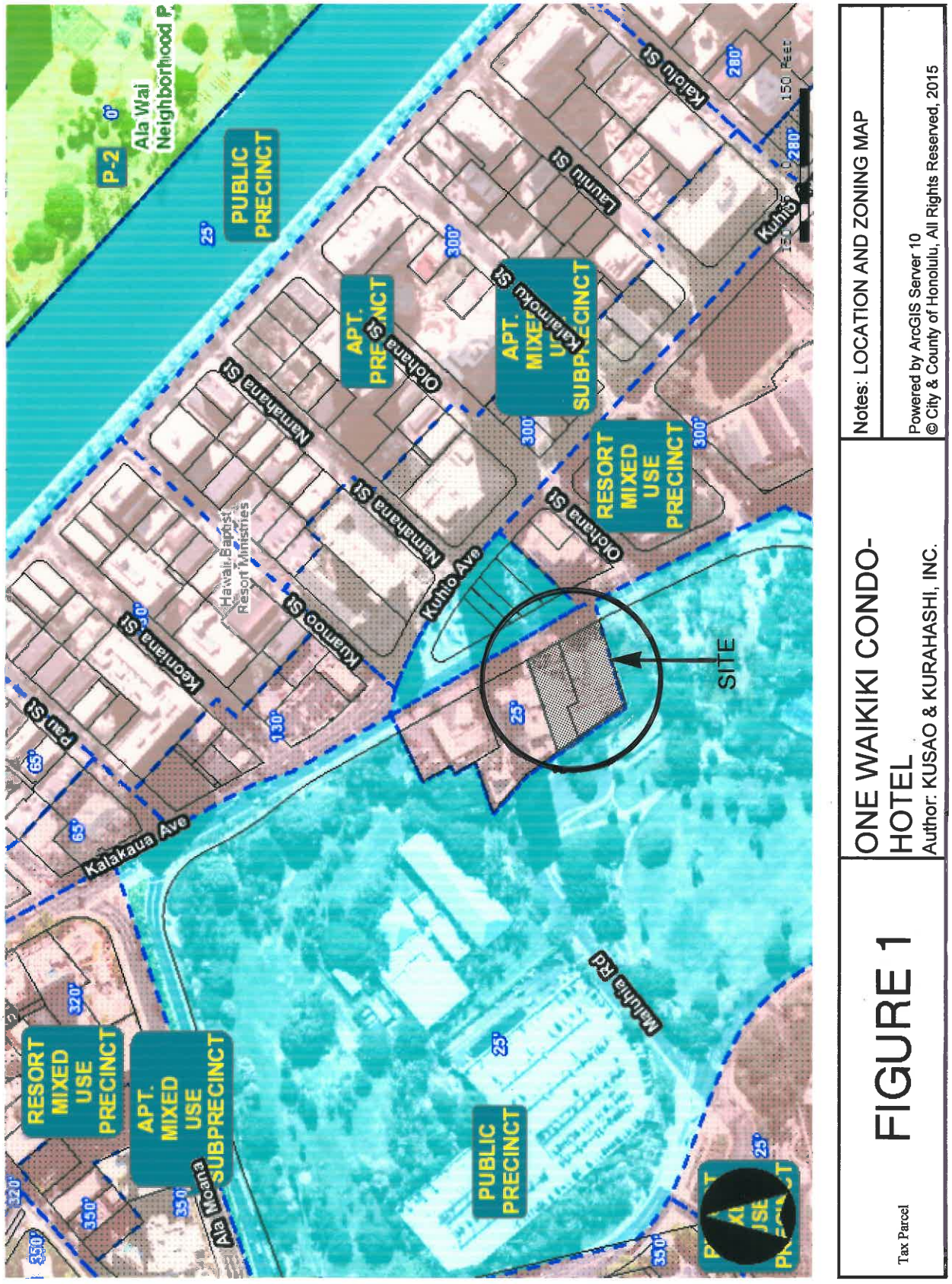

FIGURE 2 DEVELOPMENT PLAN LAND USE MAP

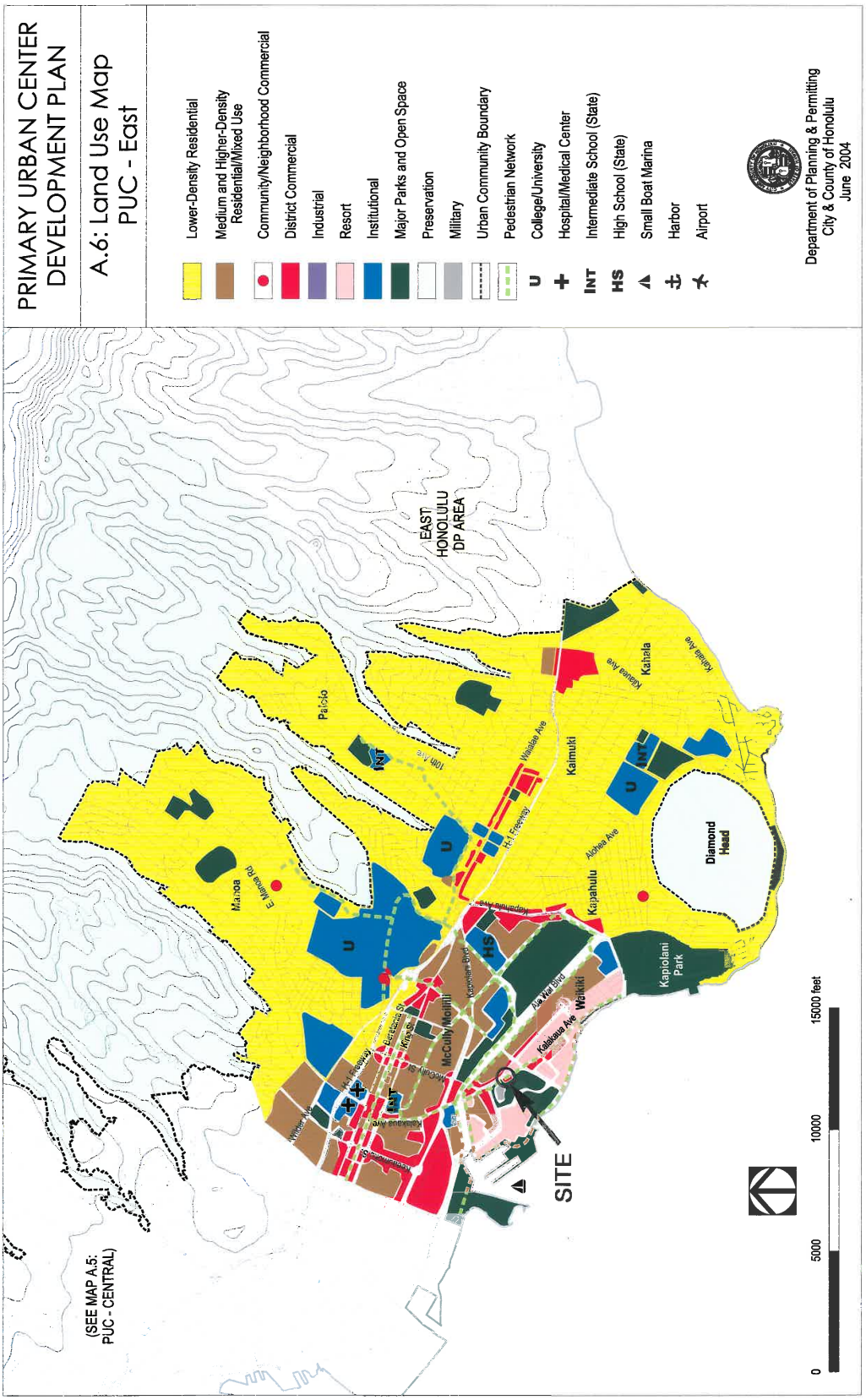

FIGURE 2

FIGURE 3 PUBLIC INFRASTRUCTURE MAP

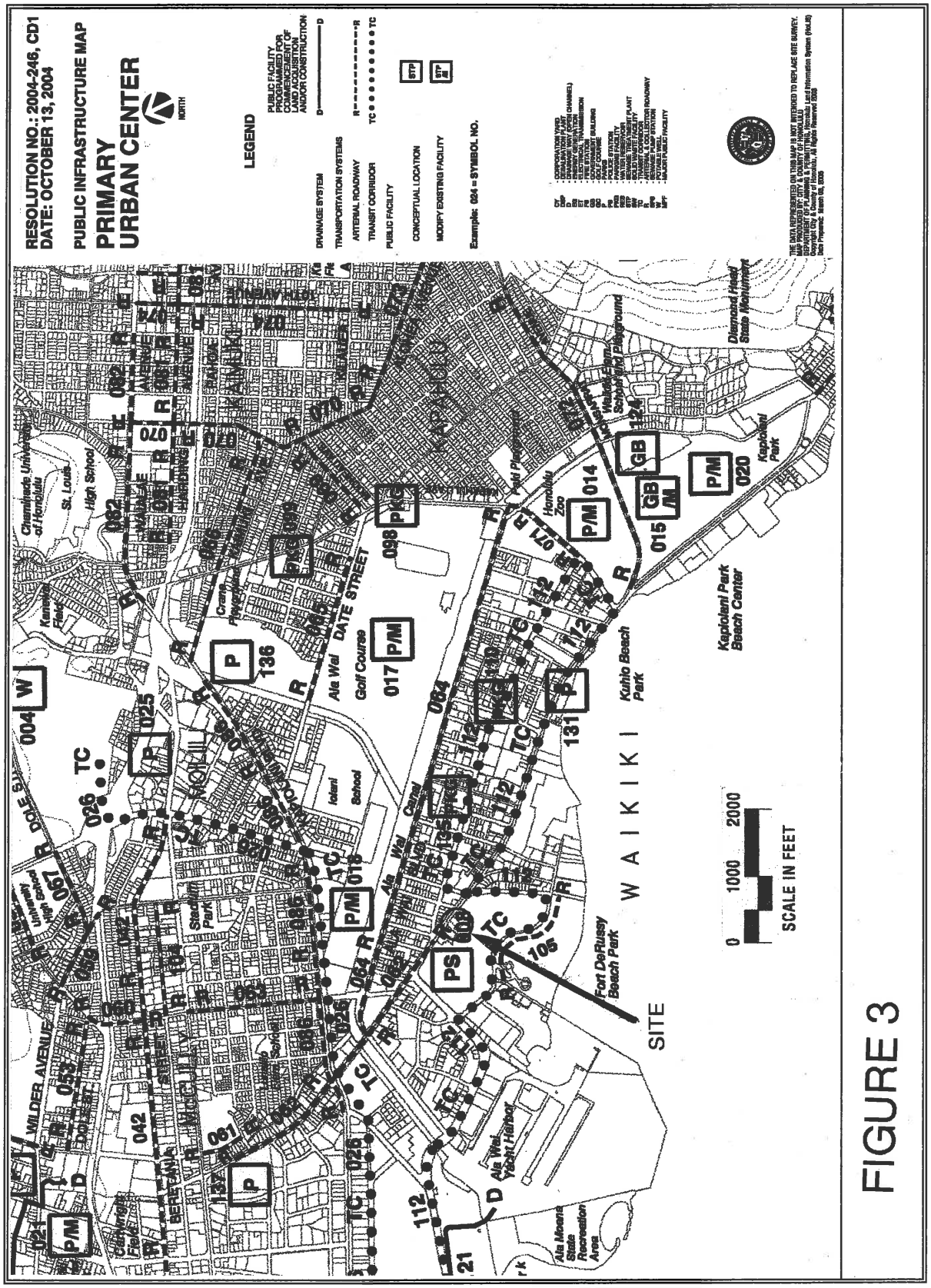

FIGURE 4 WAIKĪKĪ SPECIAL DISTRICT MAP

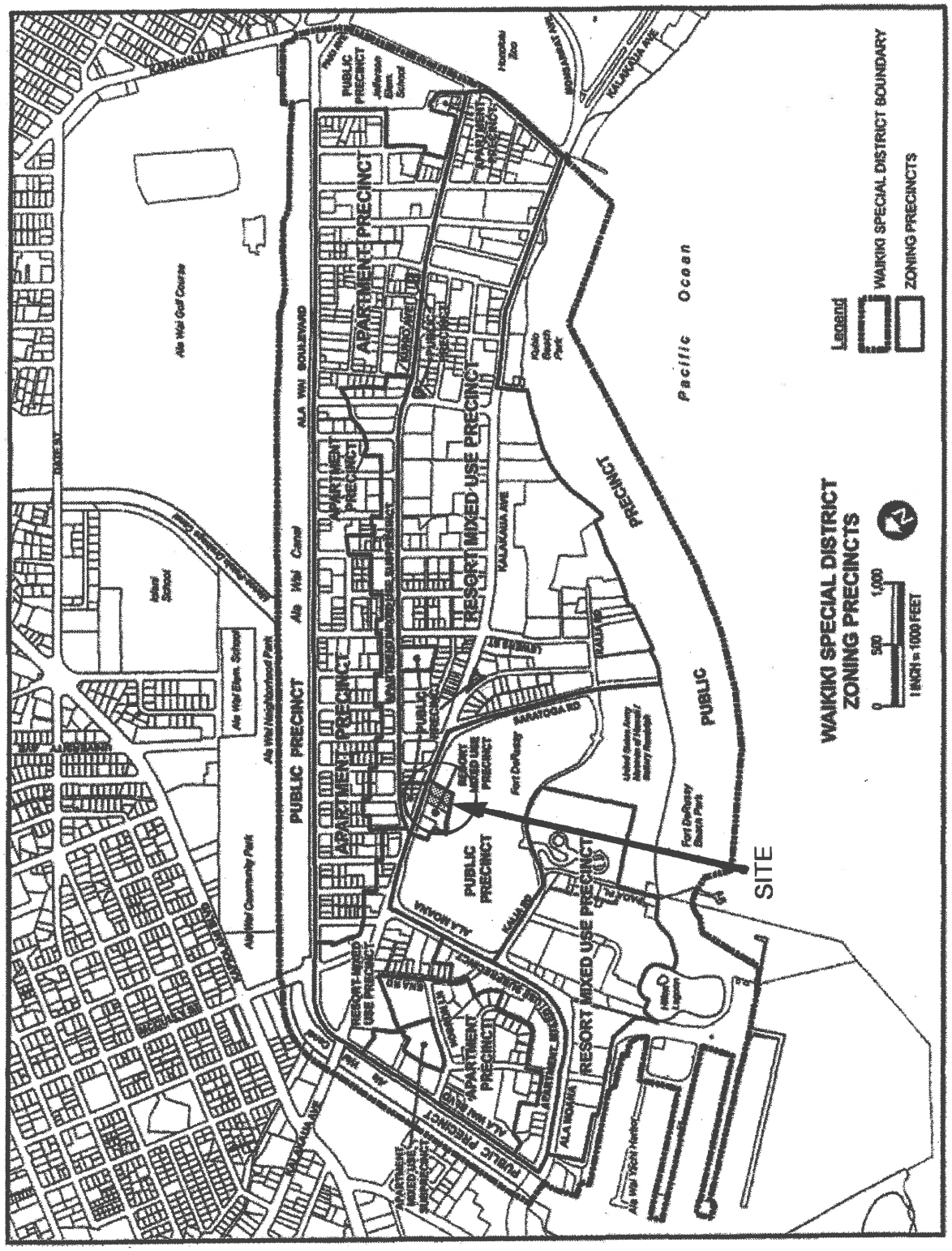

FIGURE 4

FIGURE 5 WAIKĪKĪ SPECIAL DISTRICT - URBAN DESIGN CONTROLS (HEIGHT MAP)

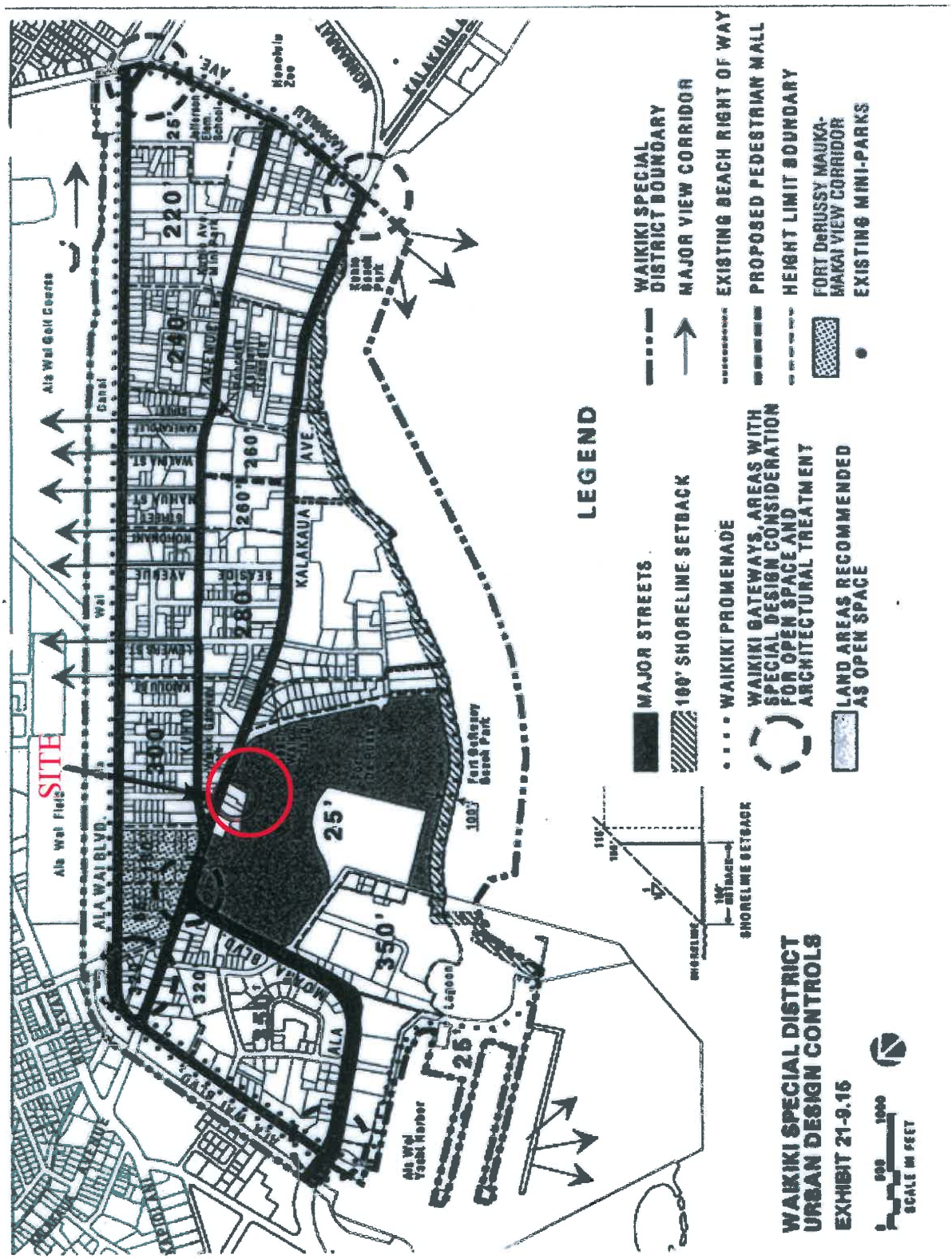

FIGURE 5

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2. PROJECT INFORMATION

BH is submitting this Final Environmental Assessment ("FEA") to the Department of Planning and Permitting ("DPP") for processing. BH also plans to submit a request to DPP and the City Council to allow a 325-foot high (350 feet with architectural appurtenances) for the Project and a Waikīkī Special District permit application to DPP for the Project.

This FEA for the Project is prepared pursuant to and in accordance with the requirements of Chapter 343, Hawai'i Revised Statutes ("HRS") and Chapter 200 of Title 11, Hawai'i Administrative Rules - Environmental Impact Statement Rules. The actions that trigger this FEA are the proposed development in the Waikīkī Special District ("WSD") and the possible improvements on City land in the Kalākaua Avenue right-of-way.

The proposed condo-hotel, restaurant and chapel development is permitted in the Resort Mixed Use Precinct in Waikīkī.

2.1 THE PROJECT

BH proposes to demolish the existing buildings on the Project Site and to construct the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-foot high (350 feet with architectural appurtenances), 170-unit condo-hotel project, with a basement. The Project will be developed on two parcels of land ("Project Site") located at 2055 and 2057 Kalākaua Avenue in Waikīkī, Honolulu, on O'ahu, on the makai (south) side of Kalākaua Avenue.

The Project will include: in the basement, a mechanical area and lower level auto lift and elevator areas; on the ground floor the Project includes a porte cochere, landscaped gardens and water feature, lobby, front desk, concierge, office, restaurant, back of house, loading zones, and two auto lifts; mechanical parking levels on the 2nd to 5th floors; on the 6th floor a swimming pool, deck, fitness center, spa, pool bar, restrooms and back of house; on the 7th floor, a restaurant, lounge, private dining, kitchen, and storage; the 8th through 15th floors will have 10 condo-hotel units per floor (one one-bedroom and nine studio units); the 16th through 24th floors will have 8 condo-hotel units per floor (two one-bedroom and six studio units); the 25th floor will contain three penthouse units, two one-bedroom and one two-bedroom units; and the 26th floor will have a wedding chapel, guest lounge, storage, office, family lounge, bridal salon restrooms, back of house and gardens and water features. Although the Project has 155 condo-hotel units planned, up to 15 of the one and two bedroom units will be lock off units, increasing the condo-hotel unit count to 170 units.

A Conceptual Design showing the proposed improvements is provided in Appendix A.

History of the Height Limit for the Project Site

1969 Jan.	The Project Site and other adjacent parcels ("privately owned parcels") not part of Fort DeRussy were zoned B-5 Resort Commercial District and under the Comprehensive Zoning Code (CZC), Ordinance No. 3234, these parcels had a 350-foot height limit, except for the first 35 feet fronting the street (Kalākaua Avenue) which had a 25-foot height limit.
1976 Apr.	These privately owned parcels were rezoned from the B-5 Resort Commercial District to Resort Hotel Precinct and under the CZC, Waikīkī Special Design District (Ordinance No. 4573) had a 25-foot height limit.

1986 Oct.	With the adoption of the Land Use Ordinance (LUO), Ordinance No. 86-96, these privately owned parcels were zoned Resort Commercial Precinct on the Use Precinct Map (Exhibit 13); designated Park on the Circulation Plan (Exhibit 14); and designated "Land Areas Recommended as Open Space" with a 25-foot height limit on the Urban Design Controls Map (Exhibit 15).
1992 Dec.	These privately owned parcels were re-designated on the Primary Urban Center (PUC) Development Plan Land Use Map from Commercial to Park by Ordinance No. 92-144.
1993	The re-designation of these privately owned parcels to Park on the PUC Development Plan resulted in an attempt to rezone these parcels from the Resort Commercial Precinct to a Public Precinct on the Use Precinct Map (Exhibit 21-9.13). In the Public Precinct permitted uses were limited to "Public uses and structures, including accessory activities operated by private lessees under supervision of a public agency." The City Council based on testimony received on this proposed rezoning decided to let the parcels remain in the Resort Commercial Precinct.
1996 Mar.	These privately owned parcels were re-designated on the Primary Urban Center (PUC) Development Plan Land Use Map from Park to Commercial by Ordinance No. 96-13.
1997 Aug.	These privately owned parcels were zoned Resort Commercial Precinct on the Use Precinct Map (Exhibit 7.13); the Circulation Plan Exhibit 14 was eliminated; and designated with a 25-foot height limit on the Urban Design Controls Map (Exhibit 15). In August 1997, on Exhibit 15 the Project Site and other adjacent parcels were no longer designated as "Land Areas Recommended as Open Space".
2011 Dec.	These privately owned parcels were rezoned from Resort Commercial Precinct to Resort Mixed Use Precinct on the Use Precinct Map (Exhibit 21-9.13) by Ordinance No. 11-31 and continued to be designated with a 25-foot height limit on the Urban Design Controls Map (Exhibit 21-9.15).
2015 Dec.	These privately owned parcels continue to be zoned Resort Mixed Use Precinct on the Use Precinct Map (Exhibit 21-9.13) and continue to be designated with a 25-foot height limit on the Urban Design Controls Map (Exhibit 21-9.15).

Between January 1969 and April 1976, these privately owned parcels (including the Project Site) were zoned B-5 Resort Commercial District with a maximum height limit of 350 feet, except for the 35 feet of the street frontage which had a 25-foot height limit. The Hale Makai Hotel (now Luana Waikīkī Hotel and Suites) was constructed in 1969 and is 16 stories high (about 160 feet) and with about 225 units.

In April 1976, with the adoption of the Waikīkī Special Design District, these privately owned parcels were rezoned to the Resort Hotel Precinct and the height limit was reduced from 350 feet to 25 feet. This action turned the Luana Waikīkī Hotel and Suites (Luana Waikīkī) into a nonconforming structure as far as height. This also significantly reduced the development potential of these privately owned parcels.

With the adoption of the LUO in October 1986, these privately owned parcels were rezoned from the Resort Hotel Precinct to the Resort Commercial Precinct and recommended for open space on the Urban Design Controls Map. The Project Site was downzoned in height and developable density in 1976 and in 1986 was designated as a park/open space area in the Land Use Ordinance, possibly with the idea that the City would one day purchase these parcels at a significantly reduced price from the early parcel values under the H-2 Hotel District and B-5 Resort Commercial District zoning with a 350-foot height limit.

In 1992, the applicant believes the re-designation of these privately owned parcels on the PUC Development Plan Land Use Map was done in error. If the City intended to acquire these parcels for park use, rather than designate them Park on the Land Use Map, they should have placed a symbol on the PUC Public Facilities Map, which would have allowed for City acquisition in the future. This is the process that is followed when the City intends to acquire privately owned parcels. The Park designation on the Land Use Map led to a proposed downzoning to a Public Precinct which would have severely restricted use of the property to "Public uses and structures, including accessory activities operated by private lessees under supervision of a public agency." Fortunately the City and City Council eliminated this proposed rezoning from the package of zone changes and kept these privately owned parcels in a Resort Commercial Precinct.

In 1996, the error on the Land Use Map was corrected and the privately owned parcels were re-designated from Park to Commercial.

The applicant feels that there is an opportunity to restore the previous 350-foot height limit for the Project Site under the existing LUO, Waikīkī Special District (WSD) provision that allows an increase in height limit to 350 feet, provided certain public views are not affected.

This process would require processing of a WSD, Major permit and concurrent with the processing of the WSD permit requesting an increase in the allowable height of the building to 325 feet (350 feet with architectural appurtenances), provided the Project meets certain criteria in the WSD, in accordance with Sec. 21-9.80-4(g)(3). Sec. 21-9.80-4(g)(3) states as follows:

"*The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koʻolau Range, and the building does not exceed a height of 350 feet.*"

The Project will not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean, as shown in Appendix A2, View Corridors. The Project will also not impact the view from any Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koʻolau Range.

The 25-foot height limit for the Project Site will not serve to protect mauka views from Fort DeRussy because the area between the Project Site and the Ala Wai Canal between Kuamoʻo Street and Kaiʻolu Street has a 300-foot height limit (Figure 5). As this area is redeveloped according to the allowable height, views of the Koʻolau Range from Fort DeRussy will be blocked for this section of Fort DeRussy.

2.2 PUBLIC BENEFITS

The Project will provide multiple public benefits including:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.

- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.
  - The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
  - The proposed Princess Kaʻiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.
  - The most recent redevelopment project planned at the Waikīkī Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
  - The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaʻiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.
- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.
- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.
  - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized

building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

- The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
- The Project will reduce material waste through effective construction and operational recycling programs.

» Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.

- The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
- Coordinated off-site improvements to neighboring parks and open spaces, King Kalākaua Park (formerly Waikīkī Gateway Park) and Fort DeRussy, to create greater connectivity.
- Commitment to providing an on-site cultural historian to provide insight and educate park users.
- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.
- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

2.3 POTENTIAL ADVERSE IMPACTS

Potential short-term adverse impacts include the following:

2.3.1 Construction Noise, Short-Term Impact

Y. Ebisu & Associates has prepared the "Acoustical Study for the One Waikīkī Project, Waikīkī, Oʻahu, Hawaiʻi " for the Project ("Acoustical Study") dated July 2015. The Acoustical Study in its entirety is provided in Appendix B.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential short-term noise impacts from the Project which states in part as follows:

"Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities, are located at the neighboring Aqua Luana Waikīkī Hotel and at the Fort DeRussy Chapel. Predicted construction noise levels during demolition and site preparation phase of the work on the project site ranged from 53 to 95 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the Aqua Luana Waikīkī Hotel west of the project site during the demolition and site preparation work, where buffer distances are relatively small (in the order of 15 to 50 feet). On the makai (south) side of the project site where the Fort DeRussy Chapel is located, construction noise levels during demolition and site preparation are predicted to range from 56 to 86 dBA. Adverse impacts from construction noise are not expected to be in the 'public health and welfare' category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site."

2.3.2 Construction Air Quality, Short-Term Impact

TRC Solutions, Inc. has prepared the "Air Quality Study for the Proposed Park Kālia-Waikīkī Condo-Hotel Development" ("Air Quality Study") dated November 2015. The Air Quality Study in its entirety is provided in Appendix C.

Short term impacts on air quality are expected to be primarily related to engine exhaust from on-site construction equipment and fugitive dust generated by the construction activity.

As stated in Section 5.0 Short-Term Project Impacts:

"For construction projects such as this, the largest on-site equipment emissions generally come from diesel engine exhaust. The main pollutants contributed by diesel engines are NOx and CO. The CO emissions from the diesel-powered construction engines is expected to be low compared to the vehicles on nearby roads. In addition, existing concentrations of CO measured are well below, approximately 80% below, the more stringent of the applicable standards. Diesel engine NOx emissions do tend to be higher in comparison to gasoline engines. However, construction emissions are temporary (as opposed to a permanent engine installation such as a generator) and unlikely to cause a violation of state or federal standards. In 2014, the recorded 1-hour NO2 emissions value was approximately 80% below the applicable federal standard (there is no state standard), and this value is the result of a three year average. Also in 2014, the recorded annual NO2 value was approximately 90% below the state standard, the more stringent of the two standards."

.....

"Though reasonable precautions to avoid fugitive dust are expected to be determined on a case by case basis, the Clean Air Branch of the Hawai'i Department of Health provides a number of emission control techniques. These precautions can include measures such as using water to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. It is recommended that a dust control plan be created and implemented during construction."

2.3.3 Construction Impact on Traffic and Pedestrians, Short-Term

During the construction phase there will be impacts to pedestrians and vehicular traffic in the area due to construction activity on-site and possibly affecting sidewalk areas and the street, during certain construction activities.

Potential long term adverse impacts include the following:

2.3.4 Noise Impact, Long-Term

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts from the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible.

.....

"Mechanical equipment, such as air conditioning chillers or cooling towers, and garage and kitchen ventilation fans are the primary on-site noise sources expected to be located on the project site. These equipment, singly or together, have the potential of exceeding the allowable property line noise limits of the State DOH noise regulation

(Reference 4). The State DOH noise limits which apply along the property lines of resort districts are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively, where the daytime period is from 7:00 am to 10:00 pm, and the nighttime period is from 10:00 pm to 7:00 am. Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

.....

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls."

2.3.5 Air Quality Impact, Long-Term

As stated in part in Chapter 7.0 Conclusions and Recommendations of the Air Quality Study:

"Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards."

2.4 MITIGATION MEASURES

Certain impacts from the proposed development could be significant, so the following mitigation measures are planned.

2.4.1. Construction Practices

2.4.1.1 Construction Noise Impact, Short-Term Mitigation

Y. Ebisu & Associates has prepared the "Acoustical Study for the One Waikīkī Project, Waikīkī, Oʻahu, Hawaiʻi " for the Project ("Acoustical Study") dated July 2015. The Acoustical Study in its entirety is provided in Appendix B.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of short-term noise impacts and mitigation measures for the Project that is stated in part as follows:

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

Most structures are well over 70 feet from the construction site and most resort units are air conditioned. The Fort DeRussy Chapel and the Luana Waikīkī Hotel are the two exceptions. The Fort DeRussy Chapel is located about 55 feet away, however, their schedule of events noted Protestant Services on Sunday morning at 9:00 am; Catholic Services on Saturday evening at 5:00 pm and "Chapel On the Beach" beach side of the Hale Koa Hotel at 6:00 pm. These services except for the 5:00 pm Catholic Services on Saturday fall outside of the typical construction hours allowed by the State. The Applicant will instruct contractors to voluntarily stop noise creating activity at 5:00 pm on Saturdays so as not to adversely impact the Fort DeRussy Chapel Saturday operations.

The Luana Waikīkī Hotel and Suites ("Luana Waikīkī") is air conditioned which should help to mitigate construction noise impacts, but its guests, due to their proximity, will still be the most affected by construction noise impacts.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawai'i (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 13 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures."

The contractor will be asked to use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, and using properly tuned and balanced machines.

2.4.1.2 Construction Air Quality, Short-Term Mitigation

Chapter 7.0, Conclusions and Recommendations stated in part as follows:

"The most significant potential short-term impacts from the proposed project will occur during construction. The primary potential impact of concern is from fugitive dust emissions. It is recommended that a dust control plan be developed that includes measures specific to this project and implemented during construction. There are a number of possible measures that may be appropriate, such as spraying water on unpaved roads, storage piles, and disturbed areas that may be present to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. Routinely cleaning the access road to the site and washing tires will help prevent track-out of dirt onto paved roads, reducing the potential for fugitive dust emissions. Additional measures to prevent fugitive emissions from

the occurrence of wind include the use of wind screens to block disturbed areas and placement of landscape as early as possible.

"Though highly unlikely to impact local air quality related to the NAAQS and HAAQS, engine exhaust emissions will also occur during construction. These emissions will occur from both equipment used on site and motor vehicles used by construction workers to commute to and from the job site. To minimize these emissions, it is recommended equipment and crew be moved to and from site during off-peak traffic hours. It is also recommended that idling of equipment be minimized during construction."

As stated in Section 5.0 Short-Term Project Impacts:

"Though reasonable precautions to avoid fugitive dust are expected to be determined on a case by case basis, the Clean Air Branch of the Hawai'i Department of Health provides a number of emission control techniques. These precautions can include measures such as using water to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. It is recommended that a dust control plan be created and implemented during construction."

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor during construction, including active work areas will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Dirt-hauling trucks will be covered when traveling on roadways. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emission, that may occur as a result of trucks tracking dirt onto paved roadways in the project area.

2.4.1.3 Traffic

BH will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

2.4.2 Traffic Improvements

Although traffic operations (level of service) with the Project in 2018 are expected to remain similar to conditions without the Project in 2018, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding

area. The "Traffic Impact Report Park Kālia-Waikīkī" ("Traffic Impact Report") dated November 2015 was prepared by Wilson Okamoto Corporation and is provided in Appendix D. The report recommends the following traffic mitigation measures:

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at the project driveway to avoid or minimize vehicle encroachments to oncoming traffic lanes.

The applicant will implement these recommended traffic mitigation measures.

The Traffic Impact Report concluded that:

"The proposed Park Kālia - Waikīkī development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kālia - Waikīkī Development is not expected to have a significant impact on traffic operations in the vicinity."

2.4.3 Noise (Acoustical) Long-Term Mitigation

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts and mitigation measures for the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

.....

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments

so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled through the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a noise mitigation measure."

.....

"... Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

The applicant will provide sound attenuation for ventilation openings, exhaust fans, and/or mechanical equipment, as needed to not exceed the State Department of Health noise limits at the project's property boundaries.

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge."

The applicant will follow these recommendations in determining the appropriate glazing to be used for noise mitigation.

2.4.4 Air Quality Long Term Mitigation

As stated in part in Chapter 7.0 Conclusions and Recommendations of the Air Quality Study:

"Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards. No measures are recommended to mitigate long-term air quality impacts."

2.5 UNRESOLVED ISSUES

There will be further action required with respect to the following unresolved issues:

- A WSD Permit, Major application will be submitted for review and approval by the City's DPP along with a request to modify the allowable height of the building to 325 feet (350 feet with architectural appurtenances) which will need to be processed by DPP and approved by the City Council.
- Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.
- Construction Noise Permit application will be submitted for review and approval by the State Department of Health.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan, if required, will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.

2.6 COMPATIBILITY WITH LAND USE PLANS AND POLICIES

- State Land Use – The Project Site is situated within the State Urban district. Within that district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The Project's condo-hotel, restaurant, and chapel development planned in Waikīkī are consistent with this Urban designation.
- General Plan - The Project will comply with policies related to improving visitor facilities and timing new development with infrastructure.
- PUCDP - The Project will comply with policies related to the support of the visitor industry with updated facilities, enhance the walking experience in Waikīkī, and comply with the land use map designation of Commercial.
- Zoning - The Project will be developed in accordance with development standards of the WSD, except for the existing 25-foot height limit. The proposed 325-foot height (350 feet with architectural appurtenances) will need to be processed by DPP and approved by the City Council. The proposed condo-hotel and dining uses are permitted uses in the Resort Mixed Use Precinct of the WSD for the specific parcels which comprise the Project Site.

2.7 REQUIRED GOVERNMENTAL PERMITS AND APPROVALS

- A WSD Permit, Major application will be submitted for review and approval by the City's DPP along with a request to modify the allowable height of the building to 325 feet (350

feet with architectural appurtenances), which will need to be processed by DPP and approved by the City Council.

- Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.
- Construction Noise Permit application will be submitted for review and approval by the State Department of Health.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan, if required, will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.

2.8 ALTERNATIVES CONSIDERED

2.8.1 Alternative I: No Action

This alternative was considered and rejected since the potential rents from continuing a restaurant on the property does not provide a return that covers the financing of the purchase price of the property.

2.8.2 Alternative II: Luxury Condominium Development

This alternative was considered but rejected due to the increasing supply of these type of units located in nearby Kakaʻako. Due to the high cost of construction, and high unit pricing, a very strong market for these luxury units would have to exist at the time the development would come to market.

2.8.3 Alternative III: Develop within the WSD Standards

Clearing the Project Site provides an opportunity for BH to start with a clean slate and develop in accordance with the development standards of the WSD.

This property unfortunately has a height limit of 25 feet and although a maximum density of 3.5 FAR can be achieved through open space bonuses, there is no way to utilize this density in a 25-foot structure. A large area, including the properties immediately across Kalākaua Avenue except for King Kalākaua Park (25-foot height limit), has a 300-foot height limit (area bounded by Kuamoʻo Street, Ala Wai Boulevard, Kaiʻolu Street and its extension connecting to Kalākaua Avenue and Kalākaua Avenue). With this 300-foot height limit immediately across the street, restricting the Project Site to a 25-foot height limit does not seem to serve any meaningful purpose, such as protection of public views.

Developing within the WSD Standard for height will create a project that cannot be financed.

2.8.4 Alternative IV: Develop within the WSD Standards, Except for Height (Preferred Alternative)

BH considered a redevelopment scenario which would require, among other things, a request to modify only one development standard of the WSD to allow a height limit of 325 feet (350 feet with architectural appurtenances).

This process would require processing of a WSD, Major permit and concurrent with the processing of the WSD permit requesting an increase in the allowable height of the building to 325 feet (350 feet with architectural appurtenances), provided the Project meets certain criteria in the WSD, in accordance with Sec. 21-9.80-4(g)(3). Sec. 21-9.80-4(g)(3) states as follows:

"*The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koʻolau Range, and the building does not exceed a height of 350 feet.*"

The Project will not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean, as shown in Appendix A2, View Corridors. The Project will also not impact the view from any Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koʻolau Range.

The Preferred Alternative would include upgraded and inviting landscaping along Kalākaua Avenue. Landscaping on an upper level of the Project will also provide visual relief for the overlooking taller buildings nearby, offering a pleasant change from the typical rooftop view of lower structures.

The Preferred Alternative will also result in implementation of the City's vision for Waikīkī as described in the PUCDP. Specifically, the vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

The Preferred Alternative will also result in the following community benefits that would not be achieved under Alternatives 1 through 3:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.
- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.
    - The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
    - The proposed Princess Kaʻiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.
    - The most recent redevelopment project planned at the Waikīkī Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
    - The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaʻiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.
- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.
- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.
    - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
    - The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
    - The Project will reduce material waste through effective construction and operational recycling programs.
- Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operation and coordination of programing for Parks in Kālia, Waikīkī.
    - The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
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    - Commitment to providing an on-site cultural historian to provide insight and educate park users.

- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.
- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

3. PURPOSE OF AND NEED FOR THE PROJECT

Park Kālia-Waikīkī will provide needed condo-hotel units to replace units lost in Waikīkī and help to energize this west end of Waikīkī that has not provided much opportunity to encourage visitors to travel to this end of Waikīkī.

Park Kālia-Waikīkī will provide a condo-hotel and restaurants to attract visitors to stay and dine in a lush landscaped setting, with significant amounts of public open space.

The Project will provide redevelopment of an underutilized property that will improve lodging opportunities for our visitors and provide tax income to the State and City.

Waikīkī Special District

The Project will achieve several of the key objectives of the Waikīkī Special District (WSD) guidelines and result in demonstrable contributions that benefit the community and the stability, function and overall ambiance of Waikīkī, as follows:

Sec. 21-9.80-1(a) – Promote a Hawaiian Sense of Place

The Project design includes landscaped yards, public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

Sec. 21-9.80-1(b) - Optimum Community Benefits

The development of the Project Site will provide the following community benefits:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.

- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.
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- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

Sec. 21-9.80-1(d) - Variety of Compatible Land Uses

The Project will include a condo hotel, dining and public open space, a variety of compatible land uses in support of the resort and residential community in Waikīkī and the larger island wide residential community.

Sec. 21-9.80-1(e) - Multimodal Transportation in Waikīkī

The Project will further the WSD objective to support the efficient use of multimodal transportation in Waikīkī and encourage the use of public transit and bicycles.

The Project will take advantage of the existing bus facilities that exist along Kalākaua and Kūhiō Avenues in providing for the needs of employees and condo-hotel guests. Convenient bike racks will be provided in the parking garage as needed to satisfy bike-user demand.

The condo-hotel operator intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The condo-hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees and guests at the Project Site.

Sec. 21-9.80-1(f) – Zoning Requirements Should not Function as Barriers to Desirable Redevelopment

At the present time, the 25-foot height limit serves as a major barrier to redevelopment of this underutilized site. Allowing development in accordance with Section 21-9.80-4(g)(3) which allows a building height limit of 350 feet, provided certain important views from the Punchbowl Lookout and from the Kalākaua Avenue frontage of Fort DeRussy is not blocked, will remove this barrier to redevelopment. The Project will not affect these views as shown in Appendix A2, View Corridors.

Sec. 21-9.80-1(g) - Support Visitor and Resident Needs

The Project will provide commercial support for visitors and residents with dining experiences in a conveniently located mixed use condo-hotel development. The redevelopment of the Project Site will enhance the visitor experience in Waikīkī.

Sec. 21-9.80-1(h) - Rejuvenation and Revitalization in the Special District

The Project will replace the Project Site's older development with a new condo-hotel, dining and a chapel.

Sec. 21-9.80-1(i) - Hawai'i's Tropical Climate and Ambience

The Project will take advantage of Hawai'i's tropical climate and ambiance with landscaped public open space and yard areas at street level that will include tropical landscaping and a water feature.

The Project will also include lanais for each of the condo-hotel units allowing the occupants to take advantage of the tropical climate and ocean views from their units.

The open portion of the 6th Floor will include a swimming pool, deck, and pool bar. This open amenity deck will allow the condo-hotel guests to take advantage of Hawai'i 's tropical climate and the ocean and mauka views from the deck.

Sec. 21-9.80-1(k) - Diamond Head View from Punchbowl

Most of the tower will be in the view profile of the Allure Waikīkī and all of the tower will have no impact on the view of Diamond Head from the Punchbowl Lookout (see Appendix E). The Applicant designed this Project to minimize the impact on the view of Diamond Head from Punchbowl.

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4. PROJECT DESCRIPTION

4.1 LOCATION

The Project Site is located in the Primary Urban Center of Honolulu and within the Waikīkī Special District. The Project will be developed on the former Kyo-ya Restaurant site that is comprised of two parcels.

The Project Site is bound by Kalākaua Avenue to the north, Fort DeRussy Park to the east, Fort DeRussy Park and an Army Chapel to the south, and the Luana Waikīkī condo-hotel to the west.

4.2 GENERAL DESCRIPTION OF THE ACTION

4.2.1 Existing Condition

BH proposes to demolish the existing buildings on the Project Site and to construct the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-foot high (350 feet with architectural appurtenances), 170-unit condo-hotel project, with a basement. The Project will be developed on two parcels of land ("Project Site") located at 2055 and 2057 Kalākaua Avenue in Waikīkī, Honolulu, on Oʻahu, on the makai (south) side of Kalākaua Avenue.

4.2.2 Proposed Development

BH proposes to demolish the existing buildings on the Project Site and to construct the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-foot high (350' with architectural appurtenances), 170-unit condo-hotel project, with a basement. The Project will be developed on two parcels of land ("Project Site") located at 2055 and 2057 Kalākaua Avenue in Waikīkī, Honolulu, on Oʻahu, on the makai (south) side of Kalākaua Avenue.

The Project will include: in the basement, a mechanical area and lower level auto lift and elevator areas; the ground floor the Project includes a porte cochere, landscaped gardens and water feature, lobby, front desk, concierge, office, restaurant, back of house, loading zones, and two auto lifts; mechanical parking levels on Levels P1 through P4; above Level P4 on the 2nd floor a swimming pool, deck, fitness center, spa, pool bar, restrooms and back of house; on the 3rd floor, a restaurant, lounge, private dining, kitchen, and storage; the 4th through 11th floors will have 10 condo-hotel units per floor (one one-bedroom and nine studio units); the 12th through 20th floors will have 8 condo-hotel units per floor (two one-bedroom and six studio units); the 21st floor will contain three penthouse units, two one-bedroom and one two-bedroom units; and the 22nd floor will have a wedding

chapel, guest lounge, storage, office, family lounge, bridal salon restrooms, back of house and gardens and water features. Including parking levels, the building will have 26 floors. Although the Project has 155 condo-hotel units planned, up to 15 of the one and two bedroom units will be lock off units, increasing the condo-hotel unit count to 170 units.

4.3 PHASING AND TIMING OF ACTION

Development of the Project is estimated to take approximately 18 months to construct.

Construction of the building is anticipated to begin in the second quarter of 2017, once BH receives all required permits and approvals, including acceptance of the Final EA, approval of a Resolution from City Council for the 325-foot height (350 feet with architectural appurtenances), approval of a WSD permit from DPP, approval of building permits from DPP, and the securing of project financing.

4.4 SUMMARY OF TECHNICAL CHARACTERISTICS

4.4.1 Use Characteristics

The existing Kyo-ya Restaurant and parking garage will be demolished to allow the site to be developed with the Park Kālia-Waikīkī on 28,761 square feet of land in Waikīkī. BH proposes the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-foot high (350 feet with architectural appurtenances), 170-unit condo-hotel project, with a basement. The Project will be developed on two parcels of land ("Project Site") located at 2055 and 2057 Kalākaua Avenue in Waikīkī, Honolulu, on Oʻahu, on the makai (south) side of Kalākaua Avenue.

Ingress and egress to the Park Kālia-Waikīkī will be via right turn in and right turn out on the one way, eastbound Kalākaua Avenue.

4.4.2 Physical Characteristics

BH proposes the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-foot high (350 feet with architectural appurtenances), 170-unit condo-hotel project, with a basement.

The Project will include: in the basement, a mechanical area and lower level auto lift and elevator areas; the ground floor the Project includes a porte cochere, landscaped gardens and water feature, lobby, front desk, concierge, office, restaurant, back of house, loading zones, and two auto lifts; mechanical parking levels on Levels P1 through P4; above Level P4 on the 2nd floor a swimming pool, deck, fitness center, spa, pool bar, restrooms and back of house; on the 3rd floor, a

restaurant, lounge, private dining, kitchen, and storage; the 4th through 11th floors will have 10 condo-hotel units per floor (one one-bedroom and nine studio units); the 12th through 20th floors will have 8 condo-hotel units per floor (two one-bedroom and six studio units); the 21st floor will contain three penthouse units, two one-bedroom and one two-bedroom units; and the 22nd floor will have a wedding chapel, guest lounge, storage, office, family lounge, bridal salon restrooms, back of house and gardens and water features. Including parking levels, the building will have 26 floors. Although the Project has 155 condo-hotel units planned, up to 15 of the one and two bedroom units will be lock off units, increasing the condo-hotel unit count to 170 units.

4.5 HISTORIC PERSPECTIVE (ARCHAEOLOGICAL)

The Project Site is not listed on the State or Federal Register of Historic Places.

An Archaeological Inventory Survey titled "AIS Initial Report for One Waikīkī, the Former Kyo-Ya Restaurant Property, Waikīkī, Honolulu (Kona), Oʻahu" was prepared by Cultural Surveys Hawaiʻi , Inc. in July 2015. Please refer to Appendix E for complete report.

The archaeological inventory survey Section 2 "Summary and Interpretation" section states as follows:

"We started on a 6 m (20 foot long) excavation. This needed to be cut short by about a 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive collapse due to buried unstable concrete rubble. We regard the loss of this portion of the trench as not of any consequence as were able to observe the stratigraphy in the rest of the test excavation down to the water table. We dig these particularly long trenches in part because we assume we may not be able to see the stratigraphy in the entire length. We got a good view of an expanse of stratigraphy for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches) which is what we sought.
"Several discrete episodes of fill deposits were observed which is no surprise. These fill episodes, designated Strata Ia through Ic, extend to a depth of 50 cm below surface.

"Strata IIa and IIb appeared mechanically altered and both strata lacked signatures of Native Hawaiian occupation (no sea shells, bones or other food scraps, charcoal staining fire cracked rocks, or lithic debitage from stone tool manufacture).

"Stratum III is relatively undisturbed native Jaucas sand which again lacked any sea shells, bones, charcoal staining fire cracked rocks, lithic debitage from stone tool manufacture.

"We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

5. ALTERNATIVES

5.1 ALTERNATIVE I: NO ACTION

This alternative was considered and rejected since the potential rents from continuing a restaurant on the property does not provide a return that covers the financing of the purchase price of the property.

5.2 ALTERNATIVE II: LUXURY CONDOMINIUM DEVELOPMENT

This alternative was considered but rejected due to the increasing supply of these type of units located in nearby Kakaʻako. Due to the high cost of construction, and high unit pricing, a very strong market for these luxury units would have to exist at the time the development would come to market.

5.3 ALTERNATIVE III: DEVELOP WITHIN THE WSD STANDARDS

Clearing the Project Site provides an opportunity for BH to start with a clean slate and develop in accordance with the development standards of the WSD.

This property unfortunately has a height limit of 25 feet and although a maximum density of 3.5 FAR can be achieved through open space bonuses, there is no way to utilize this density in a 25-foot structure. A large area, including the properties immediately across Kalākaua Avenue except for King Kalākaua Park (25-foot height limit), has a 300-foot height limit (area bounded by Kuamoʻo Street, Ala Wai Boulevard, Kaiʻolu Street and its extension connecting to Kalākaua Avenue and Kalākaua Avenue). With this 300-foot height limit immediately across the street, restricting the Project Site to a 25-foot height limit does not seem to serve any meaningful purpose.

Developing within the WSD Standard for height will create a project that cannot be financed.

5.4 ALTERNATIVE IV: DEVELOP WITHIN THE WSD STANDARDS, EXCEPT FOR HEIGHT (PREFERRED ALTERNATIVE)

BH considered a redevelopment scenario which would require, among other things, a request to modify only one development standard of the WSD to allow a height limit of 325-feet (350 feet with architectural appurtenances).

This process would require processing of a WSD, Major permit and concurrent with the processing of the WSD permit requesting an increase in the allowable height of the building to 325-feet (350 feet with architectural appurtenances), provided the Project meets certain criteria in the WSD, in accordance with Sec. 21-9.80-4(g)(3). Sec. 21-9.80-4(g)(3) states as follows:

"The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalākaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koʻolau Range, and the building does not exceed a height of 350 feet."

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The Preferred Alternative will also result in the following community benefits that would not be achieved under Alternatives 1 through 3:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
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- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.
- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

6. ENVIRONMENTAL SETTING

6.1 LOCAL AND REGIONAL PERSPECTIVE

BH proposes to demolish the existing buildings on the Project Site and to construct the Park Kālia-Waikīkī Condo-Hotel Project, a 26-floor, 325-feet (350 feet with architectural appurtenances), 170-unit condo-hotel project, with a basement. The Project will be developed on two parcels of land ("Project Site") located at 2055 and 2057 Kalākaua Avenue in Waikīkī, Honolulu, on Oʻahu, on the makai (south) side of Kalākaua Avenue.

The Project Site is located in the Primary Urban Center of Honolulu and within the Waikīkī Special District. The Project will be developed on a 28,761 square foot property that presently has the former Kyo-ya Restaurant and parking garage.

The Project Site is bound by Kalākaua Avenue to the north, Fort DeRussy Park to the east, Fort DeRussy Park and an Army Chapel to the south, and the Luana Waikīkī condo-hotel to the west.

The greater surrounding area includes hotels, commercial centers, condominiums, apartments, the Ala Wai Canal, and Waikīkī Beach.

6.2 RARE OR UNIQUE ENVIRONMENTAL RESOURCES

AECOS Inc. prepared a "Due-Diligence Natural Resources Assessment for TMKs: 2-6-006: 001 & 004 in Waikīkī, Island of Oʻahu, Hawaiʻi " ("Natural Resources Assessment"). The entire assessment is provided in Appendix F. Excerpts from this study are provided below:

6.2.1 Flora

The "Discussion, Botanical Resources" section of this Natural Resources Assessment states as follows:

"Our survey revealed no issues on the subject property with respect to the species of plants growing there. No species listed under either state or federal endangered species programs (DLNR, 1998; USFWS, 2014) are present on or immediately adjacent to the site."

6.2.2 Fauna

The "Discussion, Avian Resources" section of this Natural Resources Assessment states in part as follows:

"The findings of the avian survey are consistent with the urban resort development present within the general project area, and the reality that the

subject property is almost completely covered with a two-story structure. As previously noted, one of the species detected, White Tern, is an indigenous resident seabird species with the Oʻahu population listed under state endangered species statutes as a threatened species (DLNR, 1968). The species is a relatively common, nesting species in the general Waikīkī area, first recorded as one pair in Honolulu in 1961 (Ord, 1961; VanderWerf, 2003; David, 2013, 2015)."

The applicant will work with the Department of Land and Natural Resource to determine appropriate measures to minimize impact to the nesting areas of the White Tern.

The "Discussion, Mamalian Resources" section of this Natural Resources Assessment states as follows:

"Although we did not record any mammalian species on or adjacent to the subject property, it can be expected that all of the standard human commensal species, including cats (Felis catus), dogs (Canis familiaris), small Indian mongoose (Herpestes auropunctatus), and one or more of the four established alien Muridae found on Oʻahu - roof rat (Rattus rattus), brown rat (Rattus norvegicus), European house mouse (Mus musculus domesticus), and Polynesian rat (Rattus exulans hawaiiensis) use various resources found within the general area on a seasonal basis. All of these introduced species are deleterious to native species. The native ōpeʻapeʻa or Hawaiian hoary bat (Lasiurus cinereus semotus) is an endangered species, but was not detected during the course of our survey. Given the limited natural environment on the property, this listed mammal is not anticipated to be present."

6.2.3 Federal Jurisdictional Waters / Critical Habitat

The "Discussion, Federal Jurisdictional Waters/Critical Habitat" section of this Natural Resources Assessment states as follows:

"Our survey revealed no federal jurisdictional waters (streams or wetlands) on the subject property. Further, no federally delineated Critical Habitat for any species includes or is adjacent to the parcels. Thus, modifications of habitats on the site will not result in impacts to federally designated Critical Habitat. There is no equivalent statute under state law."

6.2.4 Issues of Potential Significance

The "Discussion, Issues of Potential Significance" section of this Natural Resources Assessment states as follows:

"The only species recorded during the course of these surveys or likely to occur within the subject property or adjacent area that we are aware of from a literature review and our combined 90-years of experience in conducting biological surveys and bio-regulatory permitting in Hawai'i is the White Tern."

The applicant will work with the Department of Land and Natural Resource to determine appropriate measures to minimize impact to the nesting areas of the White Tern.

6.3 RELATED PROJECTS IN THE REGION

In addition to the Project, there are several other projects in the area. Some of them are mentioned below.

6.3.1 Gray's Beach Restoration Project

According to the Environmental Assessment/Environmental Impact Statement Preparation Notice for the "Gray's Beach Restoration Project", Kyo-ya Hotels & Resorts is proposing to restore and stabilize a sandy beach fronting the Sheraton Waikīkī Hotel property, approximately 1,500 feet west of the Moana Surfrider Hotel complex. All of the proposed work for this project is located within the State Land Use Conservation District. The proposed work can generally be described as follows:

- Construction of rock T-head groins along the shoreline fronting the Sheraton Waikīkī Hotel, with the eastern-most groin replacing the existing Royal Hawaiian groin; and
- Replacement of sand fill between the groins to create a beach with a minimum horizontal crest width of 30-feet at the +5.2 foot elevation extending from the seawall, and a 1V:10H slope from the crest to the sea bottom.

This project is intended to enhance recreational and aesthetic enjoyment of the area and provide protection for the backshore. The restored beach is expected to facilitate lateral access along the shoreline and enhance recreational opportunities. Pending receipt of the required permits and approvals, project construction was expected to begin in early 2011 and be completed by the end of 2011. It is BH's general understanding that the Gray's Beach Restoration Project has been put on hold, but that permitting for this development could begin again this year or next year.

Long term impacts from beach restoration action are not anticipated to result in any cumulative negative impacts with the Project. If anything, along with other neighboring projects, it will serve to continue the revitalization of the core of Waikīkī in significant ways.

6.3.2 Princess Kaʻiulani Renovation & Development and the Replacement of the Moana Surfrider Hotel Diamond Head Tower with a New Tower

The Princess Ka`iulani project includes plans for a tower with 210 condo-hotel suites and 61 fee simple residences, a 2-level podium with retail/restaurants, 187 below grade parking spaces, recreational amenities, and other accessory uses, a parking structure with 625 spaces and condo-hotel accessory uses, an energy saving deep well cooling system and the renovation of the existing 666-room Ainahau Tower.

The Diamond Head Tower development will include a tower with 185 condo-hotel rooms and 40 fee simple residences, a 2-level podium with accessory uses to the condo-hotel, auto court, beach access, public surfboard racks and a 3-foot site elevation.

Impacts include encroachment of the Diamond Head Tower into the 40-foot shoreline setback and the 100-foot coastal building and height setback, impact on infrastructure, loss of older hotel/retail buildings and short-term construction impacts.

Mitigation includes improved public ocean views, upgrade of sewer mains, completion of an archaeological inventory survey, an archaeological monitoring plan, traffic improvements, and mitigation of runoff, construction noise and air quality impacts through best management practices.

The Princess Ka`iulani and Diamond Head Tower Redevelopment Projects are located on the eastern end of Waikīkī and in the event the construction period for the Park Kālia-Waikīkī Project, overlaps with Kyo-ya Hotels & Resorts development, there should be minimum impact to the surrounding roads with trips for the most part using different routes.

Long term impacts from Kyo-ya's resort condo-hotel, condominium, and commercial development will result in cumulative impacts to infrastructure and traffic in relation to the impacts of the Project. However, based on Kyo-ya's Final EIS and this Final EA, both projects are anticipated to result in minimal impact on the existing level of service of the intersections, surrounding the projects. Other positive long term impacts of the Kyo-ya Project will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City and County tax revenues).

6.3.3 Hilton Hawaiian Village - Village Master Plan

Implementation of the "2010 Village Master Plan" will update and expand the Hilton Hawaiian Village's offering of world class shopping, dining, entertainment and hospitality options. The following improvements are planned:

- Renovation, alteration, and refurbishment (primarily interior and minor exterior projects or above-grade improvements) of existing building facades, common use areas, recreational amenities, and landscaped areas;
- Relocation, realignment, and reallocation of retail and dining areas, recreational amenities, open space, back-of-house space, traffic circulation, pedestrian flow and access within the Hilton Hawaiian Village;
- Construction of two new timeshare towers. The first tower will be located in the mauka corner of the property near Paoa Place and Kālia Road and will be 350 feet tall and include approximately 300 timeshare units, with a portion located above the current bus depot and loading areas. The second tower will be located above the makai corner of the Rainbow Bazaar, will be 260 feet tall, and include approximately 250 timeshare units. Also planned is the reconfiguration of public sidewalk fronting Kālia Road and overall street front improvements that include new landscaping, a new public bus pull-out lane, and trolley pull-out lane, and bus shelter.

The 2010 Village Master Plan is a new plan that carries forward from the existing improvements on the property. Timetable for the major improvements is estimated at roughly ten years, as follows:

- Retail space renovations and improvement of public space amenities are ongoing for projects not requiring land use permitting actions
- The development of the first timeshare tower is planned for 2013-2015
- Expansion of retail and convention space is planned from 2012-2013
- Expansion of the Super Pool and lobby area is planned from 2013-2014
- The development of the second timeshare tower is planned in 2019-2021

This proposed development is located at the far west end of Waikīkī in close proximity to the Park Kālia-Waikīkī Project, however it appears that based on the Hilton schedule, there will not be an overlap in the construction schedules for the Hilton and Park Kālia-Waikīkī. Should the first tower be delayed, it's possible that there will be some overlap in construction periods.

Long term impacts from Hilton's proposed timeshare towers will result in cumulative impacts to infrastructure and traffic in relation to the impacts of

the Project. The Project's traffic impact assessment indicates there will be no significant impact on traffic. Other positive long term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City and County tax revenues) from the two developments.

6.3.4 Waikīkī Landing

The Waikīkī Landing project site currently houses a boatyard repair facility, convenience store and fueling station. The project proposes to renovate and upgrade the existing boatyard facility and the redevelopment of the remainder of the existing site. The development is expected to include the following improvements:

- Boat yard Building with 10,694 square feet of retail space; 9,287 square feet of restaurant space; and 1,877 square feet of office space.
- Wharf Building with 6,098 square feet of restaurant space and 1,319 square feet of office space.
- Canoe House with 4,094 square feet of space for wedding ceremonies to be held on-site.
- Diamond Vista Building with 3007 square feet of retail space; 1,583 square feet of office space; 6,048 square feet of space for wedding ceremonies to be held on-site.
- At-grade parking

The proposed wedding facilities within the Canoe House and Diamond Vista Building should accommodate up to 6 small weddings a day (with about 12 guests per wedding). The project originally projected for completion by the year 2013. Project continues through the permitting process and should begin construction soon.

This proposed development is located at the far west end of Waikīkī, however the Waikīkī Landing project is in bankruptcy proceedings and the Department of Land and Natural Resources had planned to take back the lease for the site. This bankruptcy proceeding will stall the Waikīkī Landing Project and should trail the Park Kālia-Waikīkī project's construction. No cumulative impact is expected.

Long term impacts from the Waikīkī Landing will result in cumulative impacts to infrastructure and traffic. Other positive long term impacts will be increases in employment, GET collections (increase in State tax revenues) and property taxes (increase in City tax revenues).

6.3.5 Royal Hawaiian Market Place

The proposed development is situated on a 7,200 square foot lot at the corner of Royal Hawaiian Avenue and Lauʻula Street. The Project will replace 20 temporary tarp and plywood retail kiosks about 10 feet by 10 feet in size by a two-story structure with 3,395 square feet on the ground floor and 1,380 square feet on the second floor. This represents a relatively small commercial development with existing retail, dining and an existing 218-foot concrete masonry structure with a money exchange/take-out food shop that will remain.

The proposed development will support many of the existing tenants. The Project is not expected to have a significant impact since it essentially continues the existing commercial use on the project site in a permanent structure. The applicant plans to begin construction as soon as the applicant receives approval of development permits from the City and the construction is expected to take about four months.

This applicant's schedule should have the project construction completed prior to the anticipated start of construction of the Park Kālia-Waikīkī Project and there should be no cumulative construction impacts.

6.3.6 The International Market Place

The International Market Place Redevelopment Project includes the replacement of all existing buildings and structures on the site with a new retail, dining and entertainment center. The redeveloped center will be generally three levels in height, but the mauka end will have a seven-story structure consisting of two levels of retail below five levels of parking.

The Project involves the removal of approximately 213,000 square feet of existing commercial space at the International Market Place and Town Center sites and approximately 286,000 square feet of existing space at the Miramar Hotel site. With a proposed redevelopment of 419,960 square feet of new commercial space across the entire site, the redevelopment will result in a reduction of approximately 79,040 square feet.

Construction recently began, with the first phase being demolition of existing structures. Construction is expected to be completed by spring 2016, with the new International Market Place re-opening at that time.

Construction is expected to be completed before ground breaking occurs on the Park Kālia-Waikīkī Project and there should be limited or no overlap in construction.

6.3.7 2121 Kūhiō – Ritz Carlton

The applicant, PACREP LLC, proposes to develop the 2121 Kūhiō in Waikīkī. Although 2100 Kalākaua Avenue and 2139 Kūhiō Avenue properties are part of the joint developed lot with 2121 Kūhiō Avenue, the area planned for development is on the 2121 Kūhiō property, 1.396 acres of vacant land.

The applicant proposes to develop a 37-story, 350-foot structure. The original plan for 2121 Kūhiō included a five story podium with the ground floor lobby, three levels of parking and fifth and sixth floor of condo-hotel support uses. The new design is based on an 8-story shared podium with shared resident services, recreational amenities, vehicular access and off-street parking. Above this podium will be a 29-story tower.

2121 Kūhiō will include development of 361 condo-hotel units, based on keys (this may include lock-off units which although are treated as separate units in the 361 unit total may be used as one large unit or used as two separate smaller units, with separate keyed entrances from the corridor).

The ground floor development will include a sundry/retail shop, a concierge space, lobby, breezeway, drop-off, porter valet, loading, administrative and back-of-house offices, entry drive, entry plaza, and lush landscaping.

2121 Kūhiō broke ground in August of 2013 and completion is expected by mid-2016. Construction is expected to be completed before ground breaking occurs on the Park Kālia-Waikīkī Project and there should be limited or no overlap in construction.

6.3.8 2139 Kūhiō – Ritz Carlton

The Applicant, PACREP 2 LLC, proposes to develop a 39-story condo-hotel at 2139 Kūhiō Avenue in Waikīkī. The proposed development consists of a tower on podium building with up to 280 units, related building support facilities, resident services, amenities and public streetscape improvements. The new tower will be a stand-alone building with its own mechanical, electrical, and utility infrastructure, and but will share an 8-story building podium with the adjacent 2121 Kūhiō Tower that is currently in development. The building podium will contain shared resident services, recreational amenities, vehicle access and off-street parking.

The Applicant plans to begin construction this year and projects to complete construction by mid-2016. Construction is expected to be completed well before ground breaking occurs on the Park Kālia-Waikīkī Project and there should be no overlap in construction.

6.3.9 Waikīkī Parc Hotel Renovation

The Applicant, Halekulani Corporation, proposes the Waikīkī Parc Hotel Renovation Project in Waikīkī. The Project will be located on a 48,411 square foot site and will involve the renovation of the existing Waikīkī Parc Hotel including the following:

1. Provide streetscape enhancements, landscaping and special roadway paving along Kālia and Helumoa Roads.
2. Enhance existing pedestrian hotel entrance and drop off fronting Kālia Road and porte cochere on Helumoa Road.
3. Renovate ground floor lobby, restrooms and back-of-house facilities, and improvements to the existing restaurant.
4. Renovate the 8th floor pool deck to include refurbishing of the existing pool, adding a new pool, lounge chairs, poolside dining tables and chairs and renovating the existing pool bar.
5. Renovate the 8th floor by removing guest rooms and providing a new restaurant, kitchen, dining room, fitness center and hospitality room.
6. Renovate the 8th floor outdoor gathering area with landscaped wind screens and retractable roof awning and create a garden with outdoor dining tables and chairs.
7. Renovating the existing 297 rooms into all 1-bedroom and 2-bedroom rooms (reducing the unit count to 126 rooms).
8. Provide a new roof top open-air terrace.
9. Extend elevator and stairs to the roof top.
10. Provide façade improvements to the face of the parking garage, to enhance existing architectural treatment such as post and beam articulation, trellises and canopy extensions.
11. Replacing the exterior glazing of the building façade and change out all hand rails and guard rails.

Construction is anticipated to begin in the fall of 2016, and be completed by 2018. BH expects that there will be an overlap in construction periods. There will be some cumulative impact over the service roads for each development given the proximity of the two Projects. BH will discuss possible ways to mitigate the cumulative impact.

6.3.10 133 Kaʻiulani Condo-Hotel

The Applicant, MK Development Consulting, LLC (MK), proposes the 133 Kaʻiulani Condo-Hotel Development in Waikīkī. The Project includes the replacement of all existing buildings and structures on the Project Site with a new commercial and parking podium and a condo-hotel tower above.

The new condo-hotel will provide approximately 220 condo-hotel units. The new structure is planned to have a 350-foot, 33-story tower.

A basement will consist of back of house spaces and the ground floor will be composed of a retail spaces, condo-hotel lobby and support spaces. The condo-hotel reception area, lobby lounge, bar lounge, full-service restaurant as well as multiple event spaces and executive offices will be located on an amenity deck above the parking floors. The tower above the amenity deck will mostly be condo-hotel units.

The project will provide a porte-cochere for valet drop off with loading, trash and vehicular access on the ground floor. The Kaʻiulani Avenue and Koa Avenue corner of the Project will provide an open-space plaza to serve as the main pedestrian access to both the condo-hotel and retail functions. A paved and landscaped area will connect the plaza, wrapping around Kaʻiulani Avenue with access to the retail, and connect to the Prince Edward Street side of the property. This pathway will continue and connect to a landscaped pocket park for use by condo-hotel guests, Waikīkī residents and the general public.

Construction is anticipated to begin in 2016, and be completed by 2018, approximately 30 months. BH expects that there will be an overlap in construction periods, however because of the distance between the two Projects, cumulative impact should be minimal. There will be limited cumulative impact over the service roads for each development except for the Ala Wai Boulevard which both projects will use.

6.4 POPULATION AND GROWTH CHARACTERISTICS

The Project, when completed, may have a slight impact on the number of permanent residents in Waikīkī, based on the findings with other condo-hotel units which average a resident occupancy of between 5% and 20%. Based on this percentage, the 170 condo-hotel units could result in an increase in residents in Waikīkī of about 9 to 34. However, residents that purchase condo-hotels to occupy and not place back with the hotel operator,

normally occupy the units on an occasional basis and not as full time residents. As an example, the Trump Tower Waikīkī has 462 units, but only three of the units are occupied by full time residents.

The Project will increase the visitor population potential of Waikki with the development of 170 condo-hotel rooms, of which approximately 85% are anticipated to be in a hotel rental program. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, right on Kalākaua Avenue, one of the major thoroughfares in Waikīkī.

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7. RELATIONSHIP TO LAND USE PLANS, POLICIES, AND CONTROLS

7.1 STATE LAND USE

The Project Site lies within the State land use Urban district. Within this district, lands are characterized by city-like concentrations of people, structures, streets, urban level of services and other related land uses. The Project's proposed condo-hotel, restaurants and chapel are consistent with this Urban designation.

7.1.1 Hawai'i State Plan

Goals

(1) A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i 's present and future generations.

The Project replaces the Kyo-ya Restaurant that has been closed since 2007 (which ended 50-years of operation nest to Fort DeRussy Park) and as fine a restaurant and favorite of many residents and visitors, it did not make economic sense to continue operations on two very valuable lots. After closure, the property was sold.

The former Kyo-ya Restaurant will be replaced by a 170-unit condo-hotel that will provide:

- The temporary local construction jobs will peak at approximately 375 tradesmen onsite, plus ancillary support services.
- When the Project is complete, it is projected to create approximately 110 full-time equivalent hotel jobs as well as support jobs.

The Project provides much needed hotel rooms in Waikīkī with 170 additional condo hotel rooms, which will help to replace 2,645 hotel units that have been lost and will be lost in the near future.

The Project will also provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.

The money provided in GET taxes, the hotel room tax, and income tax collections from employees at the condo hotel all provide a revenue source that will assist the State in implementing each of the State Functional Plans.

7.1.2 State Functional Plan – Agriculture

The Project will not affect objectives, policies and actions recommended in the Agriculture Plan, except that it will generate a demand for some of the local fruits, vegetables and other island products for consumption at the condo-hotel, in support of the Consumption and Demand, Objective C.

7.1.3 State Functional Plan – Conservation Lands

The Project is situated on Urban land within a built environment and will not affect the policies, goals and implementing actions of the Conservation Lands Plan.

7.1.4 State Functional Plan – Education

The Project will not affect the Policies, Goals and Implementing Actions of the Education Plan.

The Project does have a slight potential to generate permanent school age children since it is anticipated that a small percentage of the units may not be in a hotel rental. However, based on existing condo hotels in Waikīkī, these units are often used as vacation homes by their owners and not as primary residences.

This Project with about 170 condo-hotel units is projected to have about 85% of the condo hotel units in a hotel rental program, with a great majority of the remaining 15% of the condo hotel units used as part-time residences or personal vacation homes. Thus it is anticipated that there may be up to 26 units which will not be in a hotel rental program, but these 26 units will not all be permanent residences, as many will be second homes (vacation homes), retirement homes, or rented as vacation units outside of the hotel rental program, as occurs in other condo hotels. Even using the 15%, however, there will not be a significant increase on the school system. Without eliminating any of the units as second homes, retirement homes or private vacation rentals, the 26 permanent residence unit increase would generate 4 students in grades K through 12 (0.12 x 26) based on Department of Education standards for Waikīkī. This will not have a significant impact on the schools in the area, as the schools have sufficient space to accommodate any anticipated increase in students generated by the Project.

7.1.5 State Functional Plan – Higher Education

The Project will not affect the Policies, Goals and Implementing Actions of the Higher Education Plan. The State Functional Plan for Higher Education reflects the Department of Education Strategies to address the policies and priority guidelines of the Hawai'i State Plan and the goals of the Board of Education and the concerns of the State Education Functional Plan Advisories Committee. It serves as the mechanism for implementing the Hawai'i State Plan as it relates to the directions and programs of the Department of Education.

The Project is a condo-hotel development and will not be involved in policies and programs related to the directions of the Board of Education or the programs of the Department of Education.

7.1.6 State Functional Plan – Economy

The Economy Plan relies heavily on the State's education system and state agencies in the implementing actions to meet the goals and policies of the Plan.

The Project will help in implementing the objectives and policies for the economy described in, "§226-6. Objectives and policies for the economy." specifically:

(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i 's people.

The Project replaces an aging non-competitive asset with a proposed condo hotel development that will provide an economic and job-creating stimulus for the local economy.

- The temporary local construction jobs will peak at approximately 375 tradesmen onsite, plus ancillary support services.
- When the Project is complete, it is projected to create approximately 110 full-time equivalent hotel jobs as well as support jobs.

(2) Foster greater cooperation and coordination between the public and private sectors in developing Hawai'i 's employment and economic growth opportunities.

The Project requires support from various public agencies in the review and approval of the Project.

(10) Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.

The Project provides much needed hotel rooms (170 condo-hotel rooms, 85% of which are anticipated to be placed in a hotel rental program) in Waikīkī in a sector that has lost employment with 2,254 hotel units that have been lost in recent years and expects future losses of hotel units.

7.1.7 State Functional Plan – Energy

The Energy Plan relies heavily on the Department of Business and Economic Development (now Department of Business, Economic Development and Tourism) to take the lead in implementing most action items in support of the objectives and policies of the Energy Plan and encouraging private energy agencies to develop alternate energy systems to reduce dependence on fossil fuels. Other State and County agencies take the lead in remaining action items.

In a smaller scale, the Project will support sustainability and energy conservation on-site as follows:

- The existing buildings on the Project that are proposed to be demolished were built in 1990 and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- BH intends to incorporate high performance building skins and roofing in the Project to maximize building thermal efficiency.
- BH will implement low-flow plumbing fixtures, explore waterless urinals, incorporate efficient landscape irrigation systems, and explore the use of non-potable water in planting areas in an effort to further reduce wastewater and potable water demands. Condensate drain from the outside air unit will be collected and piped to cooling tower makeup water. Cooling tower conductivity

meter will be provided. A chemistry free cooling tower water treatment system will be provided to reduce cooling tower water blow-down rate.

» BH will reduce the Project's material waste through effective construction and operational recycling programs.

7.1.8 State Functional Plan – Health

The Project will not affect the objectives, policies and implementing actions of the Health Plan, which will be implemented by State Agencies and Medical facilities throughout the State.

The six major health issues in the State Functional Plan for Health include:

1. Health Promotion and Disease Prevention
2. Communicable Diseases Prevention and Control
3. Special Population with Impaired Access to Health Care
4. Healthcare Services (Acute, Long-term, Primary and Emergent) for Rural
5. Communities
6. Environmental Health and Protection
7. Department of Health Leadership

The Project will not be affecting these major health issues of the State Functional Plan for Health.

7.1.9 State Functional Plan – Historic Preservation

In accordance with Implementing Action B.2.c. "*Respond to the discovery of prehistoric/historic burials in a timely and sensitive manner, which takes into consideration cultural concerns.*"

The existing structures on the Project Site are only about 25 years old and they are not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey Initial Report ("AIS") and Cultural Impact Assessment ("CIA") for One Waikīkī were conducted by Cultural Surveys Hawai'i , Inc. in July, 2015. The Archaeological Inventory Survey for One Waikīkī is included in its entirety in Appendix E. The Cultural Impact Assessment is included in its entirety in Appendix G.

The AIS stated in part as follows:

"We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

The CIA stated in part as follows:

"Based on information gathered from the cultural and historic background detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH summarizes the potential impacts and recommendations:

- *Community consultation should be conducted to inform kamaʻāina, kūpuna, and lineal and cultural descendants of the proposed project and to collect information on traditional cultural practices (past and present) within Waikīkī Ahupuaʻa. A proposed community contact outreach list is available in Appendix B.*
- *There is a significant possibility that iwi kūpuna, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural materials.*
- *Personnel involved in the project construction activities should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials or other cultural finds be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law, HRS §6E.*
- *Personnel involved in the project construction activities should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials or other cultural finds be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law, HRS §6E.*

» *Project proponents should consult with lineal and cultural descendants of Waikīkī to develop a reinternment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts are uncovered during construction or long-term."*

BH will implement these recommendations.

7.1.10 State Functional Plan – Housing

The Project will not affect the Policies, Goals and Implementing Actions of the Housing Plan. Although there is a potential for a slight percentage of the units not being placed in the hotel program, only a few will become permanent residences, many will become private short term rentals or vacation homes. The few that become permanent residences will not be affordable based on the location and quality of the constructed units. The Project will not provide housing for the very low and lower income households, which is the goal of the State Functional Plan for Housing.

7.1.11 State Functional Plan – Human Services

The Project will not affect the Policies, Goals and Implementing Actions of the Human Services Plan, which will primarily be guided by public agencies and private social service agencies. Priority issues of the Human Services Functional Plan include Elderly Care, Children and Family Support, Self-Sufficiency (related to help with medical coverage, child care, and job training), and Service Delivery Improvements. The Project as a condo-hotel will not be providing services to help in resolving these priority issues.

7.1.12 State Functional Plan – Recreation

The Project will be developed with a swimming pool and spa; fitness center; and public open space on the ground floor with landscaping and water features. The Project is also situated adjacent to Fort DeRussy Park.

Except for an increase in residents from this Project and an increase in recreational use and facilities on the island, the Project is not expected to affect other Policies, Goals and Implementing Actions of the Recreation Plan.

7.1.13 State Functional Plan – Tourism

The Project with its new condo-hotel units is consistent with Objective I.A. which calls for "Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry."

The Project also implements Policy I.A.2. by maximizing benefits to the residents of the State in general and revenues to State and County governments, specifically:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.
- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.
    - The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
    - The proposed Princess Kaʻiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.
    - The most recent redevelopment project planned at the Waikīkī Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
    - The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaʻiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.
- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs

while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.

» The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.

» The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.

- The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
- The Project will reduce material waste through effective construction and operational recycling programs.

» Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.

- The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
- Coordinated off-site improvements to neighboring parks and open spaces, King Kalākaua Park and Fort DeRussy, to create greater connectivity.
- Commitment to providing an on-site cultural historian to provide insight and educate park users.
- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.

- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

The Project is located in Waikīkī (the State's primary visitor destination area) with adequate infrastructure and support services is consistent with Policy II.A.8.

7.1.14 State Functional Plan – Transportation

The condo-hotel operator intends to implement a Traffic Management Plan (TMP) which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees. Transit and biking information will also be made available for all patrons at the customer service desk within the Project. Bike racks will be provided in the parking garage as needed to satisfy bike-user demand. BH will encourage its employees to use public transit and carpools and will encourage and assist tenants in doing the same for their employees. The goals of the TMP are consistent with Policies I.C.2 (ride share) and I.C.5. (Bikeway program).

7.2 GENERAL PLAN

7.2.1 Economic Activity

General Plan Objective B - To maintain the viability of O`ahu's visitor industry.

Policy 2 - Provide for a high quality and safe environment for visitors and residents in Waikīkī.

The Project will be a significant upgrade from existing facilities and provide a high quality and safe environment for visitors and residents in Waikīkī. The public benefits will include increasing the opportunities with new visitor accommodations in Waikīkī; enhanced open space available to the public; and provision of an economic stimulus to a local and national economy. The development will also result in an increase in property values for the City and County of Honolulu (resulting in increased property taxes) and generate additional tax revenue in terms of GET and transient taxes to the State.

The Project is intended to become an important addition to existing visitor accommodations at this ewa end of Waikīkī. It will upgrade an older, underutilized property with a new condo-hotel development, adding to the inventory of hotel rooms that has been decreasing in recent years.

Policy 3 - Encourage private participation in improvements to facilities in Waikīkī.

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.
- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.
    - The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
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- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs

while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.

» The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.

» The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.

- The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
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» Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.

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- Commitment to providing an on-site cultural historian to provide insight and educate park users.
- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.

- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

Policy 9 - Encourage the visitor industry to provide a high level of service to visitors.

The Project will upgrade existing facilities to improve the visitor accommodation experience in Waikīkī. That experience will also include enhanced open space available to visitors and local residents.

7.2.2 Energy

General Plan Objective A - To maintain an adequate, dependable, and economical supply of energy for O`ahu residents.

Policy 3 - Support programs and projects which contribute to the attainment of energy self-sufficiency on O`ahu.

BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. BH will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. BH will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

7.2.3 Physical Development and Urban Design

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

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

As noted in this FEA various public service agencies have indicated that water supply and quasi-public utilities are adequate to support the Project. Drainage

impacts will be reduced with the provision of additional landscaped open space. See "Due Diligence Report, Park Kālia-Waikīkī" prepared by Wilson Okamoto Corporation and dated November 2015, attached as Appendix H.

The "Traffic Impact Report Park Kālia-Waikīkī" ("Traffic Impact Report") dated November 2015 was prepared by Wilson Okamoto Corporation and is provided in Appendix D. The Traffic Impact Report indicates there will be no significant impact on traffic related to level of service at surrounding intersections.

Policy 3 - Phase the construction of new developments so that they do not require more regional supporting services than are available.

The phasing of the Project should not require more supporting services and infrastructure than are presently available, as discussed in detail in other sections of this FEA.

7.3 PUC DEVELOPMENT PLAN

The Project's compliance with the PUCDP is discussed as follows:

7.3.1 Vision For The PUCDP's Future

7.3.1.1 Honolulu is the Pacific's Leading City and Travel Destination

"With ongoing redevelopment and improvement, Waikīkī remains the State's largest and most popular visitor destination."

The proposed action will result in the redevelopment and improvement of this important site. The Project will provide 170 additional condo-hotel units in Waikīkī of which approximately 85% are anticipated to operate in a hotel rental program. The units will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place, totaling 2,254 hotel units. In addition, the proposed Princess Kaʻiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units. The most recent redevelopment project planned at the Waikīkī Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian

Village with 550 units planned; 133 Ka'iulani with 220 units planned ;and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

7.3.2 Land Use and Transportation

7.3.2.1 Visitor Industry

"The need to upgrade Waikīkī. Waikīkī is competing in the global market and, as a mature destination, needs to be refurbished and improved. In addition to upgrading streets and public spaces, the City and State need to adopt policies that will elicit private reinvestment in Waikīkī's physical plant."

BH proposes to invest approximately $116,000,000 million to replace the older improvements on this Project Site with a new condo-hotel facility. This development will help in replacing some of the hotel units lost in Waikīkī. This private reinvestment in Waikīkī's physical plant will implement this important vision statement of the PUCDP.

7.3.2.2 Walking

"Regional pedestrian networks are appropriate for the central Honolulu and Pearl Harbor areas. Districts with existing high levels of pedestrian activity include Waikīkī and Downtown. . . Additional elements of the network are new promenades and other pedestrian improvements to city streets (e.g., Punchbowl Street, Nimitz Highway in the Downtown area, Ward Avenue, Young Street, Keeaumoku Street and Kalākaua Avenue."

BH plans to improve the pedestrian experience along Kalākaua Avenue with enhanced public open space.

A significant increase in open space available to the public and landscaping along Kalākaua Avenue will greatly enhance the pedestrian experience through Waikīkī and provide relief from the urban forms in Waikīkī.

7.3.2.3 Bicycles

"To encourage bicycle ridership, the City has employed a Bicycle Coordinator, installed bike racks on all its buses and on many of Honolulu's streets, and has planned and partially developed a system of bikeways."

The Honolulu Bicycle Master Plan (dated April 1999) proposes a bike lane along the makai side of Kalākaua Avenue from Ala Moana Boulevard to Kapahulu Avenue.

BH plans to provide bicycle racks in the new parking structure to accommodate employees that may bicycle to work, using the new bike lane planned for Kalākaua Avenue. BH understands that Bikeshare Hawai'i will be starting their bike share program in early 2016, prior to the opening of this Project.

7.4 LAND USE MAP PUC – EAST

The Project is designated Commercial on the Primary Urban Center (PUC) Development Plan Land Use Map. The proposed development of Park Kālia-Waikīkī as a condo-hotel is consistent with this designation.

7.5 LAND USE ORDINANCE (SEC. 21-9.80 WAIKĪKĪ SPECIAL DISTRICT)

7.5.1 Waikīkī Special District Objectives (Sec. 21-9.80-1)

7.5.1.1 Promote a Hawaiian Sense of Place

The Project design includes landscaped yards and public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

7.5.1.2 Optimum Community Benefits

The development of the Project Site will provide the following community benefits:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
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- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
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- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.
- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes (“GET”) for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.
- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.
    - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when

financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

- The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
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» Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.

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- Commitment to providing an on-site cultural historian to provide insight and educate park users.
- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.
- Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

7.5.1.3 Variety of Compatible Land Uses

The Project will include a condo hotel, retail, and dining in a mixed use venue of compatible land uses in support of the resort and residential community in Waikīkī and the larger island wide residential community.

7.5.1.4 Multimodal Transportation in Waikīkī

The Project will further the WSD objective to support the efficient use of multimodal transportation in Waikīkī and encourage the use of public transit, while balancing the critical need for adequate parking at the Project Site.

The Project will take advantage of the existing bus facilities that exist along Kūhiō and Kalākaua Avenues in providing for the needs of employees and condo hotel

guests. Convenient bike racks will be provided in the parking garage as needed to satisfy bike-user demand.

The condo-hotel operator intends to implement a TMP which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees at the Project Site.

7.5.1.5 Support Visitor and Resident Needs

The Project will provide commercial support for visitors and residents with dining experiences in a conveniently located mixed use development. The redevelopment of the Project Site will enhance the visitor experience in Waikīkī.

7.5.1.6 Rejuvenation and Revitalization in the Special District

The Project will replace the Project Site's older development with a new condo-condo-hotel, a chapel and dining.

7.5.1.7 Hawai'i's Tropical Climate and Ambience

The Project will take advantage of Hawai'i's tropical climate and ambiance with a large public open space and setback and yard areas at street level that will include tropical landscaping and a water feature.

The Project will also include lanais for each of the condo-hotel units allowing the occupants to take advantage of the tropical climate and ocean views from their units.

The open, podium area on the amenity deck located on the 6th floor will be utilized as an outdoor dining terrace and main pool deck. This open amenity deck will allow the condo-hotel guests to take advantage of Hawai'i's tropical climate and the ocean and mauka views from the deck.

7.5.1.8 Diamond Head View from Punchbowl

Most of the tower will be in the view profile of the Allure Waikīkī and all of the tower will have no impact on the view of Diamond Head from the Punchbowl Lookout (see Appendix A2, View Corridors). The Applicant designed this Project to minimize the impact on the view of Diamond Head from Punchbowl.

7.5.1.9 Pedestrian Orientation in Waikīkī; People-Oriented, Interactive Landscaped Open Spaces

The Project, through its landscaped public open space and its landscaped yard area will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site.

7.5.2 Prominent View Corridors and Historic Properties (Sec. 21-9.80-4)

7.5.2.1 Significant Public Views

"(1) Intermittent ocean views from Kālia Road across Fort DeRussy Park and from the Ala Wai Bridge on Ala Moana Boulevard;
(2) Continuous ocean views along Kalākaua Avenue, from Kūhiō Beach to Kapahulu Avenue;
(3) Ocean views from Ala Wai Yacht Harbor;
(4) Ocean views from Kūhiō Beach Park;
(5) Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);
(6) Mauka views from the portions of the following streets mauka of Kūhiō Avenue:
(A) Nohonani Street;
(B) Nāhua Street;
(C) Kānekapolei Street;
(D) Kaiʻolu Street;
(E) Lewers street;
(F) Walina Street; and
(G) Seaside Avenue;
and
(7) View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue."

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.2 Preserve, Maintain, and Enhance These Views

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.3 Historic Properties

"Development should preserve, maintain and enhance historic properties whenever possible. Special district permit applications involving buildings over 50 years old shall be submitted to the state department of land and natural resources for review and comments."

The existing structures on the Project Site are only about 25 years old and they are not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey Initial Report ("AIS") and Cultural Impact Assessment ("CIA") for One Waikīkī were conducted by Cultural Surveys Hawai'i , Inc. in July, 2015. The Archaeological Inventory Survey for One Waikīkī is included in its entirety in Appendix E. The Cultural Impact Assessment is included in its entirety in Appendix G.

7.5.3 General Requirements and Design Controls (Sec. 21-9.80 4)

The design of buildings and structures will reflect a Hawaiian sense of place, as described in this section.

7.5.3.1 Uses and Structures Allowed in Required Yards and Setbacks

Should roof eaves, awnings (including retractable awnings) and other sunshade devices be provided, they will not be more than 42 inches vertically or horizontally beyond the building face for buildings under 60 feet in height. On buildings over 60 feet in height, roof eaves may extend more than 42 inches into a required yard, street setback or height setback area if the resulting roof form is integral to a cohesive, coherent design character for the structure. In no case, will such extension exceed one-half the width of the required yard or height setback.

7.5.3.2 Curb Cuts

Curb cuts for driveway openings and sight distances at all intersections will comply with the design standards of the Department of Transportation Services (DTS).

7.5.3.3 Design Guidelines.

General Guidelines

The only general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 25-foot height limit. BH will be requesting, through a Resolution from City Council, a 350-foot height limit. The Project will meet all other Waikīkī Special District design standards.

Yards. The 20-foot yard required for Kalākaua Avenue per the development standards under LUO Table 21-9.6(B) will be met possibly through yard averaging.

Utility Installations. Except for antennas, utility installations (if developed) will be designed and installed in an aesthetic manner so as to hide or screen wires and equipment completely from view, including views from above; provided, however, that any antenna located at a height of 40 feet or less from existing grade, visible from a public right-of-way, will take full advantage of stealth technologies in order

to be adequately screened from view at ground level without adversely affecting operational capabilities.

Building Materials. BH may be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment. A variety of building materials will be employed, including natural materials and possibly textured concrete and plaster.

Building Scale, Features and Articulation. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

Ground Level Features

a. Within the development, attention will be given to pedestrian-oriented ground level features, which will draw pedestrians into the condo-hotel lobby. A close indoor-outdoor relationship will be promoted with the partially open condo hotel lobby. Design priority will include the visual links through the development connecting the sidewalk and other public areas with on-site open spaces, such as the public open space.
b. Building facades at the ground level along open spaces and major streets (including Kalākaua Avenue, Kūhiō Avenue, Kapahulu Avenue, Ala Wai Boulevard and Ala Moana Boulevard) will include as appropriate open lobbies, arcade entrances, and display windows, and may include outdoor dining where it is permitted. The Kalākaua Avenue frontage will have a porte cochere and open lobby as promoted by this guideline.
c. All commercial uses located at ground level, other than as required by paragraph "b", at least one-half of the total length of the building façade along streets shall be devoted to open lobbies, arcade entrances, display windows and outdoor dining where permitted. This guideline will be met with the open lobby.
d. The Project will include a partially open condo hotel-lobby.
e. The building will be situated between a street and open spaces, the ground level pedestrian way will provide visual links between the street and the partially open condo-hotel lobby.

f. Where blank walls occur fronting a street or open space, they shall be screened with heavy landscaping or appropriately articulated exterior surfaces.
g. Only a ground level parking lift is planned for the mechanical parking garage.
h. The partially open condo hotel lobby will be open to its Kalākaua Avenue frontage.

Outdoor Lighting
Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and public rights-of-way.

7.5.3.4 Planned Development-Resort (PD-R)

The Project does not meet the minimum lot size requirements of 1 acre to process as a Planned Development-Resort project. (Project is 28,761 square feet in size)

7.5.3.5 Landscaping

a. Some trees six inches or greater in trunk diameter may be removed or relocated in order to allow appropriate development of the Project Site.
b. The parking structure will be landscaped or articulated with designs to reduce the impact of a solid wall.
c. Newly introduced landscape will include fragrant, lush, tropical vegetation and native plant species, where appropriate.
d. Fences or walls exceeding 36 inches in height, except for moss rock walls, shall be landscaped with vine or hedge planting or other approved vegetation on the street side. The only exception will be retractable fences to secure the property after business hours.
e. All landscape areas will have an adequate irrigation system.

7.5.3.6 Height Regulations

a. Rooftop height exemptions as allowed in the special district may be used, for mechanical appurtenances and utilitarian and architectural features.
b. Coastal height setbacks are not applicable for this development located makai of Kalākaua Avenue, about 1,800 square feet from the shoreline.

7.5.3.7 Parking

BH understands that ground floor uses other than dwellings are exempt from off-street parking requirements.

7.5.3.8 Vending Carts

Vending carts are not planned at this time.

7.5.4 Resort Mixed Use Precinct

7.5.4.1 Permitted Uses

The Resort Mixed Use Precinct allows as permitted uses the Project's proposed condo-hotel and dining uses.

7.5.4.2 Development Standards

Development Standard	Resort Mixed Use Precinct	Project
Minimum lot area (square feet)	10,000	28,761 square feet
Minimum lot width and depth (feet)	50	Average – 160' width and 180' depth
Yards - Front (feet) - Side	20 0	20-foot average
Maximum Density (FAR)	.0 (plus 1/2 of the abutting right-of-way)	28,761 sf 6,480 sf 35,241 sf
Minimum open space (percent of zoning lot)	0	30%
Open Space Bonus	10 sf/1 sf of public open space 5 sf/1 sf of open space 3 sf/1 sf of arcade area 1 sf/1 sf of rooftop landscape	7,708 x 10 = 77,080 sf 507 x 5 = 2,535 sf 4,437 x 3 = 13,311 sf 1,306 x 1 = 1,306 Total = 94,232 sf
Lot area 50% right-of-way Max FAR	 3.5 FAR	35,241 sf + 88,102 sf = 123,343 sf
Maximum Height (feet)	25 feet per zoning map 350 feet subject to City Council approval by Resolution	325 feet (350 feet with architectural appurtenances)
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	Will be met

7.5.4.3 Parking

The parking requirement for the Project, based on 170 condo-hotel rooms is 43 stalls. BH plans to provide 67 parking stalls 24 more than required.

7.5.4.4 Loading

The loading requirement based on the 123,343 square feet of floor area for hotel use will be three loading stalls, two full size (12' by 35') and one smaller loading stalls (8.5' by 19'). BH will provide two full size stalls and one smaller loading stall, as required.

7.6 WAIKĪKĪ SPECIAL DISTRICT GUIDELINES

The proposed development will satisfy the objectives and standards of the WSD as follows:

7.6.1 Hawaiian Sense of Place

The Project's overall design will reflect a "Hawaiian Sense of Place" by including a lush tropical landscape in public open spaces, a water feature, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places.

The Project design includes landscaped yards and public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

Exterior Building Colors. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

The building façade will be varied with a high degree of articulation. The overall exterior and interior design and finish materials will be selected to convey a contemporary tropical Hawaiian feel. From an aerial view, the high level of articulation will include a curved building face. HB will also provide lanais for each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. At the pedestrian level specifically, native patterns are planned for the façade of the building on all sides, and stone walls, wooden benches, stone walkways, and other natural elements in all areas of public interaction further promote a "Hawaiian Sense of Place".

7.6.2 Building Design

"The following guidelines are intended to promote building design which responds to Hawai'i 's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikīkī and impart a greater sense of Hawaiiana in the built environment."

As noted, the following guidelines, including the mauka/makai orientation are intended to promote a design that responds to climate, relates to human scale and preserves significant public views (emphasis added).

Significant public views are described in the "Waikīkī Special District Design Guidelines" as follows:

"...Significant views are identified in Section 9.80-3(a) of the LUO and include:

- *Views of Diamond Head from as many vantage points as possible, but especially from Ala Wai Boulevard and the Punchbowl Lookout.*
- *Continuous views of the ocean along Kalākaua Avenue, from Kūhiō Beach to Kapahulu Avenue.*
- *Intermittent ocean views from Kālia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard.*
- *Mauka views from the following streets mauka of Kūhiō Avenue: Nohonani and Nāhua Streets; Kānekapolei and Kaiʻolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade.*
- *Views of Ala Wai Yacht Harbor from Magic Island Park."*

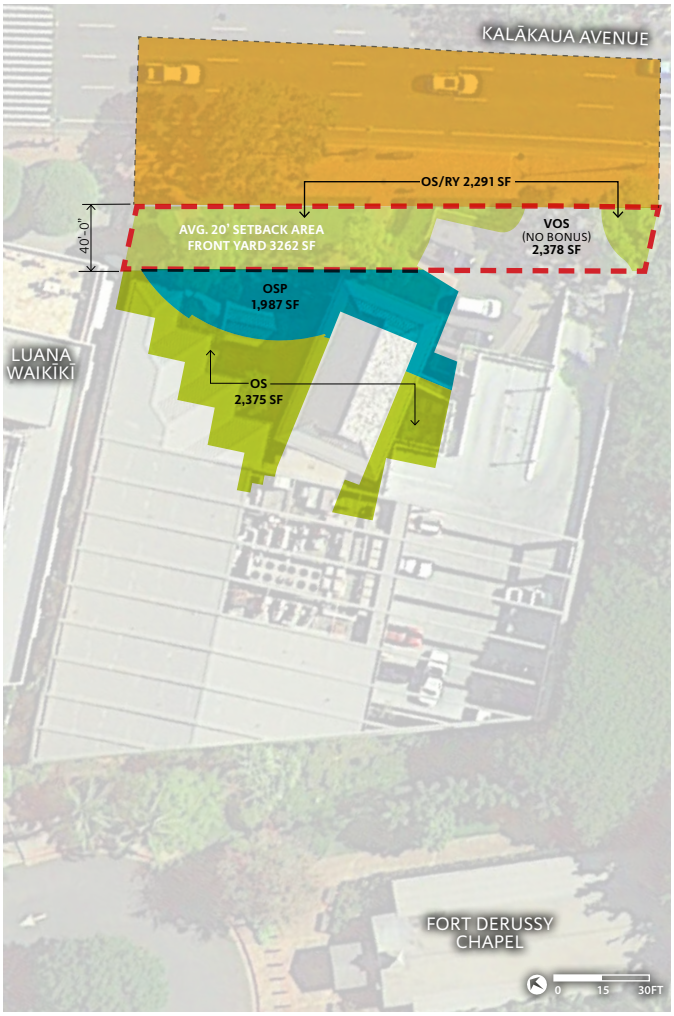
The Project will not affect any of these significant public views described here and in Section 21-9.80-3(a) of the Land Use Ordinance.

The Project responds to Hawaiʻi 's climate with lanais and a swimming pool and deck to allow visitors to enjoy the tropical climate of Hawaiʻi and provides a public open space at the ground level to further experience the tropical climate.

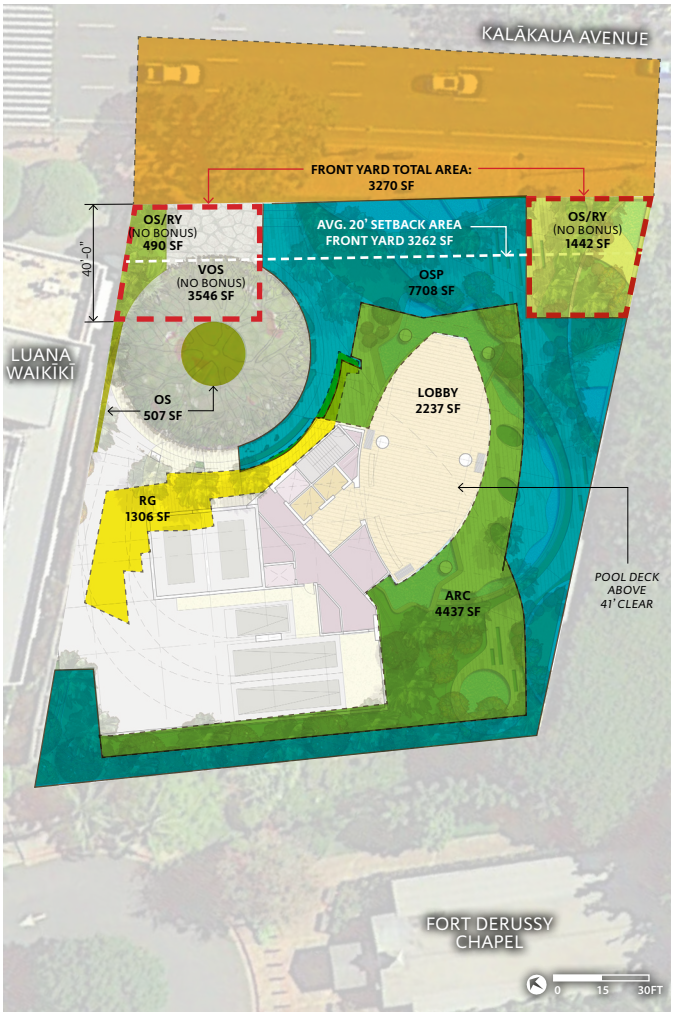
7.6.2.1 Orientation & Form

As noted in Section 7.6.2 above, since the Project will not affect the significant public views that the mauka/makai orientation was intended to protect, there is some flexibility afforded in the building orientation. This building is, however, angled in a mauka/makai orientation.

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.



Existing Open Space



Proposed Open Space

7.6.2.2 Open Space

The Project, through its landscaped public open space and setback areas and its landscaped yard areas will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site.

7.6.2.3 Parking Facilities

The mechanical parking podium will be located above the ground floor, but will include two parking lifts that will carry and maneuver cars into the four mechanical parking levels. The Project requires 43 parking stalls but will contain approximately 67 parking stalls, which is 24 stalls in excess of the 43 parking stalls required under the LUO for hotel. This location is noted in the "Waikīkī Special District Design Guidelines" as appropriate for parking in a structure.

7.6.2.4 Articulation, Scale, Material Color

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

BH will be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment.

A variety of building materials will be employed, including natural materials and textured concrete and plaster. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

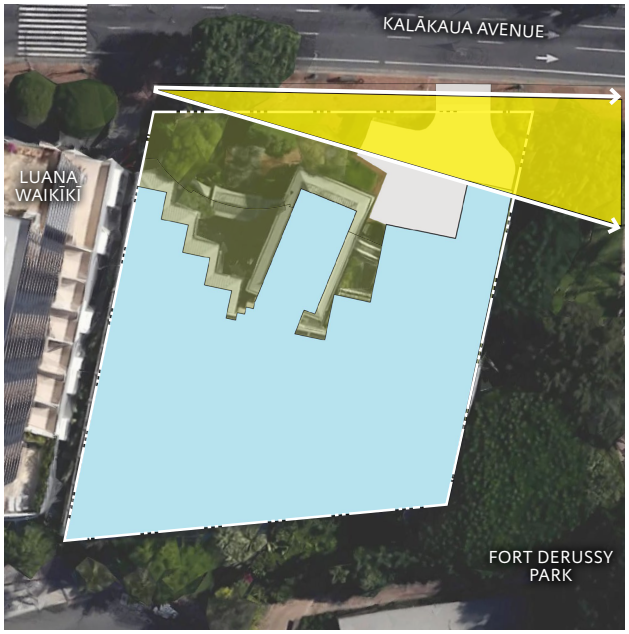
These elements of articulation, material and color are in keeping with the recommendation of the "Waikīkī Special District Design Guidelines"

7.6.2.5 Entries, Lobbies & Arcades

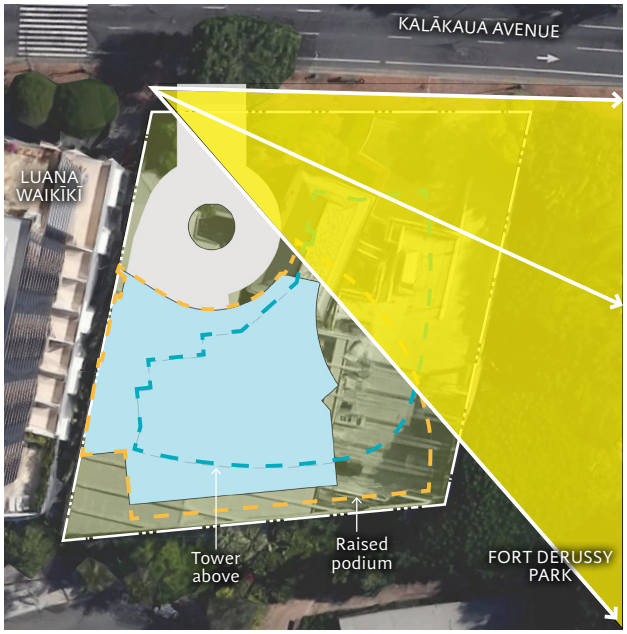
HB plans open landscaped entry areas leading visitors into the Project at the porte cochere entry on Kalākaua Avenue. Additional landscaped public open space and landscaped yard areas will provide inviting gathering places within the Project. The Project will have an open condo-hotel lobby.

7.6.2.6 Visual Links

This building is not located between a public space and a shoreline, mountain view, open space or landmark, and is not subject to the visual link criteria. However, BH does plan to have a partially open condo hotel lobby at their porte cochere on Kalākaua Avenue.

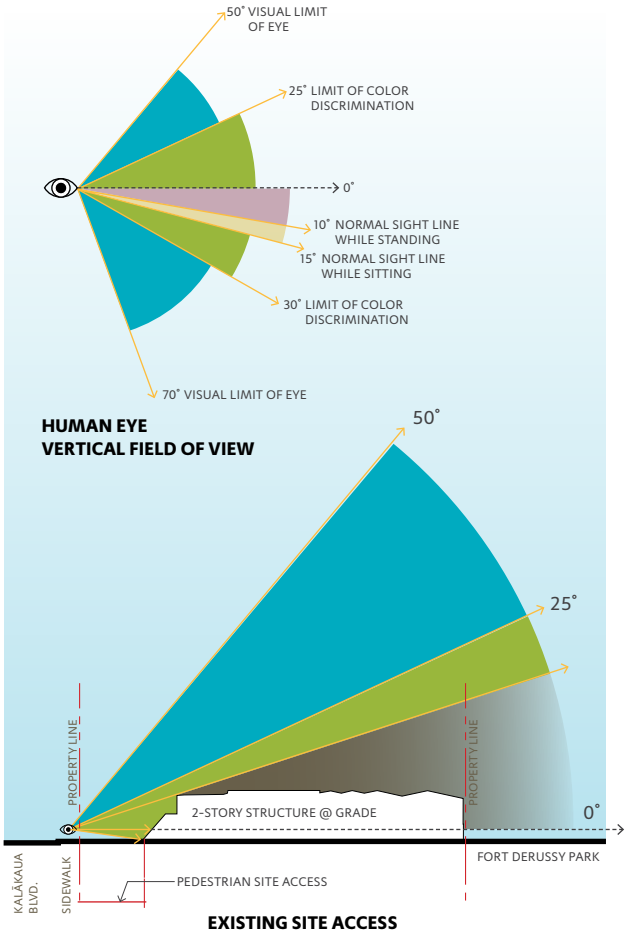


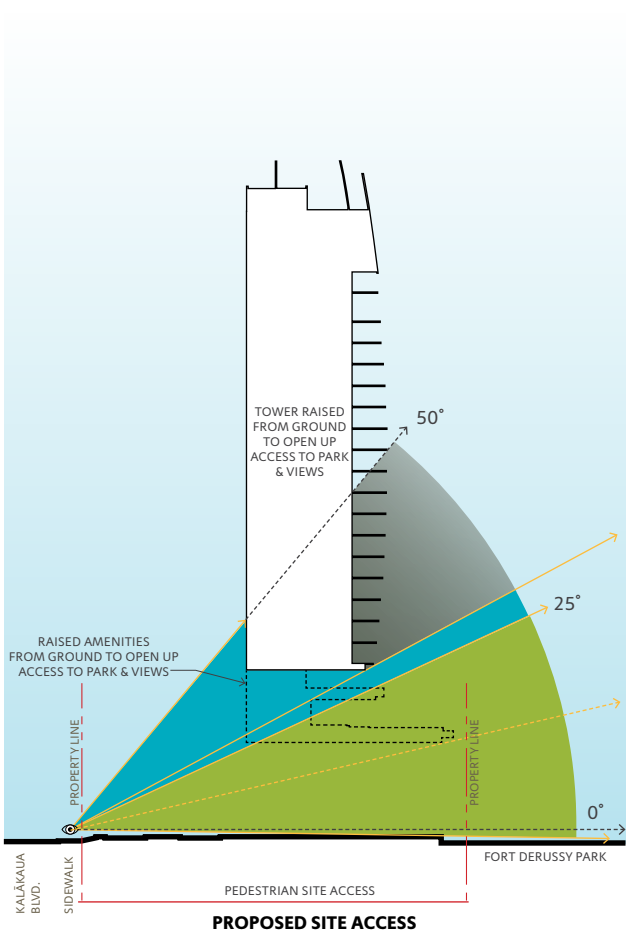
Existing



Proposed

BUILDING FOOTPRINT DRIVEWAY VIEW PLANES





7.6.2.7 Features in Required Yards

The following features will enhance the open space and improve the appearance of the streetscape:

- A porte cochere is planned along Kalākaua Avenue, and is set back onto the property.
- Lei stands are not proposed at this time.
- Walls & Fences – Fences and/or walls may be used to secure the perimeter of the Project in the evenings, respecting the front yard setback. The landscape elements will also have walls less than 36 inches in height to provide separation from walkways, including seat walls as a rest stop and/or gathering place for pedestrians.
- Shading Devices - Shading devices such as roof overhangs and eaves are proposed, and may encroach into the required yards no more than the amount permitted by the LUO.
- Outdoor Dining - Outdoor dining facilities are being considered and will meet WSD criteria. Vending carts are not proposed at this time.
- Rooftop Design and Equipment Screening - Rooftop machinery, equipment and utility installations will not exceed the established height limit and will be screened from view.

7.6.2.8 Roof Design and Equipment Screening

Rooftop machinery, equipment and utility installations (if any) will be screened from view (as required by the LUO) to prevent undesirable views and vistas from surrounding buildings, as well as from Punchbowl and Diamond Head.

7.6.2.9 Landscaping

As indicated in the preliminary concept plan, landscaping will be provided to improve the streetscape along Kalākaua Avenue and enhance the pedestrian experience for visitors and local residents alike. There will be significant public open space on the Project to maintain and enhance the inviting, park-like setting. The landscaping will promote and create the image for Waikīkī as a tropical resort destination.

7.6.2.10 Water Features and Artwork

A water feature will be provided within the Property.

7.6.2.11 Sidewalk & Paving

Public walkways will be constructed to match the existing sidewalks on Kalākaua Avenue, or will be upgraded to a design acceptable to the City's Department of Facility Maintenance.

7.6.2.12 Signage

BH has not designed the proposed signs for the Project; however, the proposed signs will meet LUO requirements, possibly through development of a Sign Master Plan to be submitted as a Zoning Adjustment. If illuminated, the lighting will comply with the WSD guidelines.

7.6.2.13 Lighting

Lighting for the Project will be utilized to contribute to public safety and to enhance the nighttime ambiance of the open space areas on the property. Outdoor lighting will be subdued or shielded so as not to provide inappropriate or excessive spillage onto surrounding properties or public rights-of-way.

7.6.3 Urban Design Controls

7.6.3.1 Waikīkī Gateways and Fort DeRussy

The Project is located about 640 feet from the Kalākaua Avenue/Ala Moana Boulevard gateway and will not affect this important gateway to Waikīkī.

7.6.3.2 Major Streets

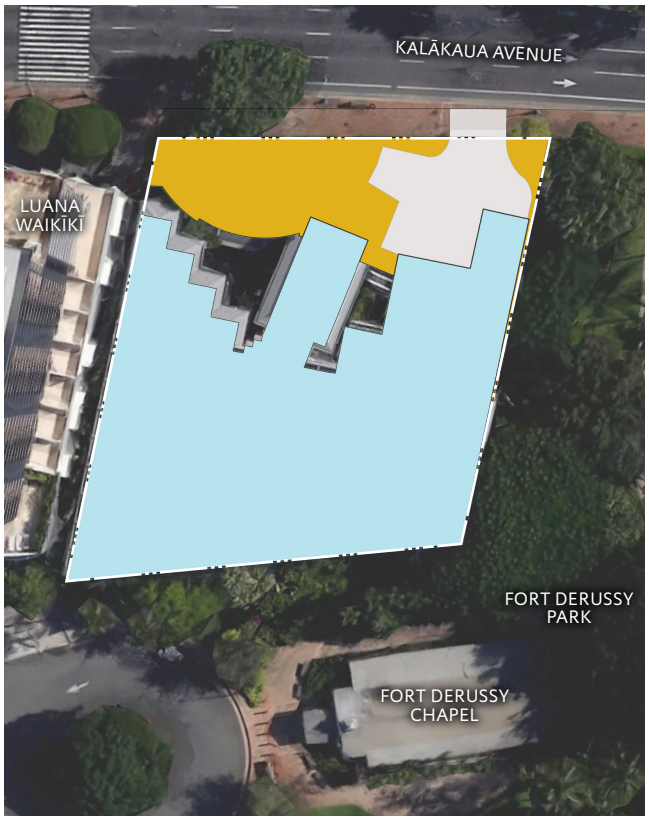
The Project site abuts Kalākaua Avenue, one of the Major Streets identified in the WSD Design Guidelines. Due to the increase in public open space and landscape within the required yards, the proposed design will improve pedestrian flow and offer visual relief for motorists. Landscaping and trees will be located to accentuate the tropical outdoor experience.

7.6.3.3 Waikīkī Promenade

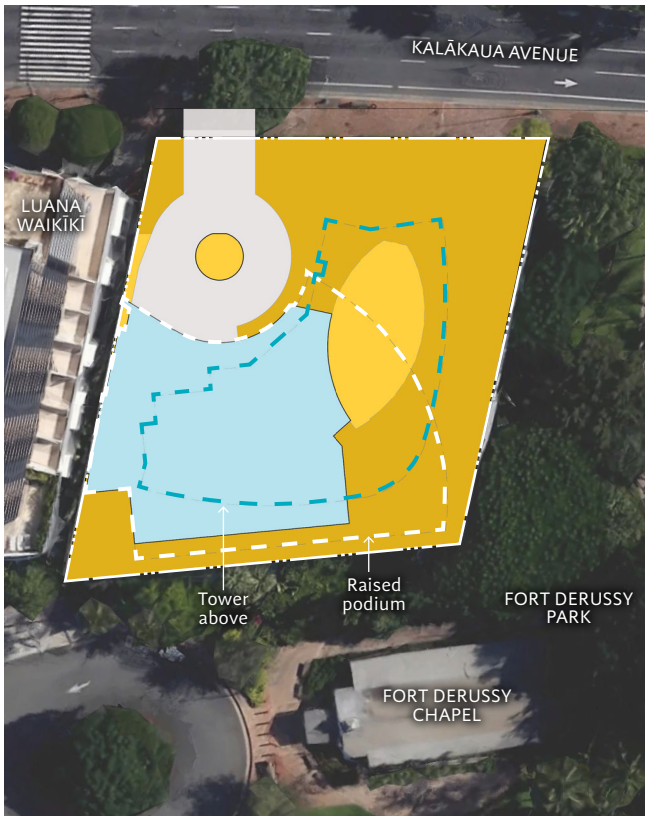
The Project is not situated along the Waikīkī Promenade and will not affect the Waikīkī Promenade.

7.6.3.4 Coastal Height Setback

The Project is not located near the shoreline; therefore it is not subject to a coastal height setback.



KYO-YA EXISTING FOOTPRINT



PARK KALIA PROPOSED FOOTPRINT

BUILDING FOOTPRINT DRIVEWAY PUBLIC GROUND ACCESS

0 20 40FT

7.6.3.5 Mini Parks

A large public open space on the Project site will be maintained by the condo hotel operator or association.

7.6.3.6 Significant Public Views

As mentioned earlier, the Project will not impact the significant views that are identified in the WSD Design Guidelines and Section 9.80-3(a) of the LUO.

7.6.3.7 Public Pedestrian Access

The Project will not affect existing public pedestrian access in Waikīkī. Due to the size, shape and location of the property, new public pedestrian access is not needed or warranted.

7.6.3.8 Historic Structures, Significant Sites and Landmarks

The existing structures on the Project Site are only about 25 years old and they are not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey Initial Report ("AIS") and Cultural Impact Assessment ("CIA") for One Waikīkī were conducted by Cultural Surveys Hawai'i , Inc. in July, 2015. The Archaeological Inventory for One Waikīkī is included in its Appendix E. The Cultural Impact Assessment is included in its entirety in Appendix G.

7.7 LIST OF NECESSARY APPROVALS

The Project will require a "Finding of No Significant Impact" (FONSI) from the Department of Planning and Permitting. The following is a preliminary list of the anticipated permits, approvals and reviews that are required prior to construction of the Project.

7.7.1 City and County of Honolulu

- A WSD Permit, Major application will be submitted for review and approval by the City's DPP along with a request to modify the allowable height of the building to 325 feet (350 feet with architectural appurtenances), which will need to be processed by DPP and approved by the City Council.
- Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.

7.7.2 State of Hawai'i

- Construction Noise Permit application will be submitted for review and approval by the State Department of Health.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan, if required, will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.

8. PROBABLE IMPACTS

8.1 IMPACTS OF THE NATURAL OR HUMAN ENVIRONMENT ON THE PROJECT

Neither the natural nor human environment is anticipated to have an impact on the Project.

8.2 DIRECT AND INDIRECT IMPACTS

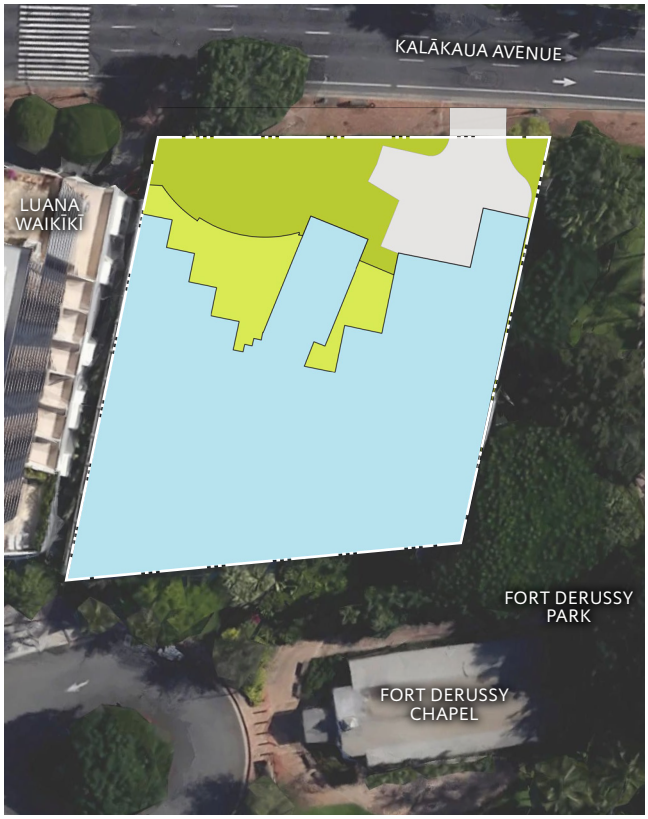
The Traffic Impact Report (Appendix D) noted that: "The proposed Park Kālia - Waikīkī development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kālia - Waikīkī development is not expected to have a significant impact on traffic operations in the vicinity."

A short term indirect impact will be increased revenues for construction-related industries providing services and supplies to contractors involved in the construction of the Project.

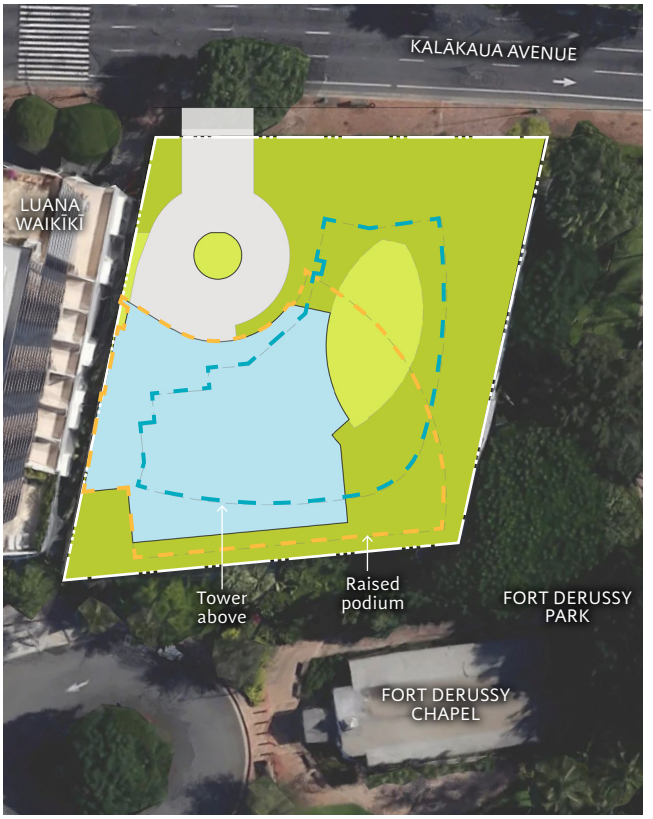
8.3 GENERAL PUBLIC BENEFITS

The Project offers a multitude of public benefits as discussed below:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.
- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.
- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.
- The Project will provide a greater average setback along Kalākaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.
- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalākaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.
- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.



KYO-YA EXISTING FOOTPRINT



PARK KALIA PROPOSED FOOTPRINT

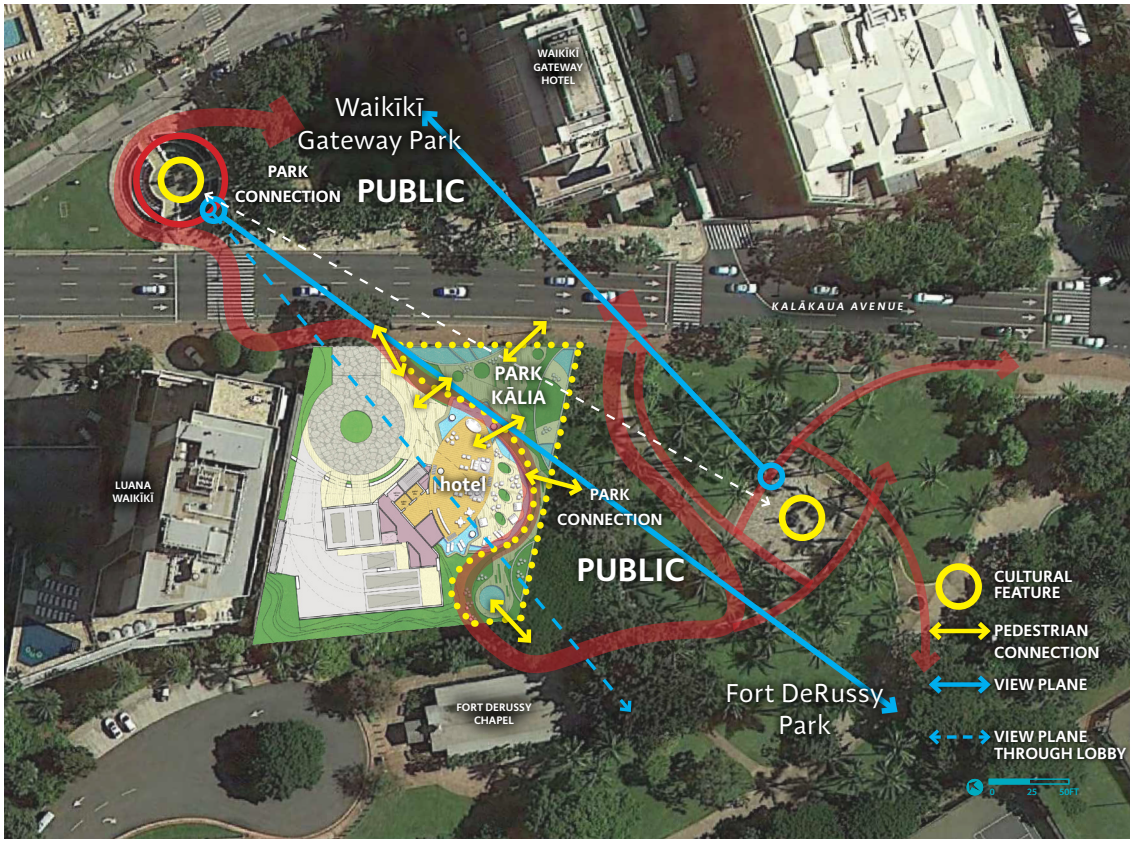
BUILDING FOOTPRINT | DRIVEWAY | OPEN SPACE, PUBLIC ACCESS | OPEN SPACE, VISUAL

0 20 40FT

- The hotel units lost in Waikīkī since 2003, include the ʻohana Waikīkī Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikīkī Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
- The proposed Princess Kaʻiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.
- The most recent redevelopment project planned at the Waikīkī Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
- The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaʻiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.
- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.
- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.
  - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
  - The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
  - The Project will reduce material waste through effective construction and operational recycling programs.
- Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.
  - The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
  - Coordinated off-site improvements to neighboring parks and open spaces, King Kalākaua Park and Fort DeRussy, to create greater connectivity.
  - Commitment to providing an on-site cultural historian to provide insight and educate park users.
  - Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.
  - Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing.

PARK KĀLIA
WAIKĪKĪ
KŪHIO AVENUE
WAIKĪKĪ GATEWAY HOTEL
KALĀKAUA AVENUE
LUANA WAIKĪKĪ
BANK OF HAWAII
FORT DERUSSY CHAPEL
U.S. POST OFFICE
Fort DeRussy
19.9 Ac (866,875 SF)
SARATOGA ROAD
TRUMP TOWER
HALE KOA HOTEL
CULTURAL / INTERPRETIVE SPACES
EXPANDED CULTURAL / INTERPRETIVE PATHS
CULTURAL POINTS OF INTEREST


WAIKĪKĪ GATEWAY HOTEL
Waikīkī Gateway Park
PARK CONNECTION
PUBLIC
KALĀKAUA AVENUE
PARK KĀLIA
hotel
LUANA WAIKĪKĪ
PARK CONNECTION
PUBLIC
FORT DERUSSY CHAPEL
Fort DeRussy Park
CULTURAL FEATURE
PEDESTRIAN CONNECTION
VIEW PLANE
VIEW PLANE THROUGH LOBBY

8.4 DEMOGRAPHIC IMPACTS

8.4.1 Residential Population

The Project, when completed, may have a slight impact on the number of permanent residents in Waikīkī, based on the findings with other condo-hotel units which average a resident occupancy of between 5% and 20%. Based on this percentage, the 170 condo-hotel units could result in an increase in residents in Waikīkī of about 9 to 34. However, residents that purchase condo-hotels to occupy and not place back with the hotel operator, normally occupy the units on an occasional basis and not as full time residents. As an example, the Trump Tower Waikīkī has 462 units, but only three of the units are occupied by full time residents.

8.4.2 Visitor Population

The Project will increase the visitor population potential of Waikki with the development of 170 condo-hotel rooms, of which approximately 85% are anticipated to be in a hotel rental program. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, right on Kalākaua Avenue, one of the major thoroughfares in Waikīkī.

8.4.3 Character or Culture of the Neighborhood

The character and culture of the surrounding neighborhood will not change, as the existing development within the surrounding neighborhood with its focus on hotel and dining is similar to the development being proposed for the Project Site. The revitalization of this property could provide an incentive for neighboring properties to also redevelop and revitalize their properties with a needed upgrading of facilities in this part of Waikīkī.

8.4.4 Displacement of Tenants

There will be no displacement of tenants as the proposed Kyo-ya Restaurant closed in 2007.

8.5 HOUSING IMPACTS

The Project, when completed, may have a slight impact on the number of permanent residents in Waikīkī, based on the findings with other condo-hotel units which average a resident occupancy of between 5% and 20%. Based on this percentage, the 170 condo-hotel units could result in an increase in residents in Waikīkī of about 9 to 34. However, residents that purchase condo-hotels to occupy and not place back with the hotel operator, normally occupy the units on an occasional basis and not as full time residents. As an example, the Trump Tower Waikīkī has 462 units, but only three of the units are occupied by full time residents.

8.6 PUBLIC SERVICES

8.6.1 Access and Transportation

The "Traffic Impact Report Park Kālia-Waikīkī" ("Traffic Impact Report") dated November 2015 was prepared by Wilson Okamoto Corporation and is provided in its entirety in Appendix D.

8.6.1.1 Area Roadway System

The Traffic Impact Report describes the area roadway system as follows:

"Kalākaua Avenue is a one-way (eastbound) roadway that with Ala Wai Boulevard forms a couplet system providing east-west access through Waikīkī. Southwest of the project site, Kalākaua Avenue intersects "Olʻohana Street. At this signalized T-intersection, the eastbound approach of Kalākaua Avenue has four through lanes. "Olʻohana Street is a two-lane, one-way (southbound) connector roadway between Ala Wai Boulevard and Kalākaua Avenue. At the intersection with Kalākaua Avenue, "Olʻohana Street has two exclusive left-turn lanes.

"East of the intersection with "Olʻohana Street, Kalākaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalākaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way (northbound) connector roadway oriented in the north-south direction between Ala Wai Boulevard and Kalākaua Avenue while Saratoga Road is a predominately three-lane, two-way roadway also oriented in the north-south direction between Kalākaua Avenue and Kālia Road. At the intersection with Kalākaua Avenue, Saratoga Road has one northbound through lane and two exclusive right-turn lanes. It should be noted that there are posted signs at the intersection indicating northbound right-turn movements are prohibited on red.

"North of the intersection with Kalākaua Avenue, Kalaimoku Street intersects Kūhiō Avenue. At this signalized intersection, the northbound approach of Kalaimoku Street has two lanes that serve all traffic movements. Kūhiō Avenue is a predominantly four-lane, two-way roadway that runs parallel to Kalākaua Avenue and Ala Wai Boulevard. At the intersection with Kalaimoku Street, the eastbound approach of Kūhiō Avenue has a shared left-turn and through lane, and one through lane while the westbound approach has one through lane and a shared through and right-turn lane.

"West of the intersection with Kalaimoku Street, Kūhiō Avenue intersects "Olʻohana Street. At this signalized intersection, the eastbound approach of Kūhiō

Avenue has one through lane and a shared through and right-turn lane while the westbound approach has an exclusive left-turn lane and one through lane. The "Ol'ohana Street approach of this intersection has two southbound lanes that serve all traffic movements."

8.6.1.2 Traffic Impact Analysis

The Traffic Impact Report summarizes the traffic impact analysis as follows:

"Under Year 2018 with project conditions, traffic operations are expected to remain similar to without project conditions despite the addition of site-generated vehicles to the surrounding roadways. Along Kalākaua Avenue, the eastbound approaches of the intersection with "Ol'ohana Street and Saratoga Road/Kalaimoku Street are expected to continue operating at LOS "B" during both peak periods while the "Ol'ohana Street and Saratoga Road approaches of those intersections are expected to continue operating at LOS "B" during both peak periods. Along Kūhiō Avenue, the eastbound approaches of the intersections with Kalaimoku Street and 'Ol'ohana Street are expected to continue operating at LOS "C" or better during both peak periods while the westbound approaches are expected to continue operating at LOS "B' or better during both peak periods. The Kalaimoku Street and 'Ol'ohana Street approaches of those intersections are expected to continue operating at LOS "C" during both peak periods."

8.6.1.3 Recommendations

Although traffic operations (level of service) with the Project in 2018 are expected to remain similar to conditions without the Project in 2018, the Traffic Impact Report recommends the following traffic mitigation measures to improve traffic circulation in the immediate surrounding area:

"1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at the project driveway to avoid or minimize vehicle encroachments to oncoming traffic lanes."

The applicant will implement these recommended traffic mitigation measures.

The Traffic Impact Report concluded that:

"The proposed Park Kālia - Waikīkī development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kālia - Waikīkī development is not expected to have a significant impact on traffic operations in the vicinity."

8.6.2 Water

Wilson Okamoto Corporation prepared a "Due Diligence Report for Park Kālia-Waikīkī" on the existing infrastructure and impact of the Project, including impact to the existing municipal water system, is included in its entirety in Appendix I and described in part as follows:

"Water supply for the project will be provided through the municipal water system of the City and County of Honolulu's Board of Water Supply (BWS).

.....

The BWS water system in the vicinity of the project site consists of a system of distribution mains and fire hydrants. BWS facility map indicates an existing 8-inch waterline that runs within the makai side of Kalākaua Ave roadway. Based on BWS facility maps, the closest existing fire hydrant to the project site is located on the makai side of Kalākaua Ave near the intersection of Kalākaua Ave and Kalaimoku Street (See Appendix B - Water System Facility Map).

A request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on June 16, 2015 (See Appendix B – Request For Flow and Pressure Data Letter). A response letter to the request for water availability for the project and pressure information for fire hydrants was received on June 29, 2015. The letter stated that the existing water system cannot provide adequate fire protection to the proposed development. The system is inadequate as the distance from the development to the nearest existing fire hydrant (approximately 295 linear feet) exceeds the standard 125 linear feet required for a high-rise hotel development. BWS will require the developer to install a fire hydrant on Kalākaua Ave within 125 linear feet of the development. During the design process, construction drawings should be submitted to BWS for review approval and on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. BWS will require the implementation of water conservation measures.....

.....

BWS records show an existing 2-inch copper lateral and 2-inch water meter servicing Parcel 1 and an 8-inch ductile iron main and 8-inch DC meter servicing Parcel 4.

.....

Average Daily Water Demand:

- *Number Of Units – 170*
- *Commercial/Residential Mix Use – 20,353 sf*
- *Average Daily Demand For Resort – 350 gallons per unit per day*
- *Average Daily Demand For Commercial/Residential Use – 120 gals per 1,000 sf per day*

Based on the above criteria the estimated average daily water demand for the project is calculated as:

170 units x 350 gallons per unit per day = 59,500 gallons per day
20,353 sf x 120 gallons per 1,000 sf per day = 2,443 gallons per day
Total average daily water demand = 61,943 gallons per day"

8.6.3 Wastewater

Wilson Okamoto Corporation prepared a "Due Diligence Report for Park Kālia-Waikīkī" on the existing infrastructure and impact of the Project, including impact to the existing municipal wastewater system, is included in its entirety in Appendix H and described in part as follows:

"3. SANITARY SEWER SYSTEM

3.1 Existing Conditions
Information obtained from the City and County of Honolulu GIS map system indicates each parcel has a sewer lateral that connects to an existing 8-inch gravity sewerline that runs within the sidewalk fronting the project site along Kalākaua Avenue. The existing sewer main connects to the Fort DeRussy pump station located along Kalākaua Avenue, north of the project site (See Appendix A for C&C of Honolulu GIS Map of Sewer System in Project Vicinity).

3.2 Connection to the City and County Sewer System
A sewer connection application was submitted to the City and County of Honolulu,

Department of Planning and Permitting, Wastewater Branch in April 2014 (See Appendix A – Sewer Connection Application, submitted April 2014). The City has not provided any preliminary opinion regarding the connection application. Correspondence between the City and Wilson Okamoto Corporation has clarified the reason for delay in response (See Appendix A - Email Correspondence 1). In summary, a 2010 consent decree between the City and the EPA required the City to either upgrade the Fort DeRussy wastewater pump station or construct an alternative project that would result in the decommissioning of the station. The City responded to the EPA in August 2014 stating that the requirement to upgrade the wastewater pump station was already completed in 2009. The EPA and DOH have not responded to the City's August 2014 response, therefore, the City is not able to approve new sewer connection applications served by the Fort DeRussy waste water pump station until a response is received.

Since the original connection application was submitted, the project program values and concept has been revised. Inquiry emails were sent to the City on June 24, 2015 for direction on how to update the original values. A response has not been received to date (See Appendix A - Email Correspondence 2). In anticipation of the City requiring the submittal of a new application, a new sewer connection application that included the latest design concept program values was submitted to the City on June 26, 2015 (See Appendix A – Sewer Connection Application, submitted June 2015). WOC inquired with the City in November 2015 to follow up with the status of the sewer connection application review. The City responded the application is still in review at DPP, Environmental Services Department (See Appendix A – Email Correspondence 3).

It is anticipated that the proposed project will utilize one or more of the existing sewer laterals. Locations of the existing laterals and its ability to be utilized in the proposed project should be verified during the design process.

3.3 Design Criteria and Facility Charges

Average daily sanitary sewer rates are based on the City and County of Honolulu, Design Standards of the Department of Wastewater Management. The quantity of wastewater was determined as follows:

Flow Criteria:
- Based on 170 units and 2.8 capita per unit = 476 capita
- Plus, Commercial Use Area of 0.47 acre and 300 capita per acre = 141 capita
- Average per capita flow = 80 gallons per day

Based on the above criteria the estimated average daily flow for the project is calculated as:
617 capita x 80 gallons per day = 49,360 gallons per day"

8.6.4 Drainage and Storm Water Quality

Wilson Okamoto Corporation prepared a "Due Diligence Report for Park Kālia-Waikīkī" on the existing infrastructure and impact of the Project, including impact to the existing municipal drainage system and storm water quality, is included in its entirety in Appendix H and described in part as follows:

"5.1 Background
Review of the site grading, flooding, and storm drainage system is based on site reconnaissance and City and County of Honolulu GIS Map Data.

5.2 Existing Conditions
The site is mainly occupied by the closed Kyo-ya restaurant building and two-level parking garage. During site reconnaissance, it was observed that on the Maluhia Road, Fort DeRussy Park, and Luana Waikīkī Hotel faces of the property, the wall of the existing building straddles the property line and on the Kalākaua Ave. frontage, there is a high point at the entrance to the two-level parking garage and the site generally slopes towards the existing sidewalk. It was observed that a portion of the existing sidewalk along this frontage is depressed due to uplifting of the sidewalk by the root system of an existing tree adjacent to the curb line along Kalākaua Ave. A series of trench drains were installed in the depressed areas to mitigate the ponding in the low areas. The trench drain outlet location was undetermined. A portion of the existing gutter adjacent to the bike lane is also uplifting due to the root system causing ponding in the gutter. No mitigation measures were observed for the ponding within the gutter (See Appendix C - Site Reconnaissance Photos).

Along Kalākaua Avenue there is an existing catch basin located approximately in line with the boundary between Parcels 1 and 4. The catch basin is connected to the City underground drainage system that discharges into the Ala Wai Canal at the mauka end of Kalaimoku Street (See Figure 5 – Existing Drainage System Map).

Based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), Community Panel 15003C0366G dated January 19, 2011, the project site is located in the Zone AO (Depth 2') (See Figure 4 – FIRM Map). Zone AO (Depth 2') is the Special Flood Hazard Area defined as "Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined".

5.3 Proposed Improvements
Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation for any proposed building should be established at a

minimum of 2-feet above the highest existing grades on-site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

Grading of the proposed project site should convey storm runoff offsite. Besides adhering to the flood zone requirements another factor that could dictate proposed elevations of the site is if the sidewalk fronting the site is improved to raise the depressed area to eliminate the existing ponding condition. If the sidewalk is improved, incidental work such as raising the covers of the various utility boxes within the sidewalk to finish grade should be completed. Other modifications to improve the area would be reconstruction of the existing gutter and landscaping measures to contain the existing tree root system to prevent uplifting of the surrounding area. The City should be consulted during the design process to help determine the extent of improvements along the sidewalk.

Due to the project site being less than one acre in size and not classified in the required criteria classification, storm water quality management practices may not be required for the project. The City should be consulted and confirmed on this at the time of final design for the project."

8.6.5 Solid Waste Disposal

The DES, Refuse Collection and Disposal Division manages solid waste disposal facilities for the Island of Oʻahu. There are two City solid waste disposal facilities: the H-POWER refuse to energy plant at Campbell Industrial Park and Waimānalo Gulch Landfill. PVT Land Company operates a privately owned and operated, licensed, solid waste facility for recovery of recyclable materials and disposal of construction and demolition materials. The PVT Landfill accepts wastes on a pre-arranged basis from haulers and contractors registered with them. Waste loads are screened with recyclable materials removed for sale/reuse and the remaining wastes land filled. The capacity of the PVT Landfill as currently licensed is about 20 years, with expansion areas available.

The solid waste generated by the proposed development will be collected by a private firm and will not impact municipal refuse services.

8.6.6 Public Schools

The Project does have a slight potential to generate permanent school age children since it is anticipated that a small percentage of the units may not be in a hotel rental. However, based on existing condo hotels in Waikīkī, these units are often used as vacation homes by their owners and not as primary residences.

This Project with about 170 condo-hotel units is projected to have about 85% of the condo hotel units in a hotel rental program, with a great majority of the remaining 15% of the condo hotel units used as part-time residences or personal vacation homes. Thus it is anticipated that there may be up to 26 units which will not be in a hotel rental program, but these 26 units will not all be permanent residences, as many will be second homes (vacation homes), retirement homes, or rented as vacation units outside of the hotel rental program, as occurs in other condo hotels. Even using the 15%, however, there will not be a significant increase on the school system. Without eliminating any of the units as second homes, retirement homes or private vacation rentals, the 26 permanent residence unit increase would generate 4 students in grades K through 12 (0.12 x 26) based on Department of Education standards for Waikīkī. This will not have a significant impact on the schools in the area, as the schools have sufficient space to accommodate any anticipated increase in students generated by the Project.

8.6.7 Parks

Fort DeRussy Park is located adjacent to the Project Site. The beach at Fort DeRussy is located approximately 0.35 miles south of the Project Site.

8.6.8 Police

Initial response will be provided by patrol officers assigned to District 6, which operates out of the Police Substation located at 2405 Kalākaua Avenue next to Kūhiō Beach, is approximately 1.0 miles away from the Project Site. The administrative offices for District 6 operate out of the Alapai Headquarters.

8.6.9 Fire

The Pāwa‘a Fire Station #7 with its engine and ladder company will provide primary response in case of an emergency. The Pāwa‘a Fire Station is located approximately a 0.9 miles away and will be able to quickly respond to a fire on the Project Site by traveling on Kapi‘olani Boulevard and Kalākaua Avenue.

8.6.10 Utilities

8.6.10.1 Electricity

HECO has existing power lines serving this area including the Project Site and BH will coordinate the timing of the development with HECO to ensure that the power lines will be adequate to support the Project and that HECO facilities are not be adversely impacted.

BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible.

8.6.10.2 Telephone

Hawaiian Telcom currently serves the Project Site and has existing utility service lines in the area. It is expected that these existing lines will continue to be used to service the Project.

8.6.10.3 Cable/Satellite Television and High-speed Internet Access

Cable/ television and high-speed internet access service is currently provided to the neighboring Luana Waikīkī property. BH will coordinate this serve with the provider.

8.7 ENVIRONMENTAL IMPACTS

8.7.1 Environmentally Sensitive Area

Since there are no endangered flora and one recognized bird, the white tern, considered a threatened species, and no other environmentally sensitive features on the Project Site, the Project Site, except for potential burials, is not considered to be environmentally sensitive.

8.7.2 Historical and Archaeological Resources

The Project Site is not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey titled "AIS Initial Report for One Waikīkī, the Former Kyo-Ya Restaurant Property, Waikīkī, Honolulu (Kona), Oʻahu" was prepared by Cultural Surveys Hawaiʻi , Inc. in July 2015. Please refer to Appendix E for complete report.

The archaeological inventory survey Section 2 "Summary and Interpretation" section states as follows:

"We started on a 6 m (20 foot long) excavation. This needed to be cut short by about a 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive collapse due to buried unstable concrete rubble. We regard the loss of this portion of the trench as not of any consequence as were able to observe the stratigraphy in the rest of the test excavation down to the water table. We dig these particularly long trenches in part because we assume we may not be able to see the stratigraphy in the entire length. We got a good view of an expanse of stratigraphy

for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches) which is what we sought.

"Several discrete episodes of fill deposits were observed which is no surprise. These fill episodes, designated Strata Ia through Ic, extend to a depth of 50 cm below surface.

"Strata IIa and IIb appeared mechanically altered and both strata lacked signatures of Native Hawaiian occupation (no sea shells, bones or other food scraps, charcoal staining fire cracked rocks, or lithic debitage from stone tool manufacture).

"Stratum III is relatively undisturbed native Jaucas sand which again lacked any sea shells, bones, charcoal staining fire cracked rocks, lithic debitage from stone tool manufacture.

"We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

8.7.3 Natural Resources

8.7.3.1 Water Resources

There are no potable or surface fresh water resources on the Project Site. The Project Site is located in Waikīkī, on the makai side of Kalākaua Avenue, about 1,800 feet from the shoreline. The waters off the south shore of O`ahu, including Waikīkī, are designated Class A by the State DOH. Rules of the State DOH indicate that the purpose of the Class A designation is to protect these waters for recreational use and aesthetic enjoyment. Because there are no fresh water features on the sites, the Project is not anticipated to adversely impact these resources.

8.7.3.2 Flood Plain Management

Wilson Okamoto Corporation prepared a "Due Diligence Report for Park Kālia-Waikīkī" on the existing infrastructure and impact of the Project, including information on the Flood Insurance Rate Map, is included in its entirety in Appendix H and described in part as follows:

"Based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), Community Panel 15003C0366G dated January 19, 2011, the project site is located in the Zone AO (Depth 2') (See Figure 4 – FIRM Map). Zone AO (Depth 2') is the Special Flood Hazard Area defined as 'Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined'".

8.7.3.3 Wetlands Protection

The development site is an urbanized lot that contains no wetlands.

8.7.3.4 Coastal Zone Management

The Project Site is within the coastal zone management area, but not within the City's Special Management Area. As such, a Special Management Area Use Permit will not be required, and the Project is not subject to permit requirements under Chapter 25, Revised Ordinances of Honolulu. Section 8.8 of this FEA provides a detailed review of Coastal Zone Management review criteria.

8.7.3.5 Unique Natural Features

The development site is level with soil suitable to support urban development as can be seen from other high rise structures on nearby lots. There are no unique features such as sand dunes or sloped areas where erosion would be a concern.

8.7.3.6 Sole Source Aquifers

There is no designated "sole source aquifer" within the vicinity of the Project Site. The location of our development falls within the Nu'uanu aquifer system that has a resource of 15 million gallons per day.

8.7.3.7 Wild and Scenic Rivers Act – Federal

According to our discussion with staff at the Federal Commission on Water Resources there are no wild or scenic rivers designated in the State of Hawai'i .

8.7.3.8 Agricultural Lands and Federal Farmland Protection Policy

The development site is in an urban area where its use will not impact agricultural lands or lands with the potential for agricultural use. It is zoned Resort Mixed Use Precinct in the Waikīkī Special District.

8.7.3.9 Open Space

The Project Site has been developed with limited open space, primarily front yard. It is situated in an urbanized and developed area and redevelopment of this site will not affect any important public open space features in the area.

8.7.3.10 Topography and Soils

The subject site is relatively flat with ground elevations ranging between +5 feet to +7 feet mean sea level (msl).

The U.S. Department of Agriculture Soil Conservation Service Soil Survey Report for the Island of Oʻahu classifies the soils for this area as Fill Land. This land type consists of areas filled with material from dredging, excavation from adjacent uplands, garbage and bagasse and slurry from sugar mills. The areas are on the islands of Kauai, Maui and Oʻahu.

Fill land, mixed (FL) – This land type 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. Included in mapping were a few areas that have been excavated.

This soil type is used for urban development including airports, housing areas and industrial facilities.

8.7.3.12 Noise (Acoustical) – Short Term

Y. Ebisu & Associates has prepared the "Acoustical Study for the One Waikīkī Project, Waikīkī, Oʻahu, Hawaiʻi " for the Project ("Acoustical Study") dated July 2015. The Acoustical Study in its entirety is provided in Appendix B.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential short-term noise impacts from the Project which states in part as follows:

"Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities, are located at the neighboring Aqua Luana Waikīkī Hotel and at the Fort DeRussy Chapel. Predicted construction noise levels during demolition and site preparation phase of the work on the project site ranged from 53 to 95 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the Aqua Luana Waikīkī Hotel west of the project site during the demolition and site preparation work, where buffer distances are relatively small (in the order of 15 to 50 feet). On the makai (south) side of the project site where the Fort DeRussy Chapel is located, construction noise levels during demolition and site preparation are predicted to range from 56 to 86 dBA. Adverse impacts from construction noise are not expected to be in the 'public health and welfare' category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site."

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of short-term noise impacts and mitigation measures for the Project that is stated in part as follows:

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

Most structures are well over 70 feet from the construction site and most resort units are air conditioned. The Fort DeRussy Chapel and the Luana Waikīkī Hotel are the two exceptions. The Fort DeRussy Chapel is located about 55 feet away, however, their scheduled of events noted Protestant Services on Sunday morning at 9:00 am; Catholic Services on Saturday evening at 5:00 pm and "Chapel On the Beach" beach side of the Hale Koa Hotel at 6:00 pm. These services except for the 5:00 pm Catholic Services on Saturday fall outside of the typical construction hours allowed by the State. The Applicant will instruct contractors to voluntarily stop noise creating activity at 5:00 pm on Saturdays so as not to adversely impact the Fort DeRussy Chapel Saturday operations.

The Luana Waikīkī Hotel and Suites ("Luana Waikīkī") is air conditioned which should help to mitigate construction noise impacts, but its guests, due to their proximity, will still be the most affected by construction noise impacts.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawai'i (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 13 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures."

The contractor will be asked to use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, and using properly tuned and balanced machines.

8.7.3.13 Air Quality – Short Term

TRC Solutions, Inc. has prepared the "Air Quality Study for the Proposed Park Kālia-Waikīkī Condo-Hotel Development" (Air Quality Study") dated November 2015. The Air Quality Study in its entirety is provided in Appendix C.

Short term impacts on air quality are expected to be primarily related to engine exhaust from on-site construction equipment and fugitive dust generated by the construction activity.

As stated in Section 5.0 Short-Term Project Impacts:

"For construction projects such as this, the largest on-site equipment emissions generally come from diesel engine exhaust. The main pollutants contributed by diesel engines are NOx and CO. The CO emissions from the diesel-powered construction engines is expected to be low compared to the vehicles on nearby roads. In addition, existing concentrations of CO measured are well below, approximately 80% below, the more stringent of the applicable standards. Diesel engine NOx emissions do tend to be higher in comparison to gasoline engines. However, construction emissions are temporary (as opposed to a permanent engine installation such as a generator) and unlikely to cause a violation of state or federal standards. In 2014, the recorded 1-hour NO2 emissions value was approximately 80% below the applicable federal standard (there is no state standard), and this value is the result of a three year average. Also in 2014, the recorded annual NO2 value was approximately 90% below the state standard, the more stringent of the two standards."

.....

"Though reasonable precautions to avoid fugitive dust are expected to be determined on a case by case basis, the Clean Air Branch of the Hawai'i Department of Health provides a number of emission control techniques. These precautions can include

measures such as using water to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. It is recommended that a dust control plan be created and implemented during construction."

8.7.3.14 Traffic – Short Term

During the construction phase there will be impacts to pedestrians and vehicular traffic in the area due to construction activity on-site and possibly affecting sidewalk areas and the street, during certain construction activities.

8.7.3.15 Traffic Improvements – Long Term

Although traffic operations (level of service) with the Project in 2018 are expected to remain similar to conditions without the Project in 2018, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report Park Kālia-Waikīkī" ("Traffic Impact Report") dated November 2015 was prepared by Wilson Okamoto Corporation and is provided in Appendix D. The report recommends the following traffic mitigation measures:

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at the project driveway to avoid or minimize vehicle encroachments to oncoming traffic lanes.

The Traffic Impact Report concluded that:

"The proposed Park Kālia - Waikīkī development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kālia - Waikīkī development is not expected to have a significant impact on traffic operations in the vicinity."

The applicant will implement these recommended traffic mitigation measures.

8.7.3.16 Noise (Acoustical) - Long Term Impacts

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts from the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"Parking Garage and Other On-Site Sources. The basement area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible.

.....

"Mechanical equipment, such as air conditioning chillers or cooling towers, and garage and kitchen ventilation fans are the primary on-site noise sources expected to be located on the project site. These equipment, singly or together, have the potential of exceeding the allowable property line noise limits of the State DOH noise regulation (Reference 4). The State DOH noise limits which apply along the property lines of resort districts are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively, where the daytime period is from 7:00 am to 10:00 pm, and the nighttime period is from 10:00 pm to 7:00 am. Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

.....

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls."

8.7.3.17 Visual Impacts

Most of the tower will be in the view profile of the Allure Waikīkī and all of the tower will have no impact on the view of Diamond Head from the Punchbowl Lookout (see Appendix A2, View Corridors). The Applicant designed this Project to minimize the impact on the view of Diamond Head from Punchbowl.

8.7.4 Department of Health Standard Comments

8.7.4.1 Clean Air Branch

1. Construction/Demolition Involving Asbestos.
   Asbestos was widely used in construction in Hawai‘i prior to 1980. Since the Kyo-ya Restaurant was built in 1990, the applicant does not anticipate encountering asbestos in their renovation Project. However, if asbestos is encountered, the applicant will contact the Asbestos Abatement Office in the Noise, Radiation and Indoor Air Quality Branch at 586-5800.

2. Control of Fugitive Dust
   The applicant will prepare a dust control management plan and understands that the plan does not require DOH approval.

   Activities will comply with the provisions of HAR Section 11-60.1-33 on Fugitive Dust.

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

8.7.4.2 Clean Water Branch

1. The applicant understands and will comply with applicable requirements of HAR Chapter 11-54.

2. Since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project will not require a Department of the Army Permit and is not expected to require a 401 Water Quality Certification (WQC).

3. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance is anticipated to be less than one acre of total land area.

4. The applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.

5. The applicant understands and will comply with the monitoring requirements, if applicable and further understands the enforcement and penalties that could occur.

6. The applicant does not expect this Project to involve polluted runoff control as outlined in the State's Coastal Nonpoint Pollution Control Management Plan or Hawai'i's Implementation Plan for Polluted Runoff Control.

8.7.4.3 Hazard Evaluation & Emergency Response Office

1. The applicant intends to follow the recommendations made by the DOH in its standard comments, and to comply with applicable sections of Chapter 128D, Environmental Response Law, HRS, and Title 11, Chapter 451 of the Hawai'i Administrative rules (HAR) State Contingency Plan.
2. The Project site does not involve lands formerly used in the production of sugar cane.
3. The applicant will seek a "no further action" letter if necessary, prior to permit approval.

8.7.4.4 Noise Radiation & Indoor Air Quality Branch Standard Comments

The Project will comply with applicable requirements of the following Administrative Rules of the Department of Health:

- Chapter 11-39 Air Conditioning and Ventilating
- Chapter 11-45 Radiation Control
- Chapter 11-46 Community Noise Control

8.7.4.5 Safe Drinking Water Branch

The Project does not involve development or actions affecting a public water system, except for a water line lateral (connection) for service off the municipal system. The Project does not involve an underground injection well, nor does it involve development of a Golf Course. Therefore, our understanding is that the standard comments standard comments of the Safe Drinking Water Branch are not applicable to the Project.

8.7.4.6 Solid and Hazardous Waste Branch

Hazardous Waste Program

The applicant does not anticipate the Project to involve the handling of hazardous waste. In the event any hazardous waste is involved in any aspect of the Project, the applicant will comply with the regulations set forth in Chapters 11-260 to 11-280 HAR.

Solid Waste Section

The Project will not involve the development of a solid waste disposal, recycling, reclamation or transfer system. The applicant may have a small on-site recycling program. As a generator of solid waste the applicant will ensure that all wastes are delivered to permitted solid waste management facilities.

Office of Solid Waste Management
The applicant will encourage recycling by providing designated trash bins for recycling.

Underground Storage Tanks
The applicant is not currently aware of the need to close or remove any underground storage tanks in connection with the development of the Project, nor does the applicant plan to install an underground storage tank.

8.7.4.7 Wastewater Branch

The Project will be connected to the City's municipal sewer system. The applicant understands that the DOH Wastewater Branch has no comments to offer at this time.

8.7.5 Pedestrian Wind Impacts

Rowan Williams Davies & Irwin Inc. (RWDI) has prepared a "Pedestrian Wind Assessment" for the Park Kālia-Waikīkī, dated November 17, 2015. The study in its entirety is provided in Appendix J.

As stated in Section 6, Summary:

"The proposed development includes several positive design features for wind control, such as slender shape, curved tower corners and dense landscaping. The existing tall buildings across Kalākaua Avenue also provide sheltering for the proposed tower from the prevailing winds. As a result, the proposed development is not expected to create negative wind impact on public sidewalks along Kalākaua Avenue, including the area in front of the Outrigger Luana Waikīkī Building.

While the future wind speeds are predicted to be generally suitable for strolling or walking, they are higher than desired for outdoor seating or standing in the gardens, main lobby and pick-up-drop-off area. Wind control solutions are presented to reduce both the horizontal and vertical winds, and photo examples are provided for reference.

Additional wind control suggestions are also provided for the exposed above-ground pool decks and balconies, where higher-than-desired wind speeds may occur in localized areas.

Wind tunnel tests should be conducted at a later design stage to quantify the wind conditions and to evaluate the effectiveness of wind mitigation strategies."

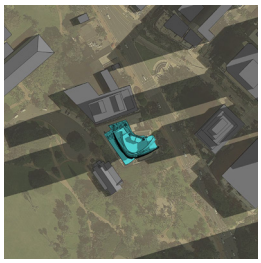
BH will implement the recommended mitigation measures as appropriate, subject to approval by DPP.

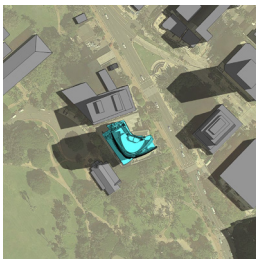
8.7.6 Shadow Analysis

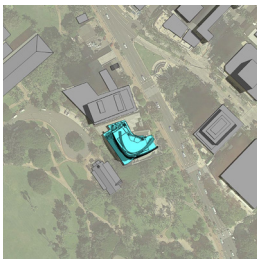
The effect of shadows from the Project structures on surrounding properties on the Summer Solstice (June 21), the Equinox (March 20 and September 21) and the Winter Solstice (December 21) of each year is depicted below and in the Appendix A, Shadow Study.

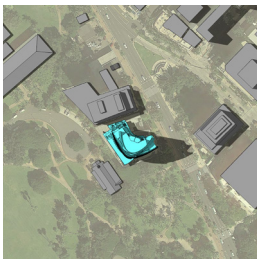
During the Summer Solstice: between 8:00 am and 10:00 am, the shadow from the Project will fall on Fort DeRussy, as a skinny long shadow, shortening significantly closer to 10:00 am; between 10:00 am and 2:00 pm the shadow from the Project stays mostly on the Project Site and Kalākaua Avenue; between 2:00 pm and 4:00 pm the shadow begins to affect the Kalākaua Avenue and falls mostly between the Waikīkī Gateway Hotel and King Kalākaua Plaza.

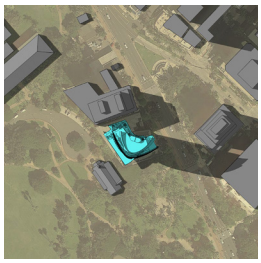
During the Equinox: between 8:00 am and 10:00 am, the shadow from the Project will fall on Fort DeRussy and the Luana Waikīkī, affecting mostly the makai side

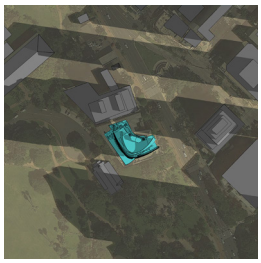

SUMMER SOLSTICE - *08:00 AM*

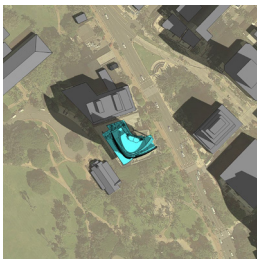

SUMMER SOLSTICE - *10:00 AM*


SUMMER SOLSTICE - *12:00 PM*


SUMMER SOLSTICE - *02:00 PM*


SUMMER SOLSTICE - *04:00 PM*


EQUINOX - *08:00 AM*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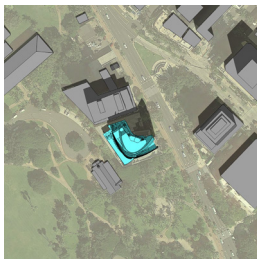
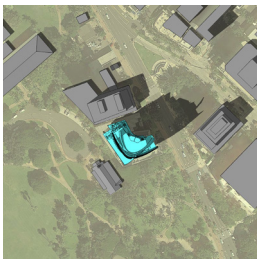

EQUINOX - *12:00 PM*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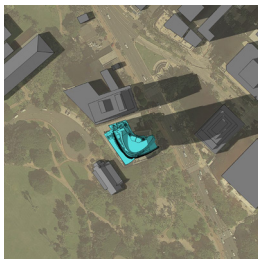
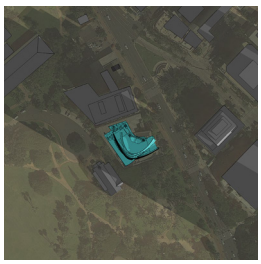
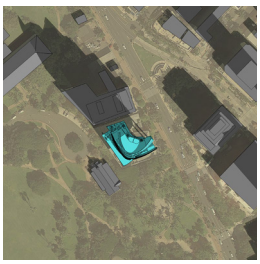
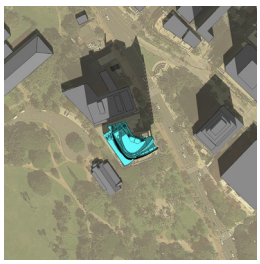
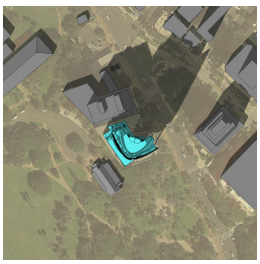
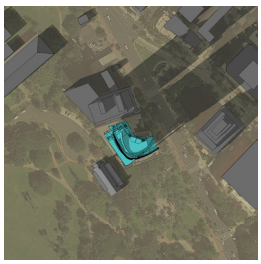

EQUINOX - *04:00 PM*


WINTER SOLSTICE - *08:00 AM*


WINTER SOLSTICE - *10:00 AM*


WINTER SOLSTICE - *12:00 PM*


WINTER SOLSTICE - *02:00 PM*


WINTER SOLSTICE - *04:00 PM*

of the building, including the swimming pool (note the Luana Waikīkī Tower also affects the swimming pool during this period); between 10:00 am and 12:00 pm the shadow from the project moves away from the swimming pool and affects primarily the Luana Waikīkī; between 12:00 pm and 2:00 pm the shadow moves away from the Luana Waikīkī and begins to affect Kalākaua Avenue and a small portion of King Kalākaua Park across the street; between 2:00 pm and by 4:00 pm the shadow extends into the eastern portion of King Kalākaua Park and the Waikīkī Gateway Hotel.

During the Winter Solstice: between 8:00 am and 10:00 am, the shadow from the Project will fall on Fort DeRussy and the Luana Waikīkī, clearing the swimming pool at about 10:00 am; between 10:00 am and 12:00 pm the shadow from the project affects the Luana Waikīkī and Kalākaua Avenue; between 12:00 pm and 2:00 pm the shadow affects Kalākaua Avenue and the western portion of King Kalākaua Park; between 2:00 pm and 4:00 pm the shadows affects the eastern portion of King Kalākaua Park and properties mauka of Kūhiō Avenue.

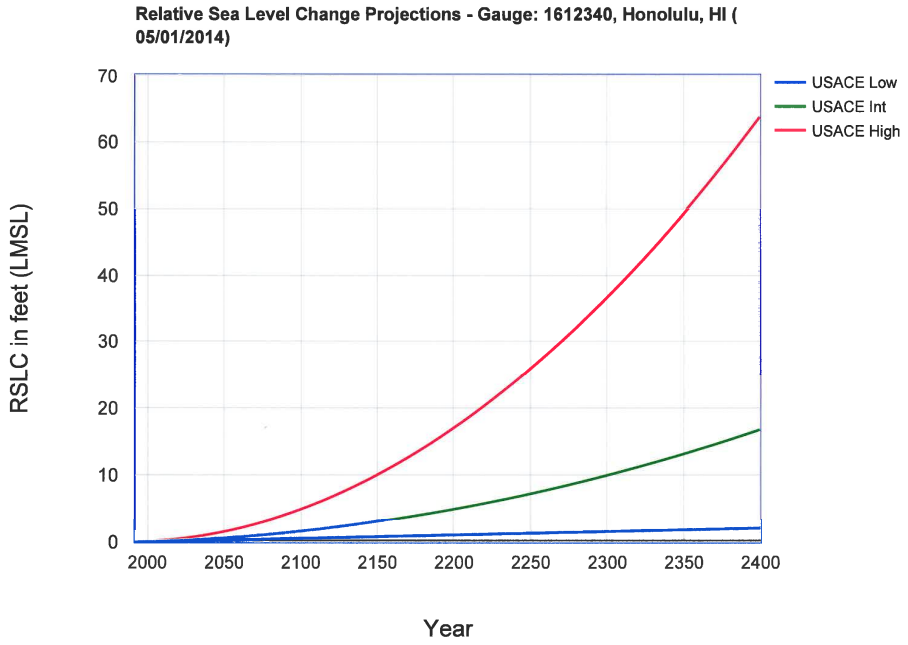
8.7.7 Climate Change and Sea Level Rise

The change in climate has been triggered by greenhouse gas emissions, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, which are key contributors to the unprecedented increases in global atmospheric warming over the past century. Although attempts are being made to reduce these emissions, these trends are projected to continue and increase in the future creating significant challenges for island communities such as Hawai'i.

The effects of climate change in Hawai'i is increasingly evident with the rise in air temperature; an increase in the sea's surface temperatures; an increase in sea levels; an increase in rain intensity, while there has been a decrease in rainfall; and a decrease in stream flows.

It is unlikely that sea level rise will increase the risk of flooding during the life of the structure, since the Project was designed to accommodate any rising sea levels by raising the Project finish grade to approximately 9 feet MSL (mean sea level).

Based on the Army Corp of Engineering on-line information, it appears that the sea level rising rate would reach the building's lobby floor anywhere between 2141 and 2285 (see Sea Level Rise chart and graph on the following pages). Taking the more recent event 2141 and opening of the hotel in 2019, the 122 years far exceeds the life



of the structure. Say the building had a 60 year life, the mean sea level would rise anywhere 0.42 – 3.10 feet. Waikīkī would be functional with a 2 foot sea level rise. The new structure sited at approximately 9 feet MSL will be safe from rising sea level for the life of the structure.

In order to minimize this Project's impact on climate change, BH will support sustainability and energy conservation on-site as follows:

- The existing buildings on the Project that are proposed to be demolished were built in the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- BH will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems.
- BH will reduce the Project's material waste through effective construction and operational recycling programs.

1612340, Honolulu, HI
NOAA's Published Rate: 0.00492 feet/yr
All values are expressed in feet relative to LMSL

Year	USACE Low	USACE Int	USACE High
1992	0.00	0.00	0.00
1995	0.02	0.02	0.02
2000	0.04	0.05	0.06
2005	0.06	0.08	0.13
2010	0.09	0.12	0.21
2015	0.11	0.16	0.31
2020	0.14	0.21	0.43
2025	0.16	0.26	0.57
2030	0.19	0.32	0.72
2035	0.21	0.38	0.90
2040	0.24	0.44	1.09
2045	0.26	0.51	1.30
2050	0.28	0.59	1.53
2055	0.31	0.66	1.78
2060	0.34	0.75	2.05
2065	0.36	0.83	2.34
2070	0.38	0.93	2.64
2075	0.41	1.02	2.96
2080	0.43	1.12	3.30
2085	0.46	1.23	3.66
2090	0.48	1.34	4.04
2095	0.51	1.45	4.44
2100	0.53	1.57	4.86
2105	0.56	1.69	5.29
2110	0.58	1.82	5.74
2115	0.61	1.95	6.21
2120	0.63	2.09	6.70
2125	0.66	2.23	7.21
2130	0.68	2.37	7.74
2135	0.70	2.52	8.29
2140	0.73	2.68	8.85
2145	0.75	2.83	9.43
2150	0.78	3.00	10.03
2155	0.80	3.16	10.65
2160	0.83	3.34	11.29
2165	0.85	3.51	11.95
2170	0.88	3.69	12.62
2175	0.90	3.88	13.32
2180	0.93	4.07	14.03
2185	0.95	4.26	14.76
2190	0.97	4.46	15.51
2195	1.00	4.66	16.28
2200	1.02	4.87	17.06
2205	1.05	5.08	17.87
2210	1.07	5.30	18.69
2215	1.10	5.52	19.53
2220	1.12	5.74	20.39
2225	1.15	5.97	21.27
2230	1.17	6.21	22.17
2235	1.20	6.45	23.09
2240	1.22	6.69	24.02
2245	1.25	6.94	24.98
2250	1.27	7.19	25.95
2255	1.29	7.44	26.94
2260	1.32	7.71	27.95
2265	1.34	7.97	28.97
2270	1.37	8.24	30.02
2275	1.39	8.51	31.08
2280	1.42	8.79	32.17
2285	1.44	9.07	33.27
2290	1.47	9.36	34.39
2295	1.49	9.65	35.53
2300	1.52	9.95	36.69
2305	1.54	10.25	37.86
2310	1.57	10.56	39.06
2315	1.59	10.87	40.27
2320	1.61	11.18	41.50
2325	1.64	11.50	42.75
2330	1.66	11.82	44.02
2335	1.69	12.15	45.30
2340	1.71	12.48	46.61
2345	1.74	12.82	47.93
2350	1.76	13.16	49.28
2355	1.79	13.50	50.64
2360	1.81	13.85	52.02
2365	1.84	14.21	53.42
2370	1.86	14.56	54.83
2375	1.89	14.93	56.27
2380	1.91	15.29	57.72
2385	1.93	15.67	59.19
2390	1.96	16.04	60.68
2395	1.98	16.42	62.19
2400	2.01	16.81	63.72

8.8 COASTAL ZONE MANAGEMENT

The Project Site is within the coastal zone management area, but not within the City's Special Management Area. As such, a Special Management Area Use Permit will not be required, and the Project is not subject to permit requirements under Chapter 25, Revised Ordinances of Honolulu.

The Project is located about 1,800 feet from the shoreline on the makai side of Kalākaua Avenue. This 1,800 foot separation provides a buffer for any impacts from the Project Site on the ocean and shoreline area. The proposed development will not affect protected coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

The following sections provide a description of how the Project complies with the Coastal Zone Management objectives and policies as detailed in HRS § 205A-2:

8.8.1 Objectives

8.8.1.1 Recreational resources

"*Provide coastal recreational opportunities accessible to the public.*"

The Project will not affect coastal recreational opportunities accessible to the public, since the Project Site is located 1,800 feet from the shoreline on the makai side of Kalākaua Avenue. Extensive public access to the shoreline is provided from the beach at Fort DeRussy.

8.8.1.2 Historic resources

"*Protect, preserve, and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*"

None of the structures on the Project Site are over 50 years old neither are they listed as historic on either the State or Federal Register of Historic Properties, nor are they considered potential candidates for either register, since the buildings are about 25 years old.

8.8.1.3 Scenic and open space resources

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

The Project located along Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet mauka of the shoreline will not affect the quality of coastal scenic and open space resources.

8.8.1.4 Coastal ecosystems

"*Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*"

The Project located along Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet mauka of the shoreline will not affect the quality of coastal ecosystems.

8.8.1.5 Economic uses

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

The Project will provide a new condo-hotel to better serve visitors to Waikīkī, providing an important visitor accommodation that meets the needs of today's visitors. The Project will generate new jobs and tax revenues for the City and State as described in greater detail earlier in this FEA.

8.8.1.6 Coastal hazards

"*Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*"

Based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), Community Panel 15003C0366G dated January 19, 2011, the project site is located in the Zone AO (Depth 2'). Zone AO (Depth 2') is the Special Flood Hazard Area defined as "Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined". This property located about 1,800 feet from the shoreline and is not in an area affected by coastal flood zones.

8.8.1.7 Managing development

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

This DEA process provided an opportunity for public participation in the management of coastal resources and hazards.

8.8.1.8 Public Participation

"Stimulate public awareness, education, and participation in coastal management."

This DEA process provided a stimulus for the public to understand and participate in the management of coastal resources and hazards.

8.8.1.9 Beach protection

"Protect beaches for public use and recreation."

The Project located along Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet mauka of the shoreline will not affect the public beaches their continued use by the public use and for recreation.

8.8.1.10 Marine resources

"Promote the protection, use, and development of marine and coastal resources to assure their sustainability."

The condo-hotel operator will promote the protection, use, and development of marine and coastal resources, assuring their sustainability, by providing access for their guests to use the beach at Fort DeRussy.

8.8.2 Policies

8.8.2.1 Recreational resources

(A) "Improve coordination and funding of coastal recreational planning and management; and"

This represents a State action/function which is well served by the Office of State Planning and the Department of Land and Natural Resources.

(B) "Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:"

(i) "Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;"
The Project will not affect coastal resources, since it is located along Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet mauka of the shoreline.

(ii) "Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or

requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;"

The Project will not damage coastal resources and will not trigger this requirement for replacement of such resources or monetary compensation.

(iii) "Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;"
Extensive public access to the shoreline is provided by the beach at Fort DeRussy.

(iv) "Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;"
Shoreline parks and other recreation facilities are provided in Waikīkī and along the beach at Fort DeRussy.

(v) "Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;"
The military has provided excellent beach access and recreational use along the beach that fronts Fort DeRussy.

(vi) "Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;"

The State and City have such standards in place and have established such standards and does regulate drainage to protect the quality of coastal waters, particularly in areas where water quality is not up to the desired standard.

(vii) "Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and"

The Project located along Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet mauka of the shoreline will not provide new shoreline recreational opportunities.

(viii) "Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6;"

It would not be reasonable to require dedication of a shoreline area for this Project and dedication requirements of section 46-6 would not be triggered in this action.

8.8.2.2 Historic resources

(A) *"Identify and analyze significant archaeological resources;"*
The Project Site is not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey titled "AIS Initial Report for One Waikīkī, the Former Kyo-Ya Restaurant Property, Waikīkī, Honolulu (Kona), Oʻahu" was prepared by Cultural Surveys Hawaiʻi , Inc. in July 2015. Please refer to Appendix E for complete report.

The archaeological inventory survey Section 2 "Summary and Interpretation" section states as follows:

"We started on a 6 m (20 foot long) excavation. This needed to be cut short by about a 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive collapse due to buried unstable concrete rubble. We regard the loss of this portion of the trench as not of any consequence as were able to observe the stratigraphy in the rest of the test excavation down to the water table. We dig these particularly long trenches in part because we assume we may not be able to see the stratigraphy in the entire length. We got a good view of an expanse of stratigraphy for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches) which is what we sought.

"Several discrete episodes of fill deposits were observed which is no surprise. These fill episodes, designated Strata Ia through Ic, extend to a depth of 50 cm below surface.

"Strata IIa and IIb appeared mechanically altered and both strata lacked signatures of Native Hawaiian occupation (no sea shells, bones or other food scraps, charcoal staining fire cracked rocks, or lithic debitage from stone tool manufacture).

"Stratum III is relatively undisturbed native Jaucas sand which again lacked any sea shells, bones, charcoal staining fire cracked rocks, lithic debitage from stone tool manufacture.

"We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation

appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

(B) "Maximize information retention through preservation of remains and artifacts or salvage operations; and"

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.
"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

(C) "Support state goals for protection, restoration, interpretation, and display of historic resources;"

BH supports these State goals, and has taken this opportunity to find, protect, interpret and reinter historic resources.

8.8.2.3 Scenic and open space resources

(A) "Identify valued scenic resources in the coastal zone management area;"
The Project site located 1,800 feet from the shoreline, does not provide or contain any valued scenic resources.

(B) "Ensure that new developments are compatible with their visual environment by designing and locating such developments to minimize the alteration of natural landforms and existing public views to and along the shoreline;"
The Project has been situated makai of the Kalākaua Avenue adjacent to Fort DeRussy Park, 1,800 feet from the shoreline, minimizes impacts to existing public views to and along the shoreline and will replace existing urban development that will not result in the alteration of natural landforms.

(C) "Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and"

The Project will not affect shoreline open space or scenic resources.

(D) "Encourage those developments that are not coastal dependent to locate in inland areas;"
This Project is not coastal dependent and is located 1,800 feet inland.

8.8.2.4 Coastal ecosystems

(A) "Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;"

(B) This Project is located 1,800 feet inland from the shoreline and is a redevelopment project which will not affect the protection, use, and development of marine and coastal resources.

(C) Improve the technical basis for natural resource management;
This Project located 1,800 feet inland from the shoreline does not provide an opportunity or nexus for providing technical information on natural resource management.

(D) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;
This Project will not affect the valuable coastal ecosystem, being 1,800 feet inland from the shoreline.

(E) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and
This Project does not involve stream diversion, channelization or similar land and water uses involving competing water needs.

(F) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures;
This Project will provide a significant increase in landscape open space that will capture and retain runoff on property, reducing current impact of stormwater runoff.

8.8.2.5 Economic uses

(A) Concentrate coastal dependent development in appropriate areas;
The Project is not a coastal dependent development and is appropriately located 1,800 feet from the shoreline..

(B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse

social, visual, and environmental impacts in the coastal zone management area; and

The Project is not a coastal dependent development and is appropriately located 1,800 feet from the shoreline.

(C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

(iii) The development is important to the State's economy;

The Project at its present location is feasible and not located along or near the shoreline (1,800 feet mauka). The Project will result in an economic and job-creating stimulus for the local economy, during the construction period as well as for the future. The Project will also result in an increase in property values for the City and County of Honolulu (the "City") resulting in increased property taxes and hotel room tax and generates additional tax revenue to the State in terms of collections from General Excise Taxes ("GET") and hotel room tax.

8.8.2.6 Coastal hazards

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

Waikīkī has an emergency warning system, including sirens to announce storm wave, tsunami and flood events. The applicant also has emergency evacuation procedures in the event of one of these events. Subsidence events have occurred in Waikīkī and developers and contractors have developed ways to minimize impacts from subsidence (shifting of the ground from ground water removal). The City and State have policies in place to deal with point and nonpoint source pollution hazards, in the form of required permits.

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;

The Project Site is within a flood zone, Zone AO (Depth 2') but is not within any storm wave, tsunami, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards.

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

The Project Site is not within flood zone, Zone AO (depth 2') and will comply with requirements of the Federal Flood Insurance Program.

(D) Prevent coastal flooding from inland projects;

This Project is not within a coastal flood zone and should not be affected by coastal flooding.

8.8.2.7 Managing development

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;
The Project will follow existing law in relation to development within the coastal zone management area, and as discussed in this section meets its policies.

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and
The Project is being processed on a timely basis with the processing of this initial environmental review.

(C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process;
This Project is not a coastal development.

8.8.2.8 Public participation

(A) Promote public involvement in coastal zone management processes;
This policy is probably directed towards State and County agencies.

(B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and
Again appears to be more a State and County agency responsibility. This FEA provides a discussion of coastal management zone guidelines and policies and the Project's compliance with these in a report that will be available to the public on OEQC's website and at DPP's office.

(C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts;
This is a State and County agency policy. Due to the location of this Project, 1,800 feet from the shoreline, coastal issues and conflicts do not occur

8.8.2.9 Beach protection

(A) Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;

The Project with its new condo-hotel structure is located 1,800 feet inland from the shoreline and will not affect shoreline processes or potential loss of improvements due to erosion.

(B) Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;

This Project does not involve erosion-protection structures.

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline;

This Project does not involve erosion-protection structures.

(D) Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and This Project does not involve inducing or cultivating vegetation in a beach transit corridor.

(E) Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor;

This Project does not involve a beach transit corridor or any encroachments to such a corridor.

8.8.2.10 Marine resources

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

This Project does not involve the use or development of coastal resources.

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

This Project does not affect marine and coastal resources or activities.

(C) Assert and articulate the interests of the State as a partner with federal agencies in the sound management of ocean resources within the United States exclusive economic zone;

This policy should be implemented by the State.

(D) Promote research, study, and understanding of ocean processes, marine life, and other ocean resources to acquire and inventory information necessary to understand how ocean development activities relate to and impact upon ocean and coastal resources; and

Another policy that should be implemented by the State.

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

Another policy that should be implemented by the State.

8.9 CUMULATIVE IMPACTS WITH OTHER RELATED PROJECTS

Of the projects planned in Waikīkī, there are some that are situated quite a distance from the Project site and are not expected to significantly affect the portion of Kalākaua Avenue that will serve as the major thoroughfare that will provide access to the Project Site. The projects that are in closer proximity include Grays Beach, Hilton Hawaiian Village, Waikīkī Landing, 2121 Kūhiō and 2139 Kūhiō (the two Ritz Carlton developments) and Waikīkī Parc Hotel. None of these projects are projected to occur at the same time as the Park Kālia- Waikīkī as most are either under way or are planned to be completed before construction begins on our Project. The Waikīkī Landing has been delayed indefinitely and will probably be developed after the Park Kālia- Waikīkī has been completed.

8.10 POPULATION AND GROWTH IMPACTS

The Project, when completed, may have a slight impact on the number of permanent residents in Waikīkī, based on the findings with other condo-hotel units which average a resident occupancy of between 5% and 20%. Based on this percentage, the 170 condo-hotel units could result in an increase in residents in Waikīkī of about 9 to 34. However, residents that purchase condo-hotels to occupy and not place back with the hotel operator, normally occupy the units on an occasional basis and not as full time residents. As an example, the Trump Tower Waikīkī has 462 units, but only three of the units are occupied by full time residents.

The Project will increase the visitor population potential of Waikki with the development of 170 condo-hotel rooms, of which approximately 85% are anticipated to be in a hotel rental program. The Project will provide important support services for visitors and local residents through convenient, resort accommodations, right on Kalākaua Avenue, one of the major thoroughfares in Waikīkī.

8.11 CULTURAL IMPACT ASSESSMENT

Cultural Surveys Hawai‘i , Inc. completed a “Cultural Impact Assessment for One Waikīkī Feasibility Study (EA)” dated July 2015. A copy of this report in its entirety is provided in Appendix G of this report. This Cultural Impact Assessment states in part as follows:

“Section 6 Traditional Cultural Practices

6.1 Gathering of Plant and Water Resources
According to traditional and historical research, the ahupua‘a once flourished in agriculture and aquaculture. However, the ahupua‘a has experienced many changes throughout the centuries, from abandoning lo‘i to filling in fishponds. Based on research, the gathering of plant and fresh water resources within Waikīkī today is most likely null.

6.2 Burials

According to the Soil Survey of the State of Hawai'i (Foote et al. 1972), the project area is located on Fill land. Slightly makai of the project area is a large pocket of Jaucas sand, the preferred sediment of Native Hawaiians for burying the deceased. Many burials have been encountered in the makai portion of Fort DeRussy and along Saratoga Road (see Figure 26. Locations of previously reported burials in the vicinity of the project area. It appears that lands further Makai and further to the east were preferred for human burials. Based on cultural and historic background detailed in this CIA report, however, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers.

6.3 Cultural Sites

Waikīkī Ahupua'a was once the epicenter for Native Hawaiian life. Several heiau and wahi pana were once located in Waikīkī. The Nā Pōhaku 'Ola Kapaemāhū a Kapuni, also known as Wizard Stones, are still located east of the project area. However, the heiau that once stood in Waikīkī Ahupua'a are now gone. While a number of traditional Hawaiian historic properties (SIHP #s -4573 Loko Kaipuni fishpond, -4574 Loko Paweo I fishpond, -4576 Loko Paweo II fishpond, and -4579 subsurface cultural deposit (see Figure 25 and Table 3) were located in the immediate vicinity, none of these previously identified cultural properties appear likely to extend into the present project area."

Section 7 Summary and Recommendations

Based on information gathered from the cultural and historic background detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH summarizes the potential impacts and recommendations:

1. *Community consultation should be conducted to inform kama'āina, kūpuna, and lineal and cultural descendants of the proposed project and to collect information on traditional cultural practices (past and present) within Waikīkī Ahupua'a. A proposed community contact outreach list is available in Appendix B*
2. *There is a significant possibility that iwi kūpuna, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural materials.*
3. *Personnel involved in the project construction activities should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials or other cultural finds be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law, HRS §6E.*
4. *Project proponents should consult with lineal and cultural descendants of Waikīkī to develop a reinternment plan and cultural preservation plan in the event that any*

human remains or cultural sites or artifacts are uncovered during construction or long-term maintenance for this project."

The applicant will follow these recommendations and begin community consultation with kamaʻāina, kūpuna, and lineal and cultural descendants of the proposed project.

9. CONFORMANCE WITH SMA GUIDELINES

The Project Site is not within the City's Special Management Area. As such, a Special Management Area Use Permit will not be required, and the Project is not subject to permit requirements under Chapter 25, Revised Ordinances of Honolulu.

The Project is located about 1,800 feet from the shoreline on the makai side of Kalākaua Avenue. Existing ocean front lots and the Hyatt Regency Waikīkī provide a buffer for any impacts from the Project Site on the ocean and shoreline area. The Project will not affect coastal views, coastal recreation, coastal ecosystems, or coastal hazards.

10. RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF HUMANITY'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

The Project will replace an existing restaurant development that has been on the property for about 50 years before closing in 2007. The proposed redevelopment of the Project Site is important to the maintenance and enhancement of the long-term productivity of these properties. The restaurant facility although still in decent shape has outlived its beneficial economic life and has been closed. Replacement of this former use with a high rise condo-hotel development will better utilize these properties and provide a beneficial economic use and benefits to tourism and the City and State with increased tax revenues.

11. DESCRIPTION OF IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES

The land under the Project Site has long been committed to urban development and the development of a condo-hotel on the property is a recommitment to urban use.

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12. PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Some of the probable adverse effects which cannot be avoided include the following:

12.1 CONSTRUCTION IMPACTS

12.1.1 Construction Noise

Y. Ebisu & Associates has prepared the "Acoustical Study for the One Waikīkī Project, Waikīkī, Oʻahu, Hawaiʻi " for the Project ("Acoustical Study") dated July 2015. The Acoustical Study in its entirety is provided in Appendix B.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential short-term noise impacts from the Project which states in part as follows:

"Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities, are located at the neighboring Aqua Luana Waikīkī Hotel and at the Fort DeRussy Chapel. Predicted construction noise levels during demolition and site preparation phase of the work on the project site ranged from 53 to 95 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the Aqua Luana Waikīkī Hotel west of the project site during the demolition and site preparation work, where buffer distances are relatively small (in the order of 15 to 50 feet). On the makai (south) side of the project site where the Fort DeRussy Chapel is located, construction noise levels during demolition and site preparation are predicted to range from 56 to 86 dBA. Adverse impacts from construction noise are not expected to be in the 'public health and welfare' category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site."

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of short-term noise impacts and mitigation measures for the Project that is stated in part as follows:

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

Most structures are well over 70 feet from the construction site and most resort units are air conditioned. The Fort DeRussy Chapel and the Luana Waikīkī Hotel are the two exceptions. The Fort DeRussy Chapel is located about 55 feet away, however, their scheduled of events noted Protestant Services on Sunday morning at 9:00 am; Catholic Services on Saturday evening at 5:00 pm and "Chapel On the Beach" beach side of the Hale Koa Hotel at 6:00 pm. These services except for the 5:00 pm Catholic Services on Saturday fall outside of the typical construction hours allowed by the State. The Applicant will instruct contractors to voluntarily stop noise creating activity at 5:00 pm on Saturdays so as not to adversely impact the Fort DeRussy Chapel Saturday operations.

The Luana Waikīkī Hotel and Suites ("Luana Waikīkī") is air conditioned which should help to mitigate construction noise impacts, but its guests, due to their proximity, will still be the most affected by construction noise impacts.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawai'i (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 13 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures."

The contractor will be asked to use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, and using properly tuned and balanced machines.

12.1.2 Construction Impact on Air Quality

TRC Solutions, Inc. has prepared the "Air Quality Study for the Proposed Park Kālia-Waikīkī Condo-Hotel Development" (Air Quality Study") dated November 2015. The Air Quality Study in its entirety is provided in Appendix C.

Short term impacts on air quality are expected to be primarily related to engine exhaust from on-site construction equipment and fugitive dust generated by the construction activity.

As stated in Section 5.0 Short-Term Project Impacts:

"For construction projects such as this, the largest on-site equipment emissions generally come from diesel engine exhaust. The main pollutants contributed by diesel engines are NOx and CO. The CO emissions from the diesel-powered construction engines is expected to be low compared to the vehicles on nearby roads. In addition, existing concentrations of CO measured are well below, approximately 80% below, the more stringent of the applicable standards. Diesel engine NOx emissions do tend to be higher in comparison to gasoline engines. However, construction emissions are temporary (as opposed to a permanent engine installation such as a generator) and unlikely to cause a violation of state or federal standards. In 2014, the recorded 1-hour NO2 emissions value was approximately 80% below the applicable federal standard (there is no state standard), and this value is the result of a three year average. Also in 2014, the recorded annual NO2 value was approximately 90% below the state standard, the more stringent of the two standards."

.....

"Though reasonable precautions to avoid fugitive dust are expected to be determined on a case by case basis, the Clean Air Branch of the Hawai'i Department of Health provides a number of emission control techniques. These precautions can include measures such as using water to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. It is recommended that a dust control plan be created and implemented during construction."

12.1.3 Construction Impact on Traffic and Pedestrians

The Traffic Impact Report (Appendix D) concluded that:

"The proposed Park Kālia - Waikīkī development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kālia - Waikīkī development is not expected to have a significant impact on traffic operations in the vicinity."

The applicant will implement these recommended traffic mitigation measures.

12.2 NOISE (ACOUSTICAL) LONG TERM IMPACTS

12.2.1 Air Quality Long Term Mitigation

As stated in part in Chapter 7.0 Conclusions and Recommendations of the Air Quality Study:

"Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards. No measures are recommended to mitigate long-term air quality impacts."

13. MITIGATION MEASURES

13.1 CONSTRUCTION PRACTICES

13.1.1 Noise

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts and mitigation measures for the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

.....

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled through the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a noise mitigation measure."

.....

"... Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations."

The applicant will provide sound attenuation for ventilation openings, exhaust fans, and/or mechanical equipment, as needed to not exceed the State Department of Health noise limits at the project's property boundaries.

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at

the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge."

The applicant will follow these recommendations in determining the appropriate glazing to be used for noise mitigation.

13.1.2 Air Quality

As stated in part in Chapter 7.0 Conclusions and Recommendations of the Air Quality Study:

"Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards. No measures are recommended to mitigate long-term air quality impacts."

13.1.3 Traffic

During the construction phase there will be impacts to pedestrians and vehicular traffic in the area due to construction activity on-site and possibly affecting sidewalk areas and the street, during certain construction activities.

BH will prepare a construction management plan detailing plans during the construction phase to address impacts to pedestrians and vehicular traffic in the area.

13.2 NOISE (ACOUSTIC) LONG TERM

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts from the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"Parking Garage and Other On-Site Sources. The parking floor's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal

noise from the circulation and parking areas of the project are possible.

.....

"Mechanical equipment, such as air conditioning chillers or cooling towers, and garage and kitchen ventilation fans are the primary on-site noise sources expected to be located on the project site. These equipment, singly or together, have the potential of exceeding the allowable property line noise limits of the State DOH noise regulation (Reference 4). The State DOH noise limits which apply along the property lines of resort districts are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively, where the daytime period is from 7:00 am to 10:00 pm, and the nighttime period is from 10:00 pm to 7:00 am. Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

.....

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls."

13.3 TRAFFIC IMPROVEMENTS

Although traffic operations (level of service) with the Project in 2018 are expected to remain similar to conditions without the Project in 2018, traffic mitigation measures are planned to improve traffic circulation in the immediate surrounding area. The "Traffic Impact Report Park Kālia-Waikīkī" ("Traffic Impact Report") dated November 2015 was prepared by Wilson Okamoto Corporation and is provided in Appendix D. The report recommends the following traffic mitigation measures:

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.
2. Provide adequate on-site loading and off-loading service areas and prohibit off-site loading operations.
3. Provide adequate turn-around area for service, delivery, and refuse collection vehicles to maneuver on the project site to avoid vehicle-reversing maneuvers onto public roadways.
4. Provide sufficient turning radii at the project driveway to avoid or minimize vehicle encroachments to oncoming traffic lanes.

The applicant will implement these recommended traffic mitigation measures.

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14. SUMMARY OF UNRESOLVED ISSUES

There will be further action required with respect to the following unresolved issues

- A WSD Permit, Major application will be submitted for review and approval by the City's DPP along with a request to modify the allowable height of the building to 325 feet (350 feet with architectural appurtenances) which will need to be processed by DPP and approved by the City Council.
- Building Permits, Flood Study, Trenching Permit, Grading Permit, Drain Connection Permit, Street Usage Permit, and Construction Plan Approval will be submitted for review and approval by the DPP at a later date.
- Construction Noise Permit application will be submitted for review
- and approval by the State Department of Health.
- An Industrial Wastewater Discharge will be submitted to the DOH.
- An Archaeological Inventory Survey plan and Burial Treatment Plan, if required, will be submitted to the Department of Land and Natural Resources, State Historic Preservation Division.

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15. COMMUNITY INPUT

15.1 WAIKĪKĪ NEIGHBORHOOD BOARD

The Project was presented to the Waikīkī Neighborhood Board by Mr. Keith Kurahashi on the evening of September 8, 2015. Notification letters, to all adjoining property owners, were mailed on August 27 and 28, 2015 informing them of the upcoming Waikīkī Neighborhood Board (Board) presentation on One Waikīkī. The following excerpt from the Board minutes provides comments that were made and questions that were asked of Mr. Kurahashi at the Board meeting (the Board minutes and notification letters are provided in Appendix L):

"One Waikīkī Project, Condo Hotel: Keith Kurahashi from Kusao & Kurahashi Inc. presented a PowerPoint and reported the following: Best Hospitality LLC, the owners of the property of the former Kyo-ya Restaurant, are proposing to build a 350-feet-tall condo hotel with 176 units. The existing 25-foot height limit for the property was established in the 1980s. Views of Diamond Head or the horizon line from the Punchbowl lookout would not be obstructed by the new tower, as it would be aligned with Allure Waikīkī. In addition to the units, plans for the building include a garden café, a restaurant, outdoor activity space, pool deck, fitness center, spa, chapel, and a total of 51 parking stalls. The development would increase hotel units in Waikīkī, provide jobs and economic benefits including additional tax revenue for the City and State. A DEA, an application for a Waikīkī Special District permit, and request for a City Council resolution will be submitted.

Questions, comments, and concerns followed:

1. *Disclosures: Chair Finley noted that he and Merz discussed this project.*
2. *Concerns and Testimony: Merz raised concerns about setting a precedent by allowing the height exemption, and noted that the Punchbowl line-of-sight rationality is arbitrary to the project. Merz also noted that the project is in non-compliance with the WSD criteria and referenced testimony from Peter J. Massucci. Erteschik noted he did not agree with the rationality for increasing the height limit from 25 feet to 350 feet, and noted that City Council should oppose the height exemption. Chair Finley noted two letters from residents Deborah and Douglas Barrett and Peter Massucci, who stated their opposition to the project.*
3. *Concerns from Residents: Resident Mark Harpeman raised concerns about the lack of green belts in Waikīkī, and the Department of Planning and Permitting (DPP) willingness to approve projects that do not meet zoning requirements. Ben Sadoski from Unite Here Local 5 raised concerns about the units-to-parking ratio. Joli Tokusato from Unite Here Local 5 raised concerns about the loss of jobs with hotel-condo conversions. A resident raised concerns about the additional amount of wastewater the tower would generate.*

A resident raised concerns about steady growth of high buildings and non-smart development in Waikīkī. Resident Steve Winter noted that 115 Luana Waikīkī Hotel and Suites residents will lose their view if this project is approved.

4. *Political Contributions: A resident asked and Kurahashi answered that he will not provide a list of political contributions and meetings with government officials, but he discloses all donations to the State Ethics Commission.*

5. *Additional Concerns from Board Members: Nigro stated his opposition and suggested that the developers choose a project that fits the zoning requirements and density. Smith and Shields commented on the foreign look of building in the photo renderings. Lofquist noted he opposes the project and raised concerns about the vicinity of the structure to Fort DeRussy.*

6. *Zoning Regulations: A resident asked the Board to focus on zoning regulations and suggested the Board be steadfast in voicing concerns to government officials.*

7. *Company: Shields asked and Kurahashi noted that Best Hospitality is a company based out of Japan.*

8. *Zoning: Chair Finley passed the gavel to Vice Chair Erteschik. Chair Finley disclosed that he has known Kurahashi for over 40 years. No conflict was determined. Chair Finley noted that he cannot support the project, as it is above the zoning limit of 25 feet. Vice Chair Erteschik relinquished the gavel to Chair Finley.*

Erteschik moved and Merz seconded the motion that the Waikīkī Neighborhood Board No. 9 oppose the One Waikīkī project.

Merz made an amendment to the motion to add: "because the project violates the Land Use Ordinance (LUO) zoning regulations and the Waikīkī Special District design criteria."

The amendment to the motion was APPROVED by UNIANIMOUS CONSENT. 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; Nay: None; Abstain: None).

The motion PASSED by UNANIMOUS CONSENT 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; Nay: None; Abstain: None)."

16. AGENCY AND PUBLIC COMMENTS AND RESPONSE

The Applicant has provided point by point responses to comments received on the DEA. Copies of the agency and public comment letters and the Applicant's responses are provided in Appendix M.

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17. SIGNIFICANCE CRITERIA

The following review of the significance criteria indicates that the development will not have a significant impact on the environment.

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

The development site is developed with a restaurant and parking garage and has been committed to urban development and use.

The property is not listed on either the State or Federal Registers of Historic Places and the Kyo-ya Restaurant built in 1990 does not qualify for inclusion on either register.

An Archaeological Inventory Survey titled "AIS Initial Report for One Waikīkī, the Former Kyo-Ya Restaurant Property, Waikīkī, Honolulu (Kona), O'ahu" was prepared by Cultural Surveys Hawai'i , Inc. in July 2015. Please refer to Appendix E for complete report.

The archaeological inventory survey Section 2 "Summary and Interpretation" section states as follows:

"We started on a 6 m (20 foot long) excavation. This needed to be cut short by about a 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive collapse due to buried unstable concrete rubble. We regard the loss of this portion of the trench as not of any consequence as were able to observe the stratigraphy in the rest of the test excavation down to the water table. We dig these particularly long trenches in part because we assume we may not be able to see the stratigraphy in the entire length. We got a good view of an expanse of stratigraphy for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches) which is what we sought.

"Several discrete episodes of fill deposits were observed which is no surprise. These fill episodes, designated Strata Ia through Ic, extend to a depth of 50 cm below surface.

"Strata IIa and IIb appeared mechanically altered and both strata lacked signatures of Native Hawaiian occupation (no sea shells, bones or other food scraps, charcoal staining fire cracked rocks, or lithic debitage from stone tool manufacture).

"Stratum III is relatively undisturbed native Jaucas sand which again lacked any sea shells, bones, charcoal staining fire cracked rocks, lithic debitage from stone tool manufacture.

"We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

"We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

"Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikīkī.

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

"As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down."

(2) "Curtails the range of beneficial uses of the environment;"

The proposed development will not curtail, but will instead enhance the range of beneficial uses of the environment. The development site will provide much needed hotel units to meet the 1,418 net loss in hotel rooms in the recent past, considering new hotel development planned.

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

The State's environmental policies and guidelines are set forth in Chapter 343, Hawai'i Revised Statutes, "State Environmental Policy". The broad policies set forth include conservation of natural resources and enhancement of quality of life. As discussed earlier, the development does not adversely affect significant natural resources, since the site is currently developed with a parking garage and restaurant. One of the guidelines states "Establish visitor destination areas with planning controls which shall include but not be limited to the number of rooms;". The proposed development will help replace hotel units lost over the past years, with a net loss of 1,418 units expected not counting the addition of 170 units planned for this site. These additional hotel units will fall within the increase in hotel units projected for the Primary Urban Center.

(4) "Substantially affects the economic welfare, social welfare, and cultural practices of the community or State;"

- *The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.*

- *The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.*

(5) Substantially affects public health;

The proposed action will not affect public health. The proposed land use is compatible with the surrounding hotel, condominium and apartment development. The developed site adjacent to the Fort DeRussy Park will fully utilize this site and provide an opportunity for visitors to enjoy and use this park.

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

The Project, when completed, may have a slight impact on the number of permanent residents in Waikīkī, based on the findings with other condo-hotel units which average a resident occupancy of between 5% and 20%. Based on this percentage, the 170 condo-hotel units could result in an increase in residents in Waikīkī of about 9 to 34. However, residents that purchase condo-hotels to occupy and not place back with the hotel operator, normally occupy the units on an occasional basis and not as full time residents. As an example, the Trump Tower Waikīkī has 462 units, but only three of the units are occupied by full time residents.

(7) Involves substantial degradation of environmental quality;

The development will not result in a substantial degradation of the environment. Only minimal impact is projected during the construction phase with the planned mitigation measures in place. Long term impacts from traffic and noise will also be minimal with the planned mitigation measures.

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

The proposed development at Park Kālia-Waikīkī does not involve a commitment to larger actions nor will it result in cumulative impacts to the environment. The proposed condo-hotel development will not generate future developments on this site or in the surrounding area that would create a cumulative impact.

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

The findings of the avian survey are consistent with the urban resort development present within the general project area, and the reality that the subject property is almost completely covered with a two-story structure. As previously noted, one of the species detected, White Tern, is an indigenous resident seabird species with the Oʻahu population listed under state endangered species statutes as a threatened species (DLNR, 1968). The species is a relatively common, nesting species in the general Waikīkī area, first recorded as one pair in Honolulu in 1961 (Ord, 1961; VanderWerf, 2003; David, 2013, 2015). "

The applicant will work with the Department of Land and Natural Resource to determine appropriate measures to minimize impact to the nesting areas of the White Tern.

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

Short term impacts on air quality are expected to be primarily related to dust generated by the construction activity. Dust will be generated in the course of excavating for foundations and utility lines. Dust control measures appropriate to the situation will be employed by the contractor during construction, including active work areas will be watered at least twice daily on days without rainfall. Use of wind screens and/or limiting the area that is disturbed at any given time will also help to contain fugitive dust emissions. Dirt-hauling trucks will be covered when traveling on roadways. A routine road cleaning and/or tire washing program will also help to reduce fugitive dust emission, that may occur as a result of trucks tracking dirt onto paved roadways in the project area.

As stated in part in Chapter 7.0 Conclusions and Recommendations of the Air Quality Study:

"Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards. No measures are recommended to mitigate long-term air quality impacts."

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of short-term noise impacts and mitigation measures for the Project that is stated in part as follows:

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

Most structures are well over 70 feet from the construction site and most resort units are air conditioned. The Fort DeRussy Chapel and the Luana Waikīkī Hotel are the two exceptions. The Fort DeRussy Chapel is located about 55 feet away, however, their scheduled of events noted Protestant Services on Sunday morning at 9:00 am; Catholic Services on Saturday evening at 5:00 pm and "Chapel On the Beach" beach side of the Hale Koa Hotel at 6:00 pm. These services except for the 5:00 pm Catholic Services on Saturday fall outside of the typical construction hours allowed by the State. The Applicant will instruct contractors to voluntarily stop noise creating activity at 5:00 pm on Saturdays so as not to adversely impact the Fort DeRussy Chapel Saturday operations.

The Luana Waikīkī Hotel and Suites ("Luana Waikīkī") is air conditioned which should help to mitigate construction noise impacts, but its guests, due to their proximity, will still be the most affected by construction noise impacts.

"The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawai'i (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 13 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures."

The contractor will be asked to use reasonable and standard practices to mitigate noise, such as using mufflers on diesel and gasoline engines, and using properly tuned and balanced machines.

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts and mitigation measures for the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing

resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

.....

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled through the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a noise mitigation measure."

.....

"... Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

The applicant will provide sound attenuation for ventilation openings, exhaust fans, and/or mechanical equipment, as needed to not exceed the State Department of Health noise limits at the project's property boundaries.

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge."

The applicant will follow these recommendations in determining the appropriate glazing to be used for noise mitigation.

Water quality would not be detrimentally affected by the proposed development. The proposed condo-hotel development will not have an adverse impact on aquifers or water resources.

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

The Project Site is in a flood plain, but is not located in other environmentally sensitive area such as a tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters. Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation for any proposed building should be established at a minimum of 2-feet above the highest existing grades on-site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

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

The proposed development will not substantially affect scenic vistas and view planes identified in county or state plans or studies. This property unfortunately has a height limit of 25 feet and although a maximum density of 3.5 FAR can be achieved through open space bonuses, there is no way to utilize this density in a 25-foot structure. A large area, including the properties immediately across Kalākaua Avenue except for King Kalākaua Park (25-foot height limit), has a 300-foot height limit (area bounded by Kuamoʻo Street, Ala Wai Boulevard, Kaiʻolu Street and its extension connecting to Kalākaua Avenue and Kalākaua Avenue). With this 300-foot height limit immediately across the street, restricting the Project Site to a 25-foot height limit does not seem to serve any meaningful purpose, such as protection of public views.

(13) Require substantial energy consumption;

BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. BH will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. BH will reduce material waste through effective construction and operational recycling programs. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.

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18. DETERMINATION

Based on this Final Environmental Assessment and a review and analysis of the significance criteria, a Finding of No Significant Impact (FONSI) for the proposed Park Kālia-Waikīkī Project is anticipated.

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19. PERSONS AND FIRMS PREPARING THIS FINAL EA

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PARK KĀLIA

WAIKĪKĪ

APPENDIX A

PARK KĀLIA

WAIKĪKĪ

A.1 ARCHITECTURAL DESIGN

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

SITE PLAN
(EXISTING)

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

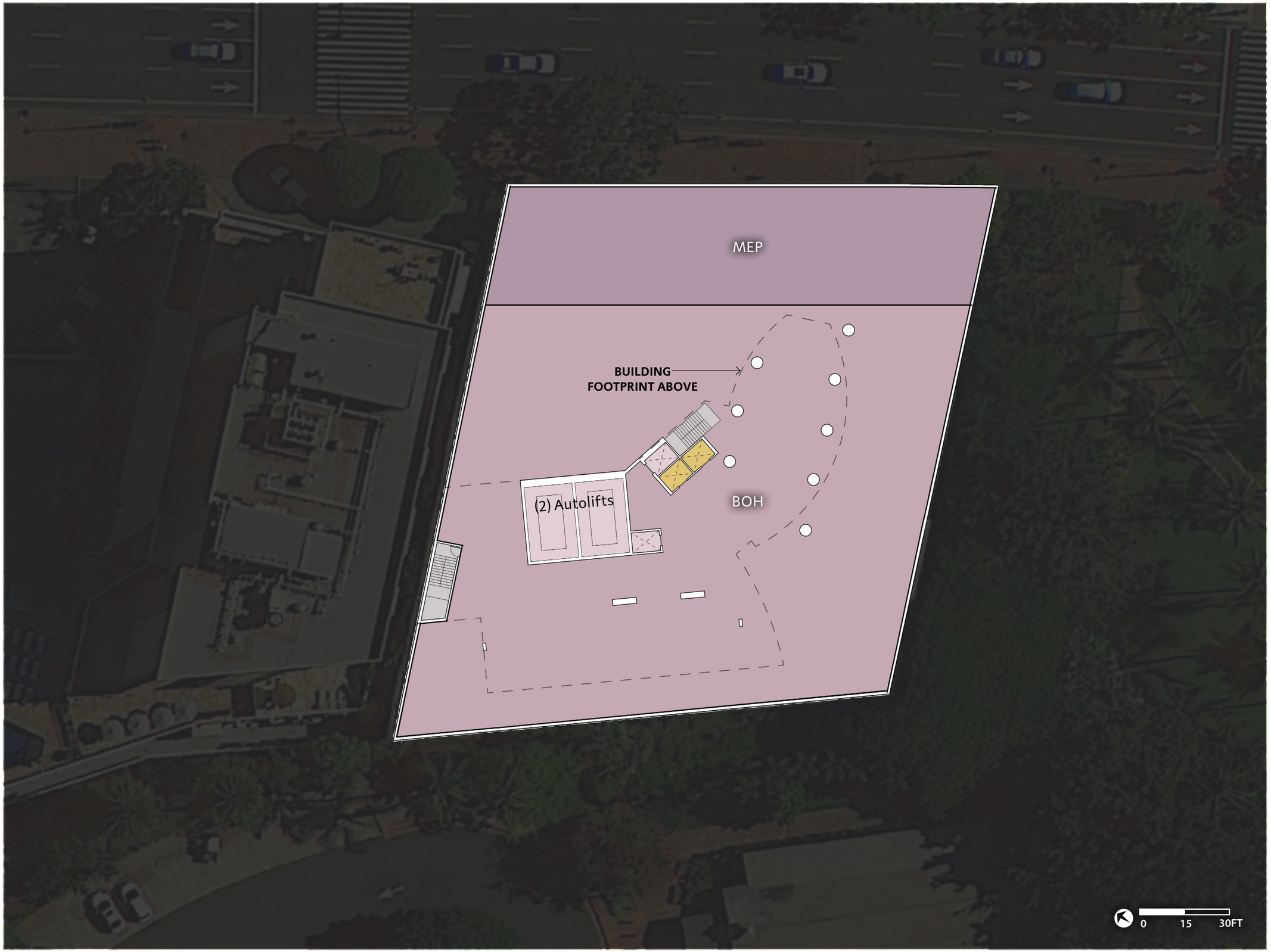
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

SITE PLAN
(PROPOSED)

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

BASEMENT PLAN

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA

WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN

NOVEMBER 2015

GROUND FLOOR PLAN

APPENDIX A

WCITARCHITECTURE

KALĀKAUA AVENUE

LUANA WAIKĪKĪ

Open to Below

(2) Autolifts

1 2 3 4 5 6 7

22’-0” wide drive aisle

8 9 10 11 12 13 14 15 16 17

(17) 8’-3” x 18’-0” stalls per 3 floors +

(16) 8’-3” x 18’-0” stalls per 1 floor =
67 stalls total

FORT DERUSSY CHAPEL

FORT DERUSSY PARK

0 15 30FT

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

PARKING PLAN
FLOORS P1-P4

APPENDIX A

WCITARCHITECTURE

KALĀKAUA AVENUE

trellis below

planter

BOH

Fitness

Spa

M

Bar

W

Pool deck

Pool

LUANA WAIKĪKĪ

FORT DERUSSY PARK

FORT DERUSSY CHAPEL

0 15 30FT

PARK KĀLIA
WAIKĪKĪ

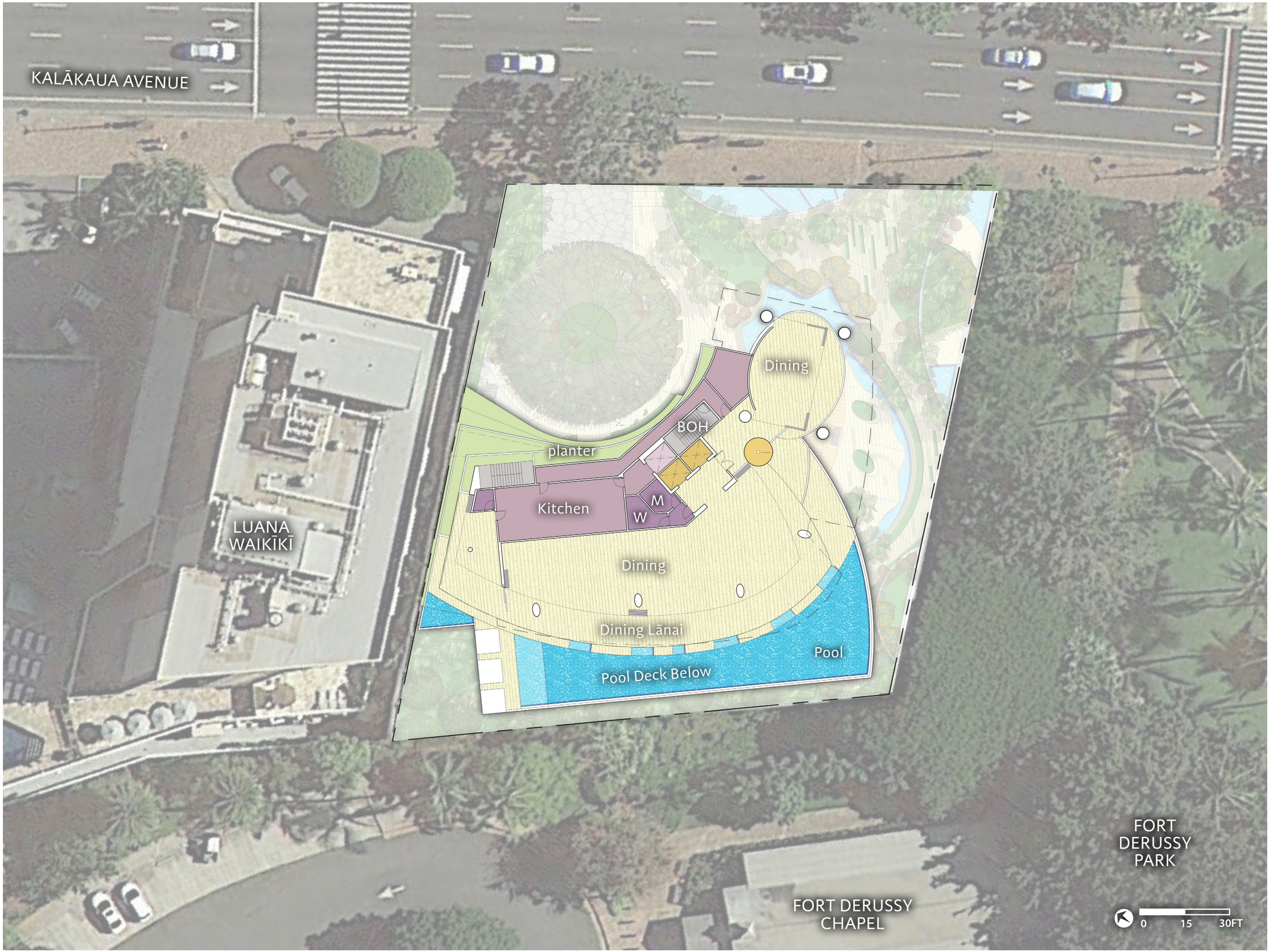
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

POOL DECK PLAN

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

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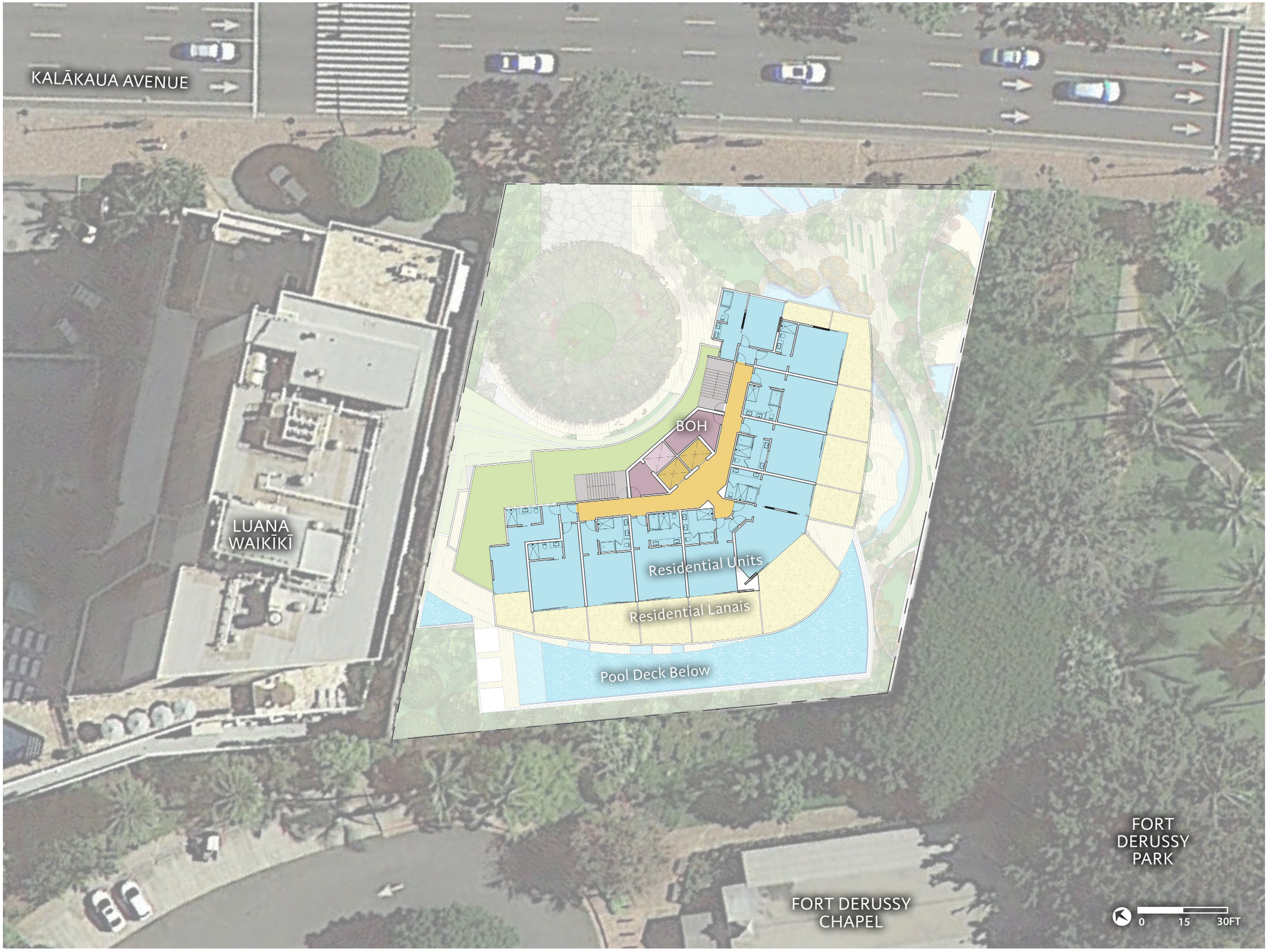
CONCEPT DESIGN
NOVEMBER 2015

RESTAURANT PLAN

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

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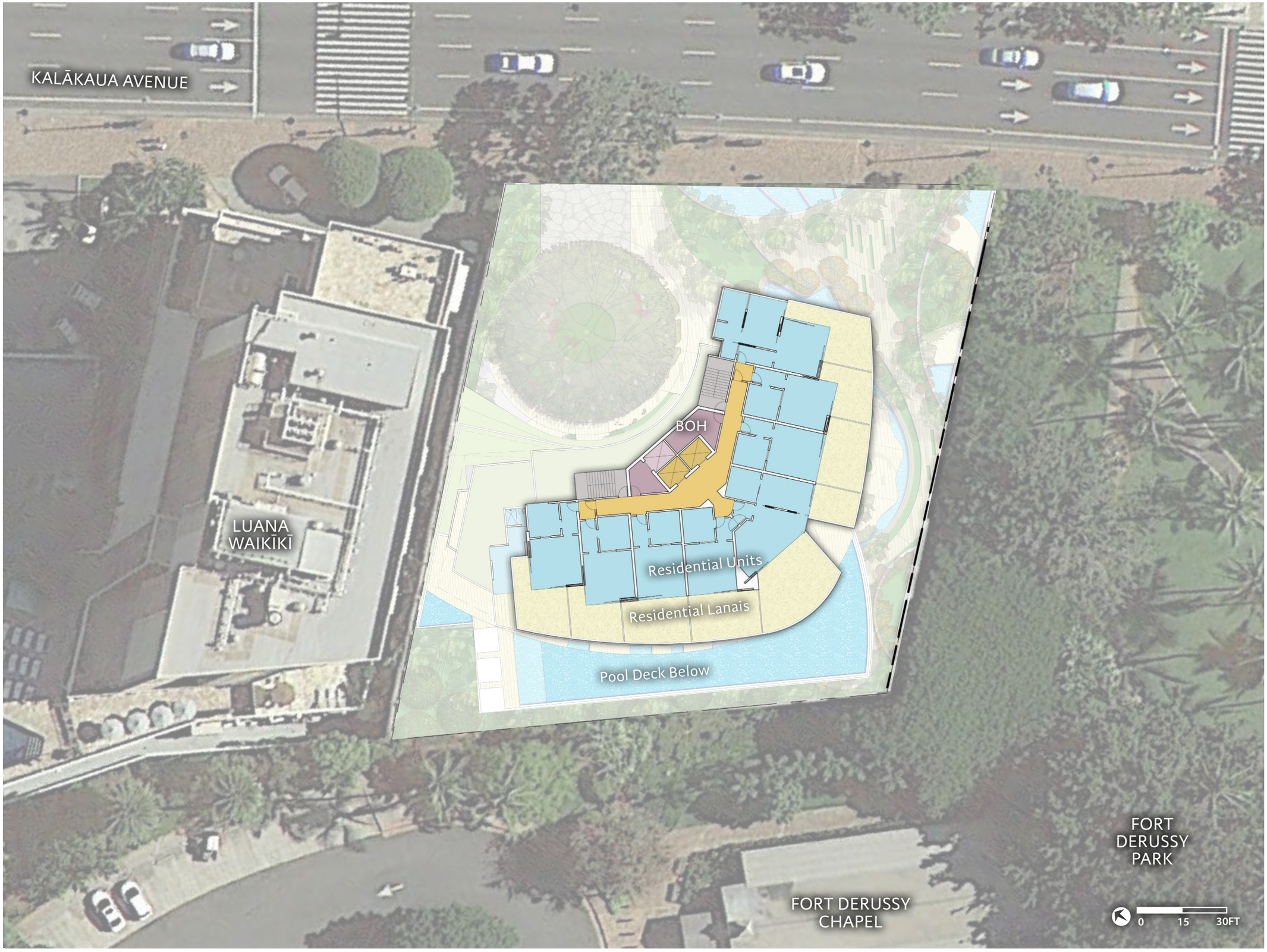
CONCEPT DESIGN
NOVEMBER 2015

4TH-11TH FLOOR PLAN

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

12TH-20TH FLOOR PLAN

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

21ST FLOOR PLAN

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

22ND FLOOR PLAN

APPENDIX A

WCITARCHITECTURE

LOT	
TMK	2-6-006-001 & 2-6-006-004
SPECIAL DISTRICT	Waikiki Special District (WSD)
PRECINCT	Resort Mized-Use
TOTAL LOT AREA	28,761 SF

ENVELOPE	ALLOWED/REQ'D STANDARD WSD (SF)
BASE FAR	3.5
50% RIGHT OF WAY	6,480
TOTAL LOT AREA	28,761
ALLOWABLE FLOOR AREA	35,241
OPEN SPACE BONUS	138,742
MAXIMUM FLOOR AREA	**123,344**

BUILDING HEIGHT		EXISITING	PROPOSED
HEIGHT LIMIT	350'	25'	350'
YARDS			
KALĀKAUA AVE	20' (average)	32.7'	20' (average)
EWA SIDE YARD	0'	0'	0' min.
DIAMOND HEAD SIDE YARD	0'	0'	33'-6" min.
REAR YARDS	0'	0'	6' min.
TRANSITIONAL SETBACKS			
KALĀKAUA AVE	1:10 (above 40')	N/A	1:10
SIDE YARDS	1:10 (above 40')	N/A	1:10
REAR YARDS	1:10 (above 40')	N/A	1:10
PARKING		**UNIT COUNT**	**PARKING COUNT**
RESIDENTIAL	1 stall / unit	170	43
COMMERCIAL	1 stall / 800 sf	17,554 sf	22
TOTAL REQUIRED PARKING			65
PROVIDED PARKING			67

PARK KĀLIA
WAIKĪKĪ

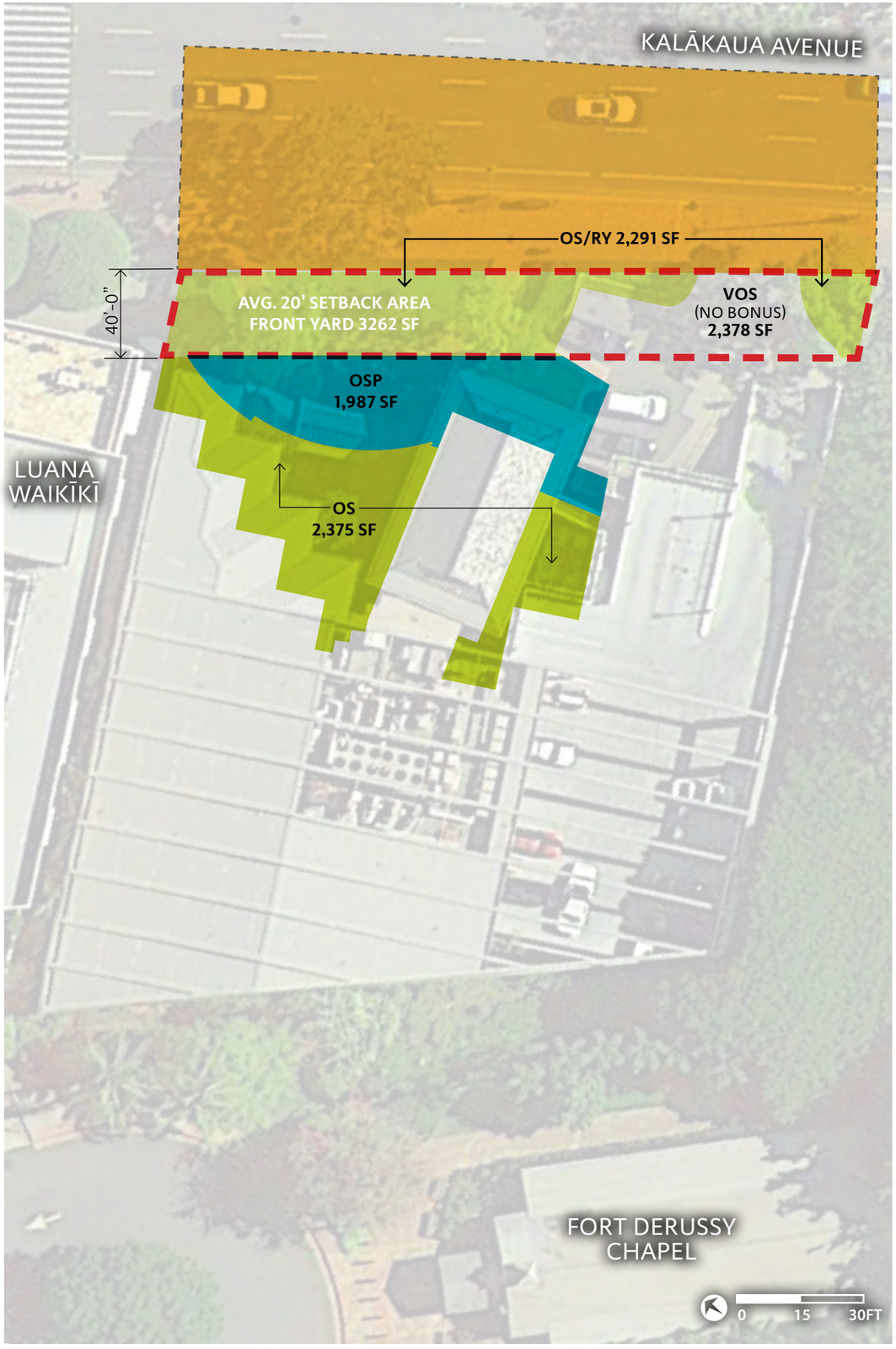
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

PROJECT SUMMARY

APPENDIX A

WCITARCHITECTURE



EXISTING OPEN SPACE BONUS CALCULATIONS

	AREA (SF)	BONUS FACTOR	BONUS AREA (SF)	LOT AREA @ 1.0	LOT AREA @ 3.5
BASE FAR AREA					
LOT AREA	28,761	1	28,761	35,241	123,343.5
50% RIGHT OF WAY	6,480	1	6,400		
OPEN SPACE BONUS					
OPEN SPACE, PUBLIC (OSP)	1,987	10	19,870		
OPEN SPACE (OS)	2,375	5	11,875		
ARCADE (ARC)	0	3	0		
ROOFTOP GARDENS (RG)	0	1	0		
TOTAL ALLOWABLE AREA			66,986		
TOTAL OPEN SPACE AREA	4,362				
NON-BONUS AREAS WITH OPEN-AIR QUALITIES					
OPEN SPACE IN REQ. YARD (OS/RY)	2,291				
LOBBY WITH 30' CEILING & OPERABLE WALLS	0				
NON-BONUS AREA OPEN TO SKY (GRASS PAVERS IN AUTOCOURT)	2,378				

	AREA (SF)	PERCENT OF LOT AREA
OPEN SPACE PERCENTAGES		
TOTAL OPEN SPACE AREA OPEN TO SKY	6,653	23.13 %
TOTAL AREA OPEN TO SKY (INCLUDES AUTOCOURT)	9,031	31.40 %
TOTAL OPEN AIR AT GROUND FLOOR (INCLUDES LOBBY)	6,653	23.13 %
TOTAL OPEN AIR GROUND FLOOR (NON-A/C, INCLUDING AUTOCOURT AND LOBBY)	9,031	31.40 %

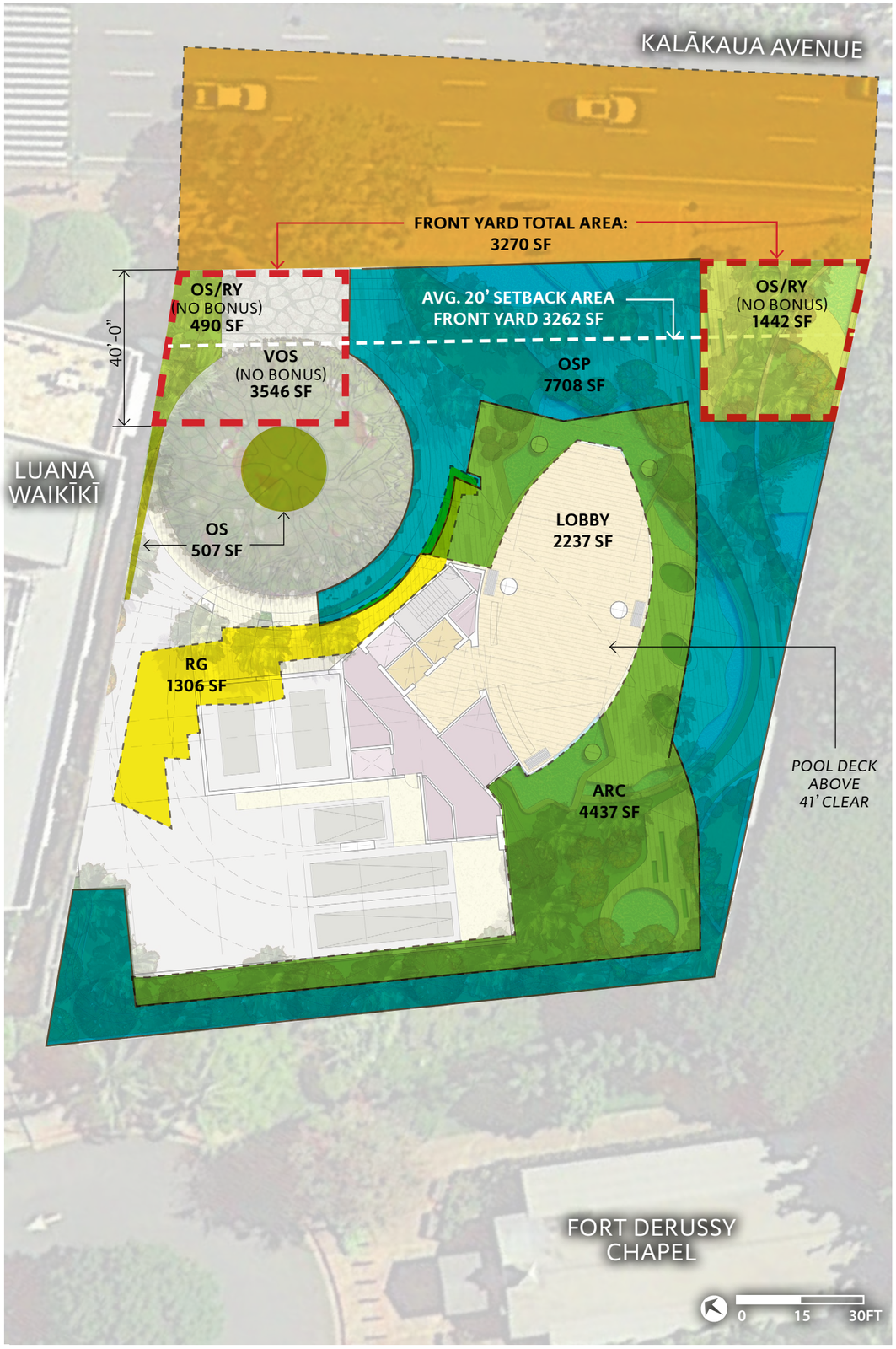
PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

OPEN SPACE
(EXISTING)
APPENDIX A

WCITARCHITECTURE



PARK KĀLIA OPEN SPACE BONUS CALCULATIONS

	AREA (SF)	BONUS FACTOR	BONUS AREA (SF)	LOT AREA @ 1.0	LOT AREA @ 3.5
BASE FAR AREA					
LOT AREA	28,761	1	28,761	35,241	123,343.5
50% RIGHT OF WAY	6,480	1	6,400		
OPEN SPACE BONUS					
OPEN SPACE, PUBLIC (OSP)	7.708	10	77,080		
OPEN SPACE (OS)	507	5	2,535		
ARCADE (ARC)	4,437	3	13,311		
ROOFTOP GARDENS (RG)	1,306	1	1,306		
TOTAL ALLOWABLE AREA			129,473		
TOTAL OPEN SPACE AREA	13,958				
NON-BONUS AREAS WITH OPEN-AIR QUALITIES					
OPEN SPACE IN REQ. YARD (OS/RY)	1,933				
LOBBY WITH 30' CEILING & OPERABLE WALLS	2,237				
NON-BONUS AREA OPEN TO SKY (GRASS PAVERS IN AUTOCOURT)	3,546				

	AREA (SF)	PERCENT OF LOT AREA
OPEN SPACE PERCENTAGES		
TOTAL OPEN SPACE AREA OPEN TO SKY	11,454	39.82 %
TOTAL AREA OPEN TO SKY (INCLUDES AUTOCOURT)	13,694	47.61 %
TOTAL OPEN AIR AT GROUND FLOOR (INCLUDES LOBBY)	16,822	58.49 %
TOTAL OPEN AIR GROUND FLOOR (NON-A/C, INCLUDING AUTOCOURT AND LOBBY)	20,368	70.82 %

PARK KĀLIA
WAIKĪKĪ

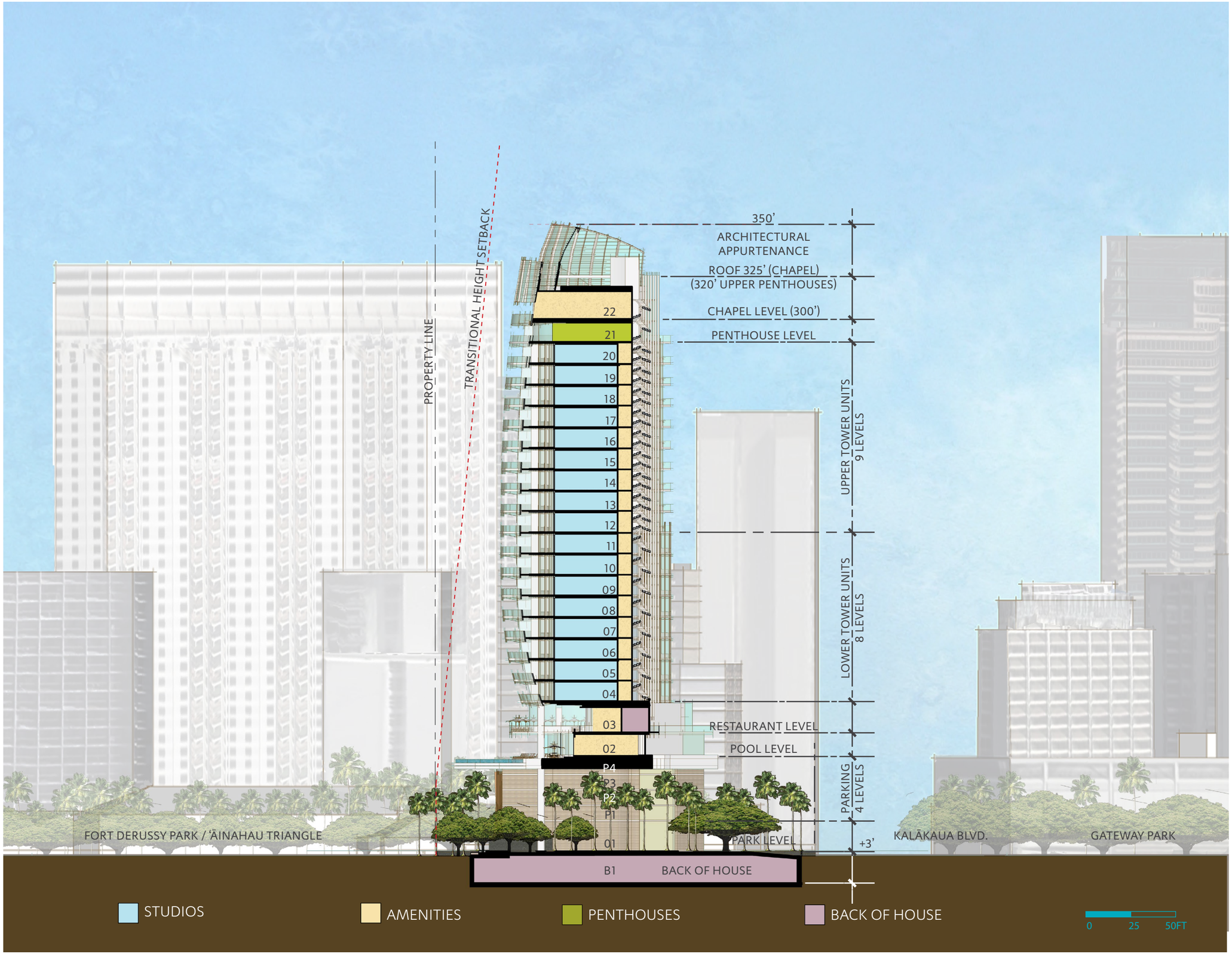
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

OPEN SPACE

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

BUILDING SECTION

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

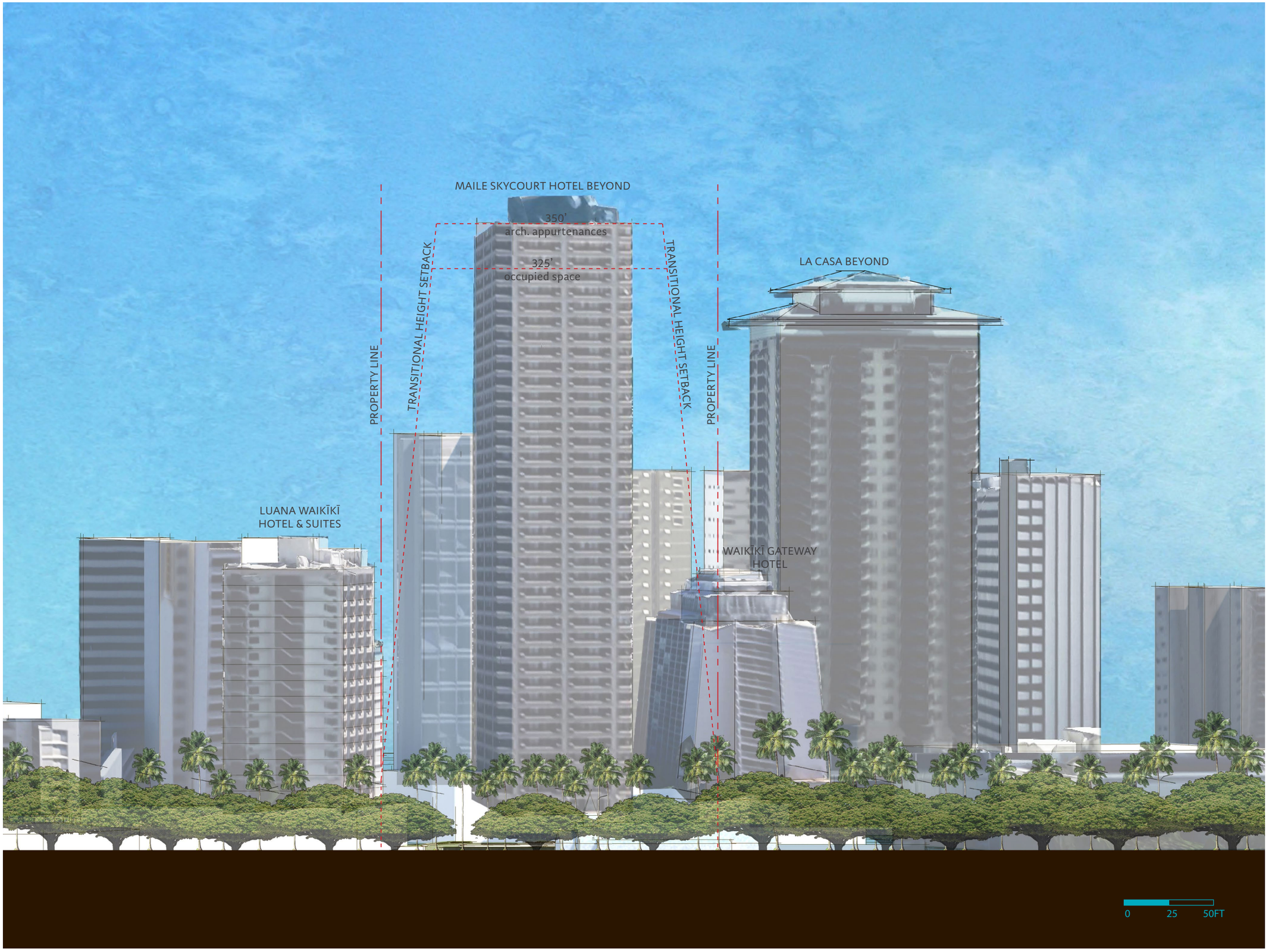
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KĀLIA ROAD

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

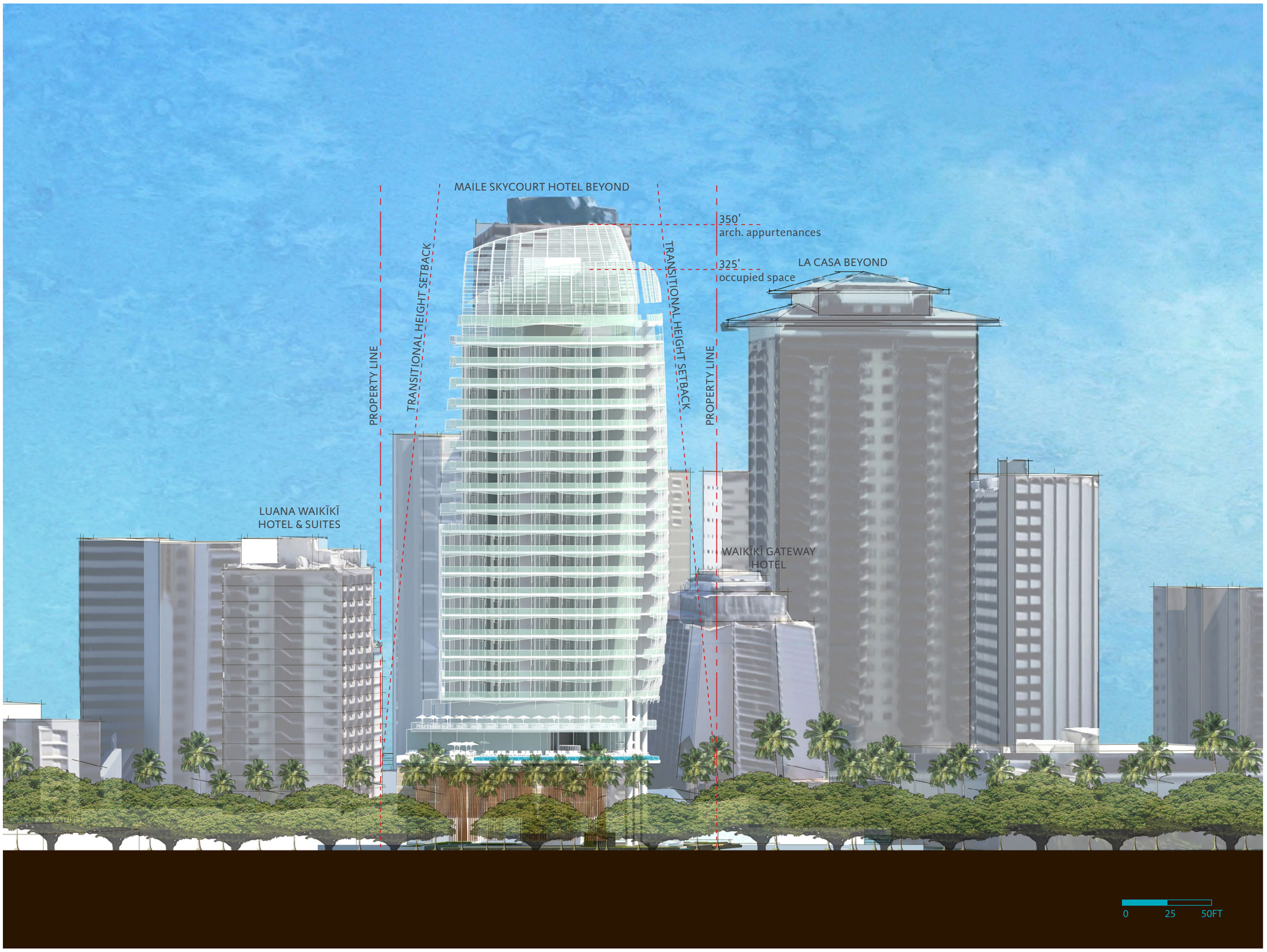
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KĀLIA ROAD
EXISTING

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

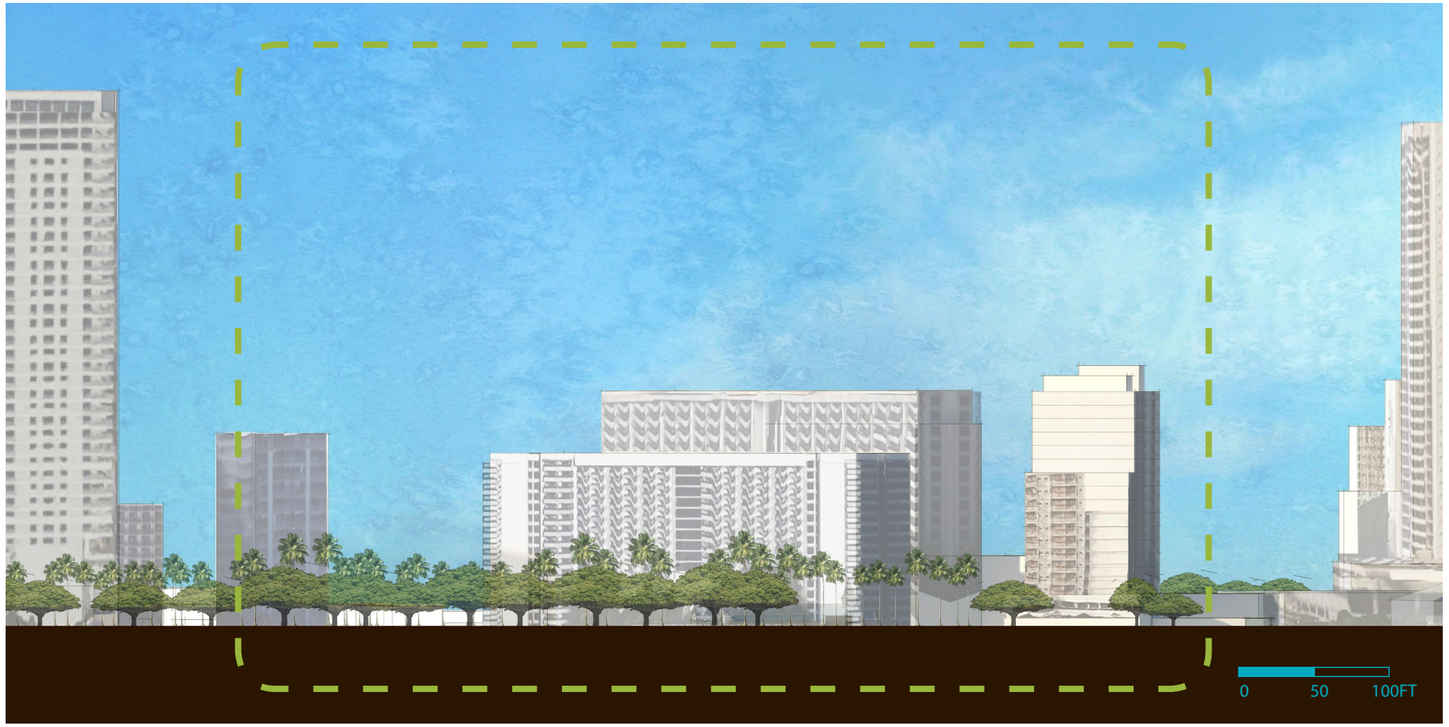
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KĀLIA ROAD
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

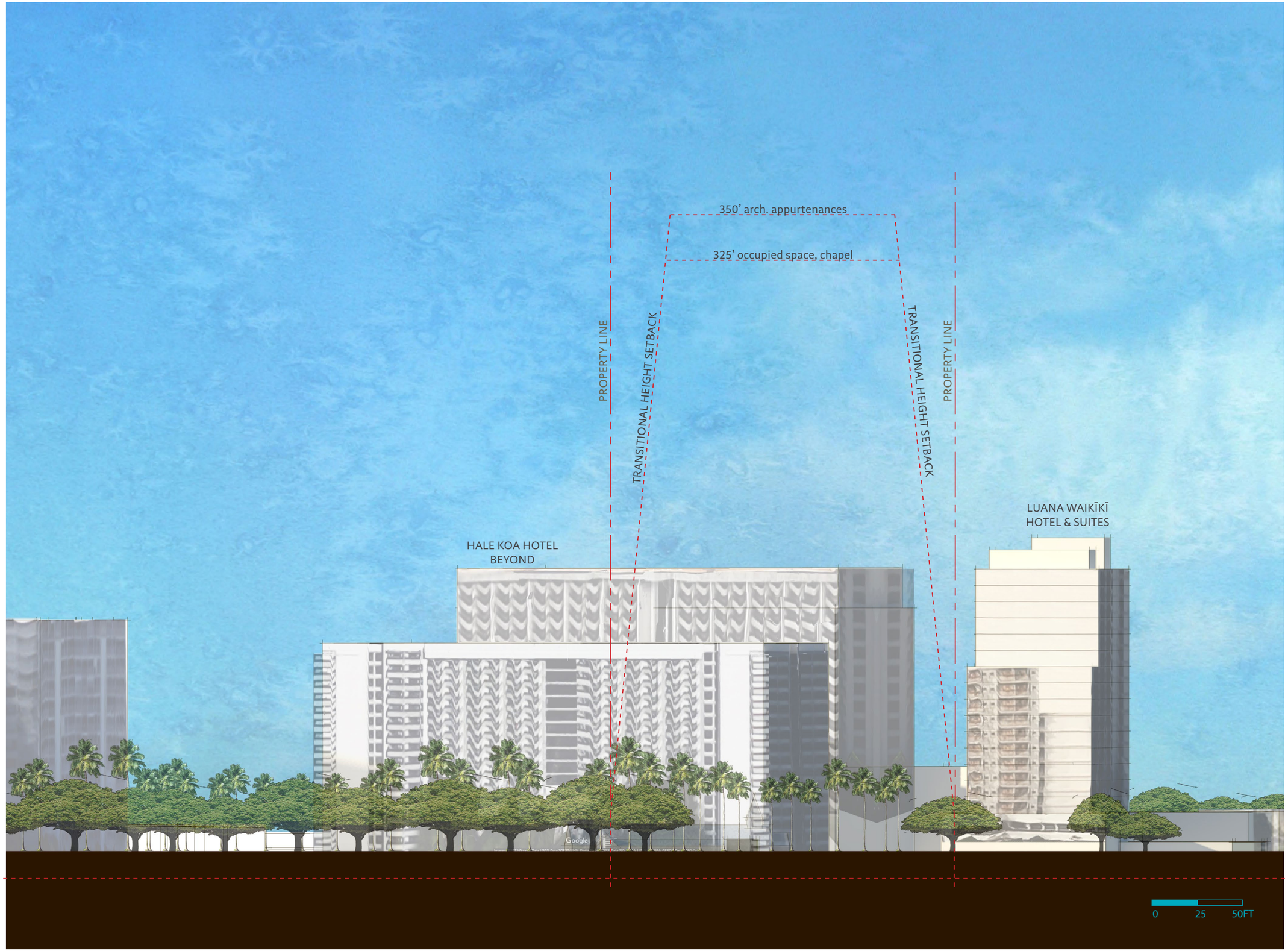
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KALĀKAUA
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

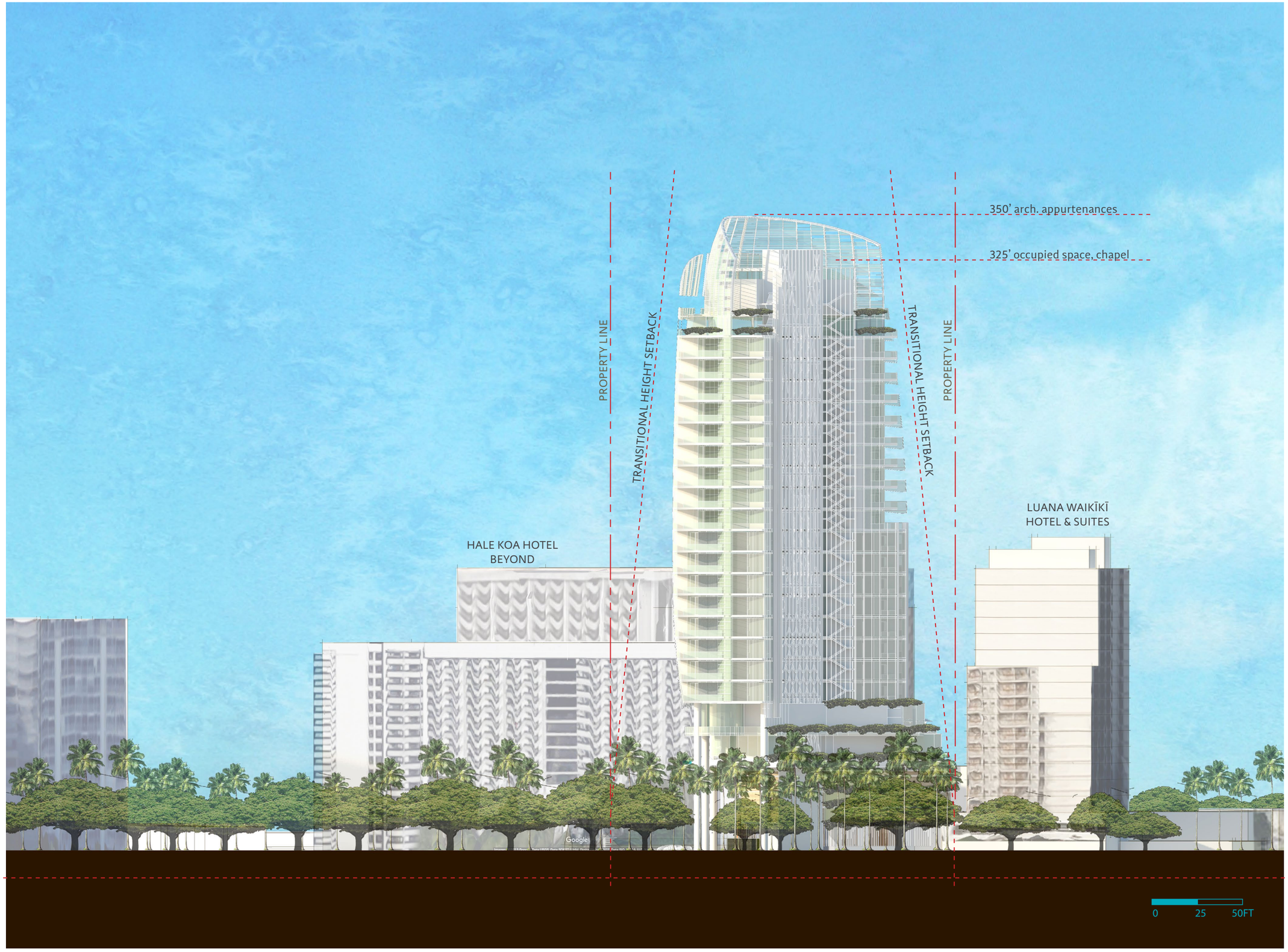
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KALĀKAUA
EXISTING

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

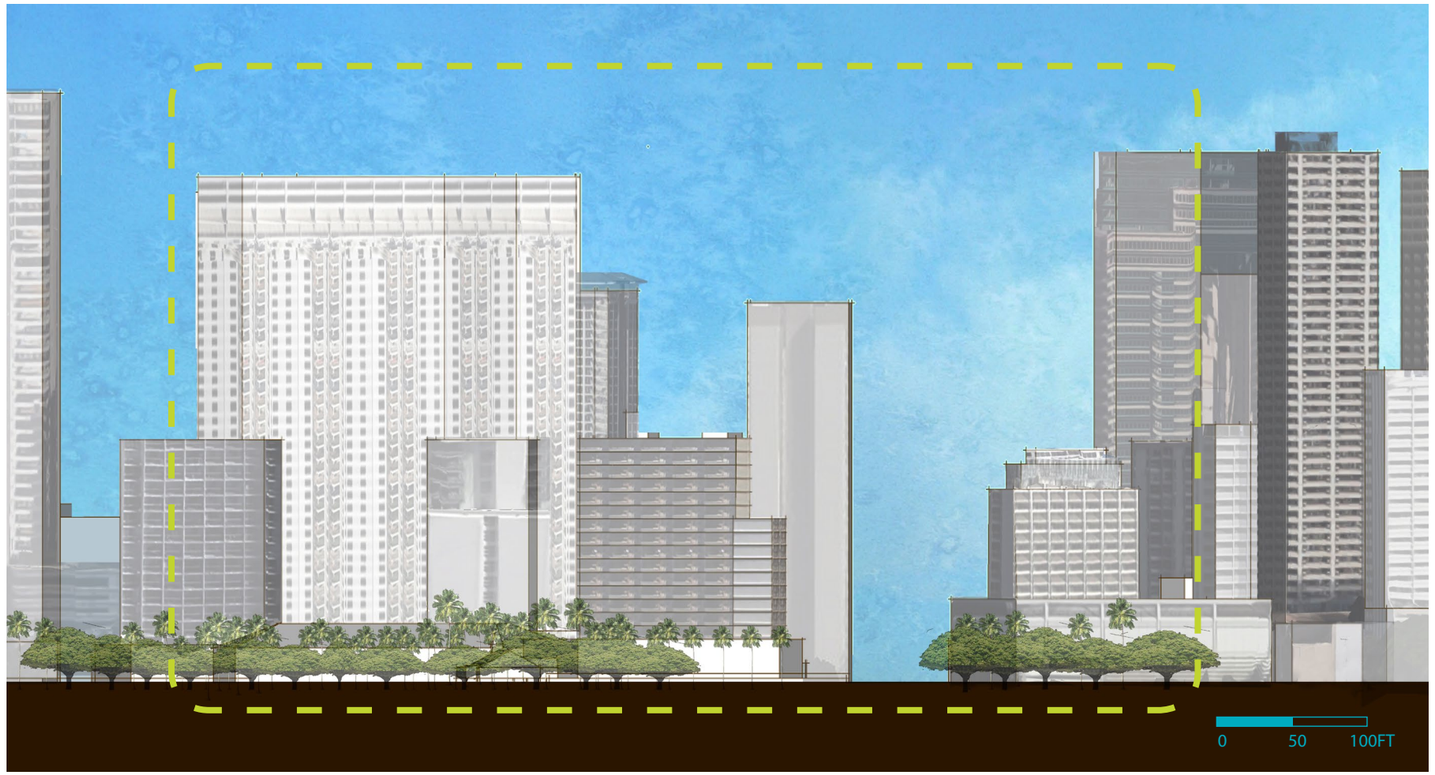
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM KALĀKAUA
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

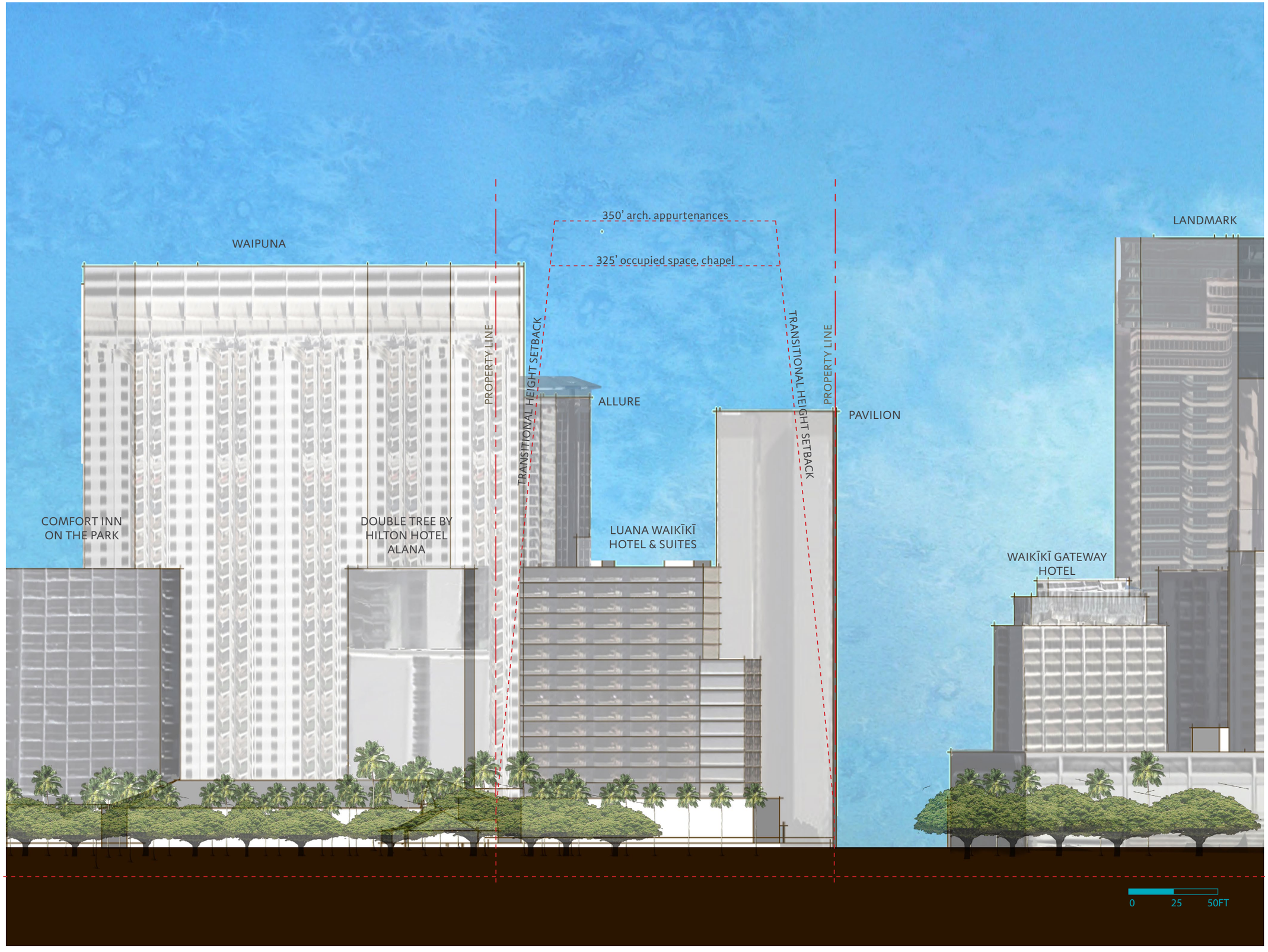
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM DIAMONDHEAD
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

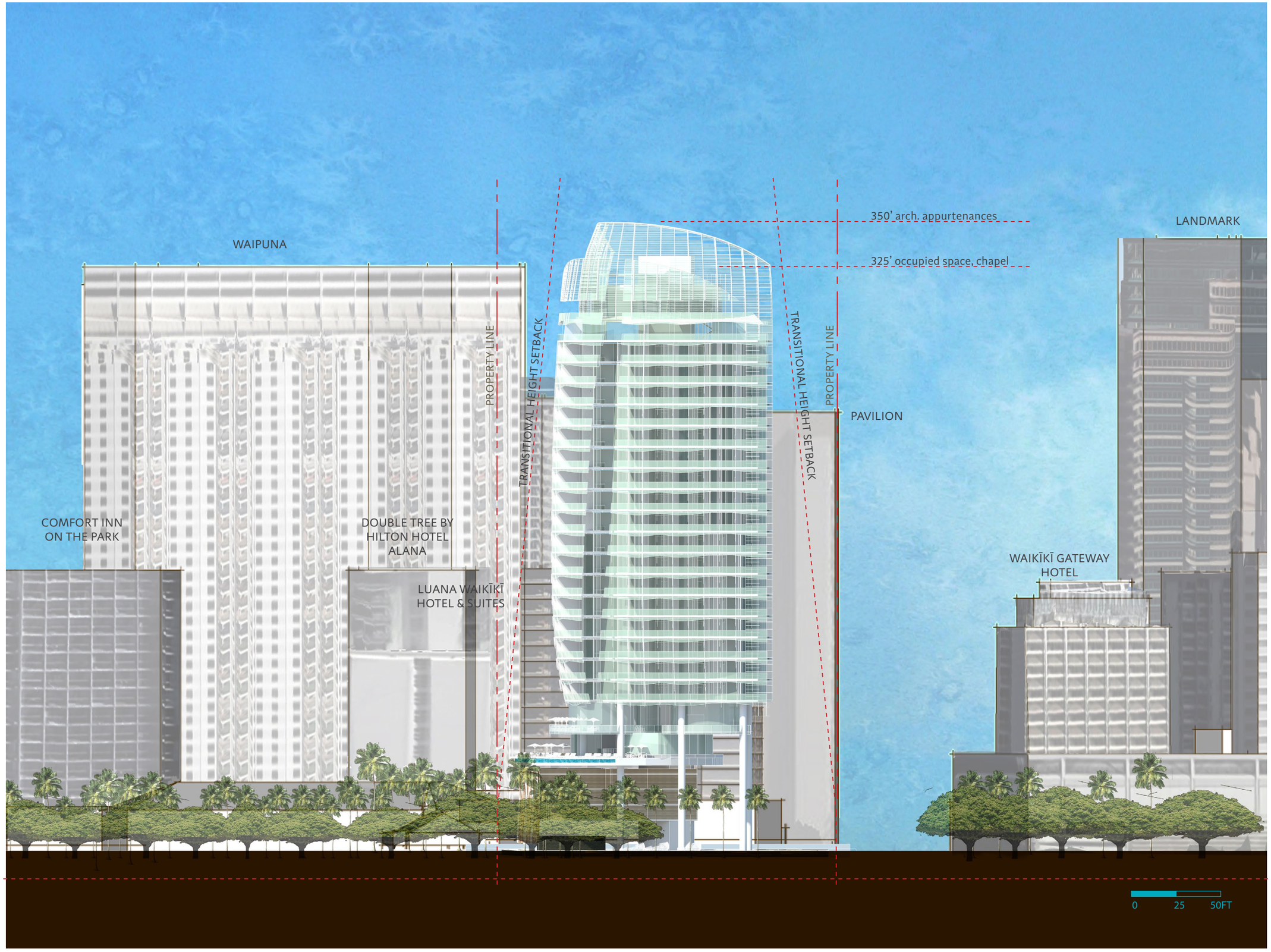
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM DIAMONDHEAD
EXISTING

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

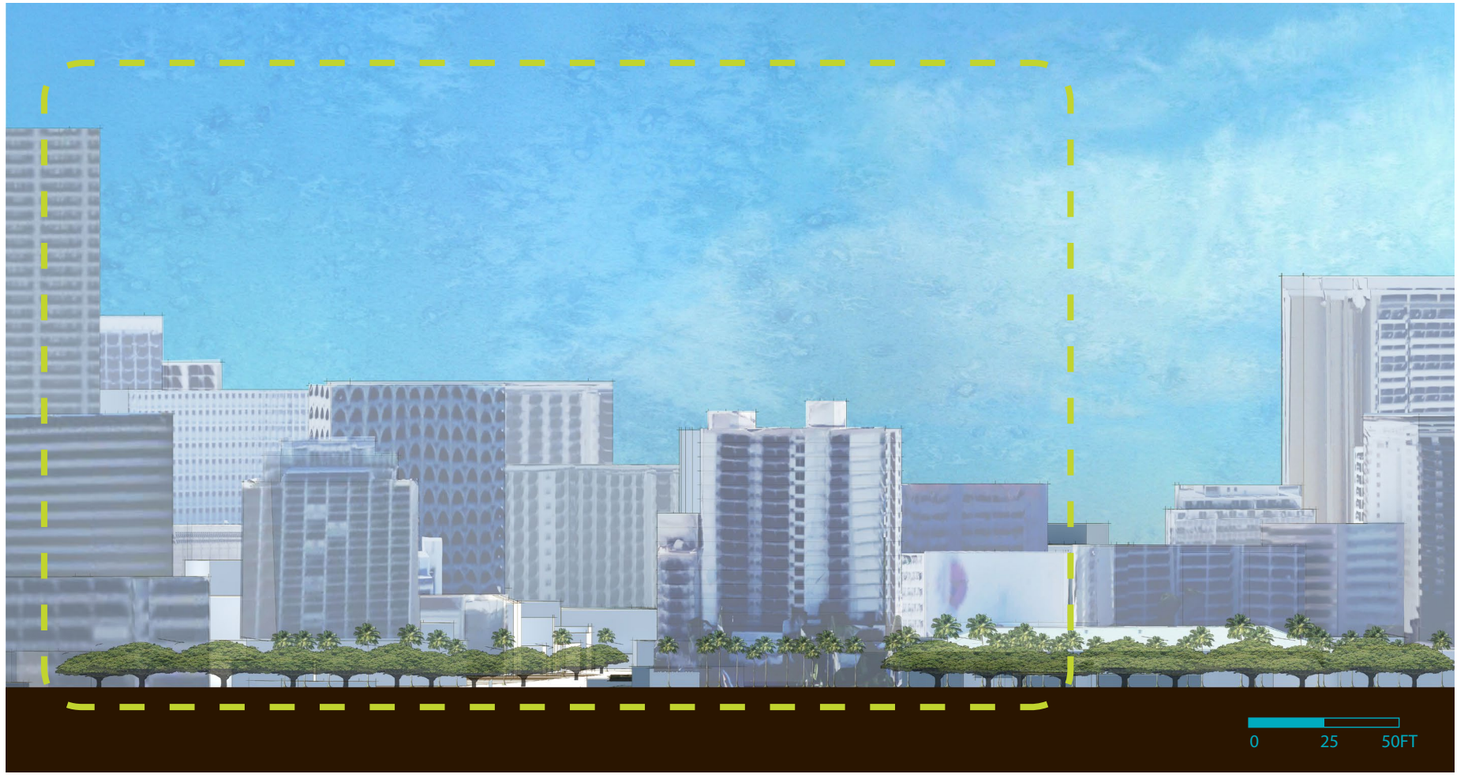
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM DIAMONDHEAD
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

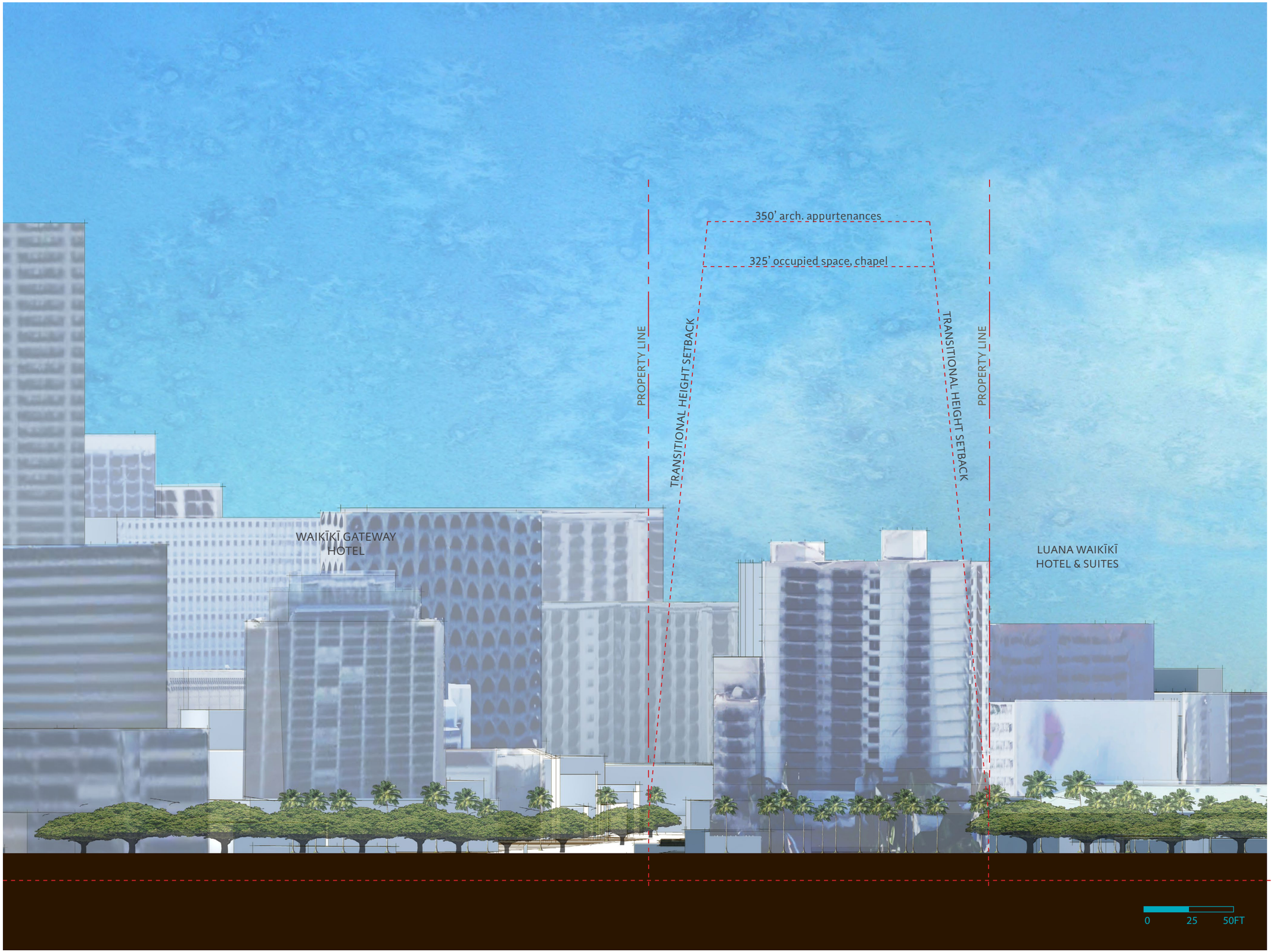
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM 'EWA ALONG KALĀKAUA
PROPOSED

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

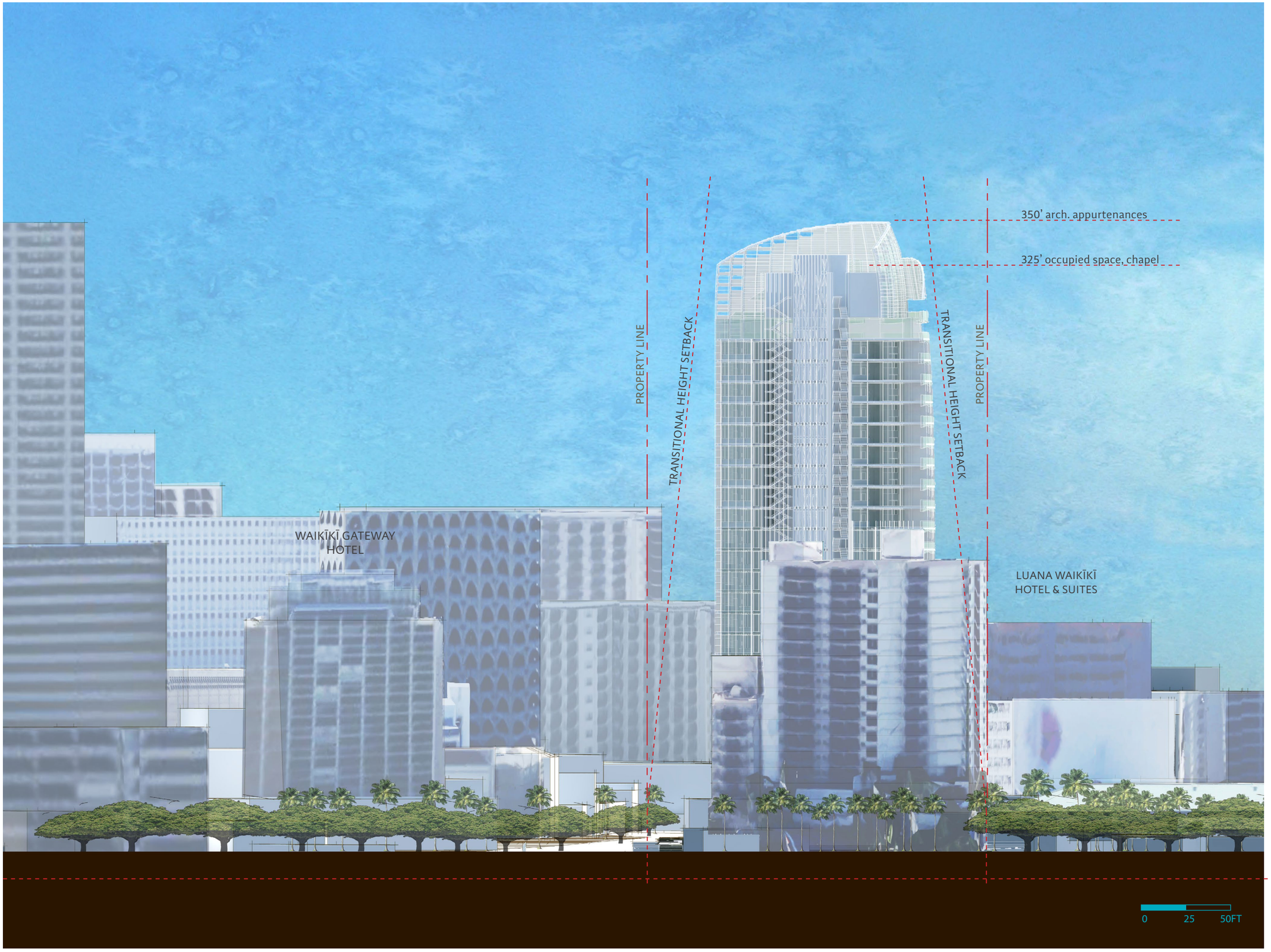
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM 'EWA ALONG KALĀKAUA
EXISTING

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ELEVATION FROM 'EWA ALONG KALĀKAUA
PROPOSED

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA

WAIKĪKĪ

A.2 URBAN DESIGN

PARK KĀLIA

WAIKĪKĪ

VIEW CORRIDORS

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

PUNCHBOWL VIEW CORRIDOR

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

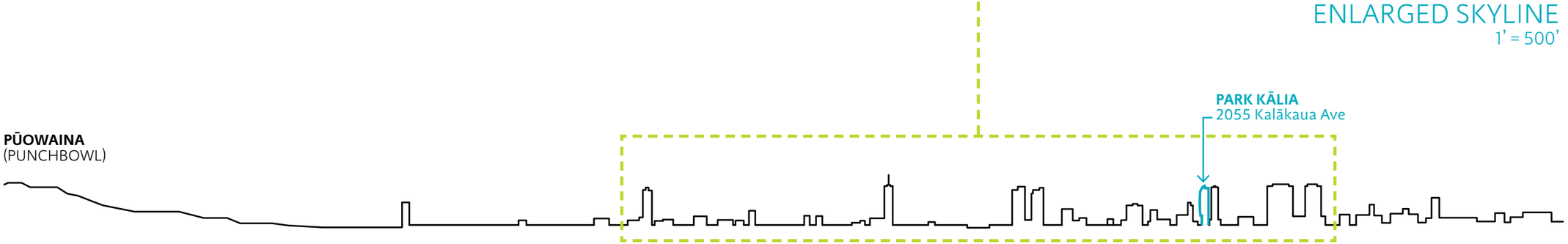
CONCEPT DESIGN
NOVEMBER 2015

PUNCHBOWL VIEW CORRIDOR

APPENDIX A

WCITARCHITECTURE

ENLARGED SKYLINE
1’ = 500’



PUNCHBOWL VIEW CORRIDOR BAND
1’ = 1000’

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

PUNCHBOWL VIEW CORRIDOR

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

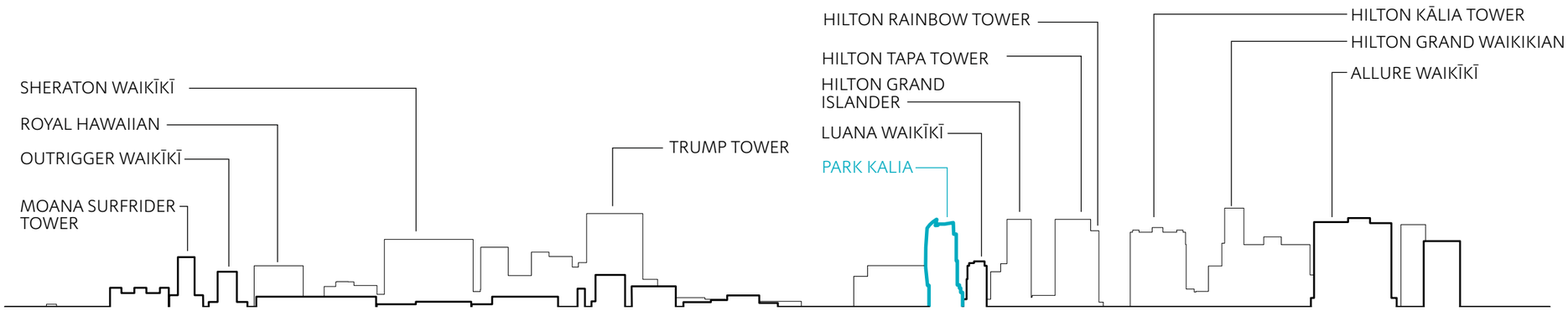
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

WAIKĪKĪ BUILDING MAP

APPENDIX A

WCITARCHITECTURE



KALĀKAUA MAKAI SKYLINE

1’ = 500’

PARK KĀLIA
WAIKĪKĪ

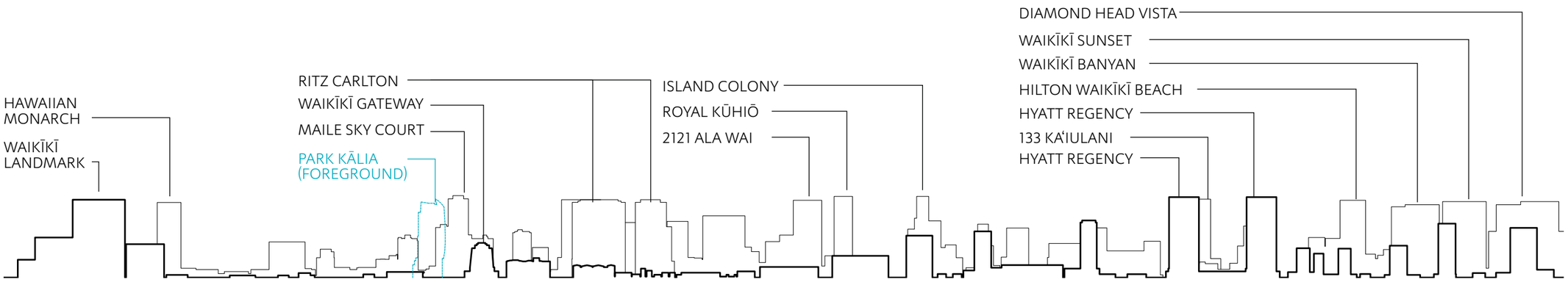
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

KALĀKAUA SKYLINE
(MAKAI)

APPENDIX A

WCITARCHITECTURE



KALĀKAUA MAUKA SKYLINE

1' = 500'

PARK KĀLIA
WAIKĪKĪ

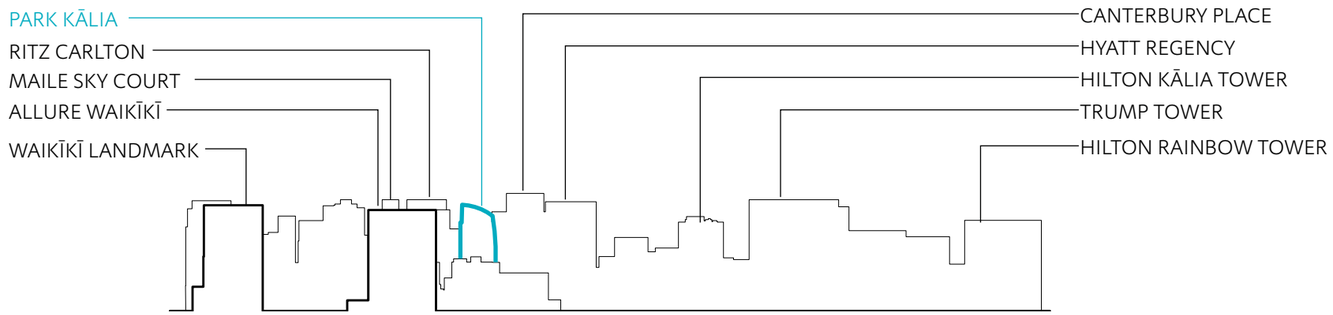
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

KALĀKAUA SKYLINE
(MAUKA)

APPENDIX A

WCITARCHITECTURE



ALA WAI SECTION LOOKING DIAMOND HEAD

1' = 500'

PARK KĀLIA
WAIKĪKĪ

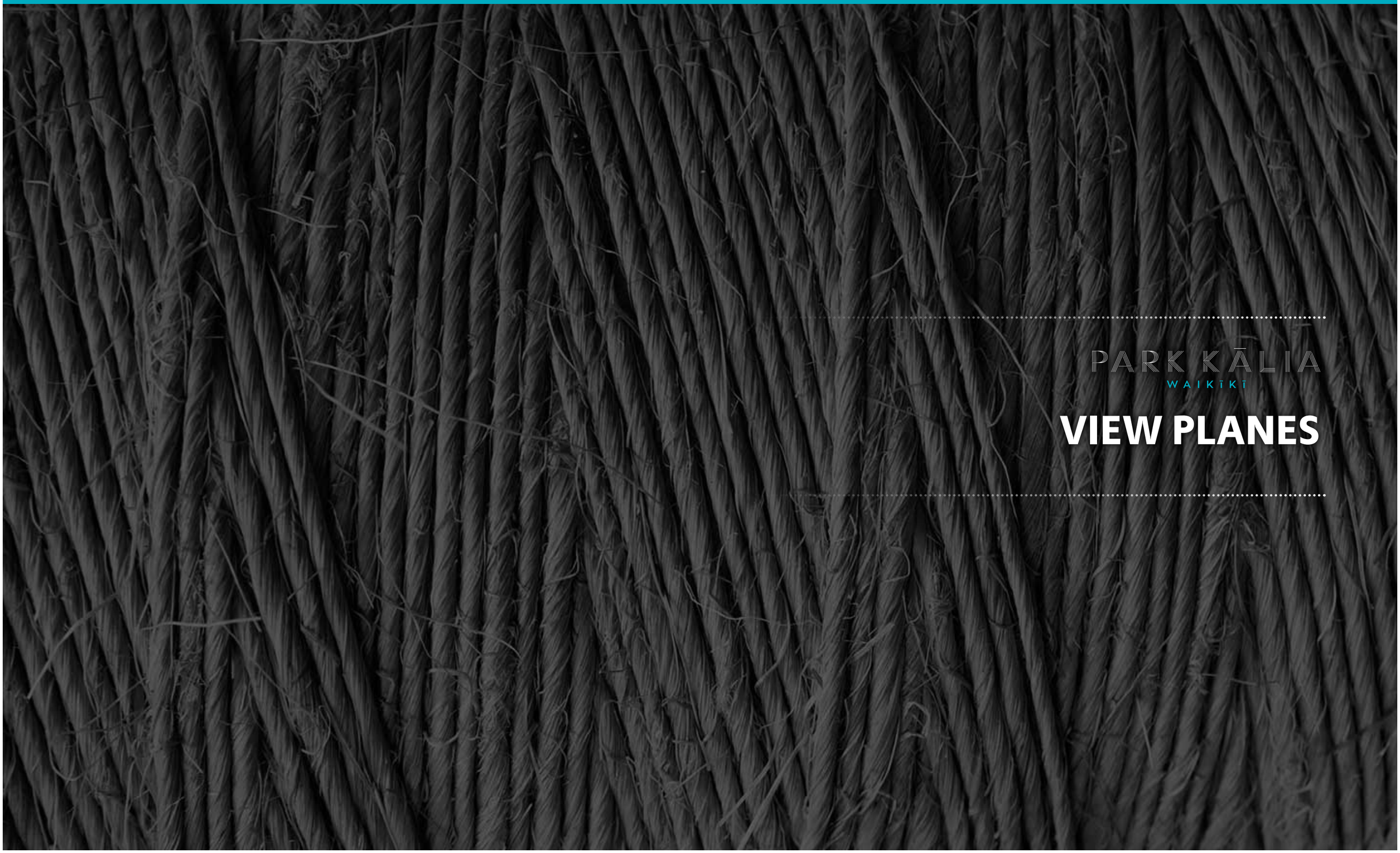
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

ALA WAI SECTION
(LOOKING DH)

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA

WAIKĪKĪ

VIEW PLANES

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

SITE VIEW CORRIDOR
(EXISTING)

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

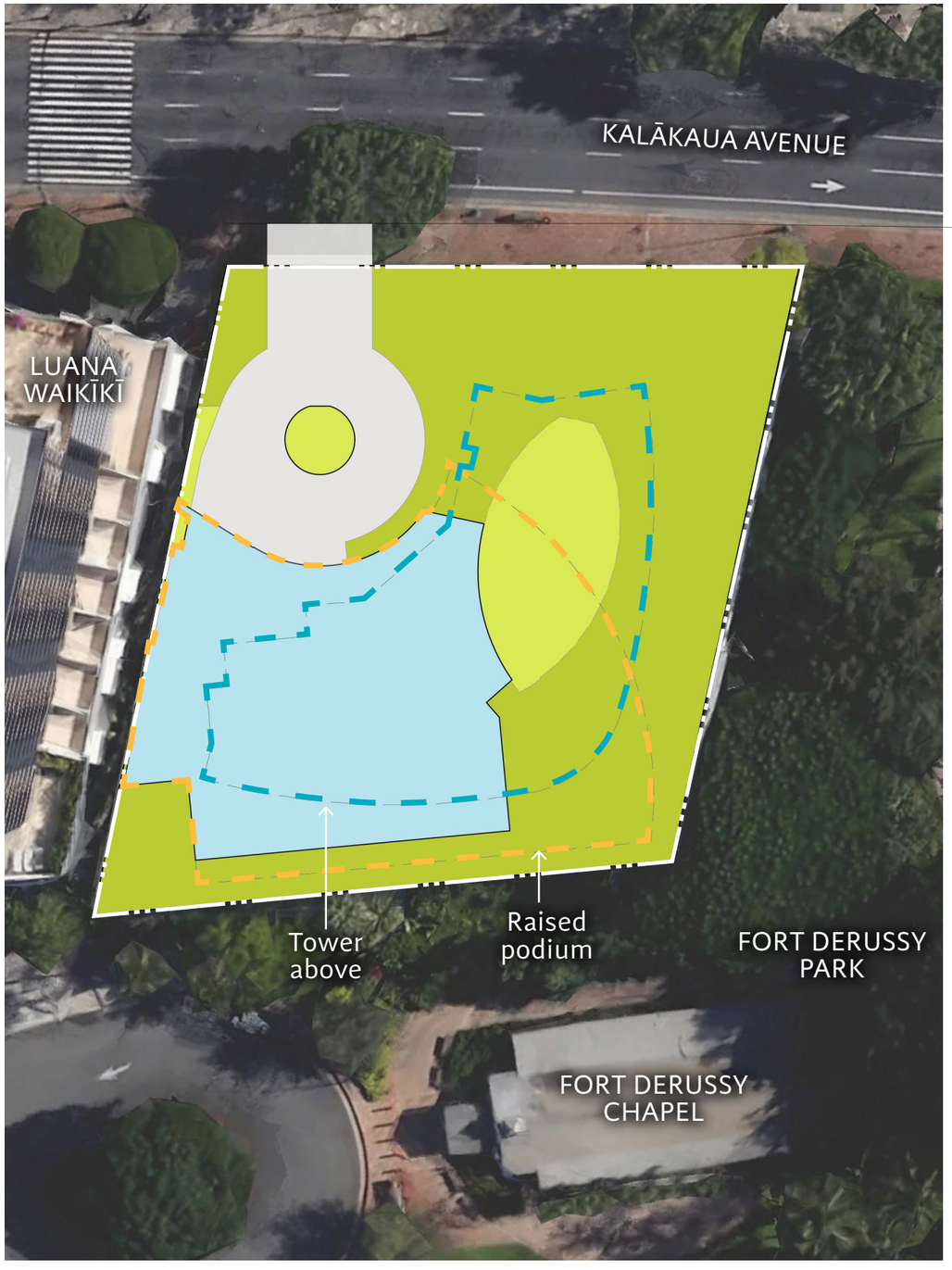
CONCEPT DESIGN
NOVEMBER 2015

SITE VIEW CORRIDOR
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

KYO-YA EXISTING FOOTPRINT



PARK KALIA PROPOSED FOOTPRINT

BUILDING FOOTPRINT

DRIVEWAY

OPEN SPACE,
PUBLIC ACCESS

OPEN SPACE,
VISUAL

0 20 40FT

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

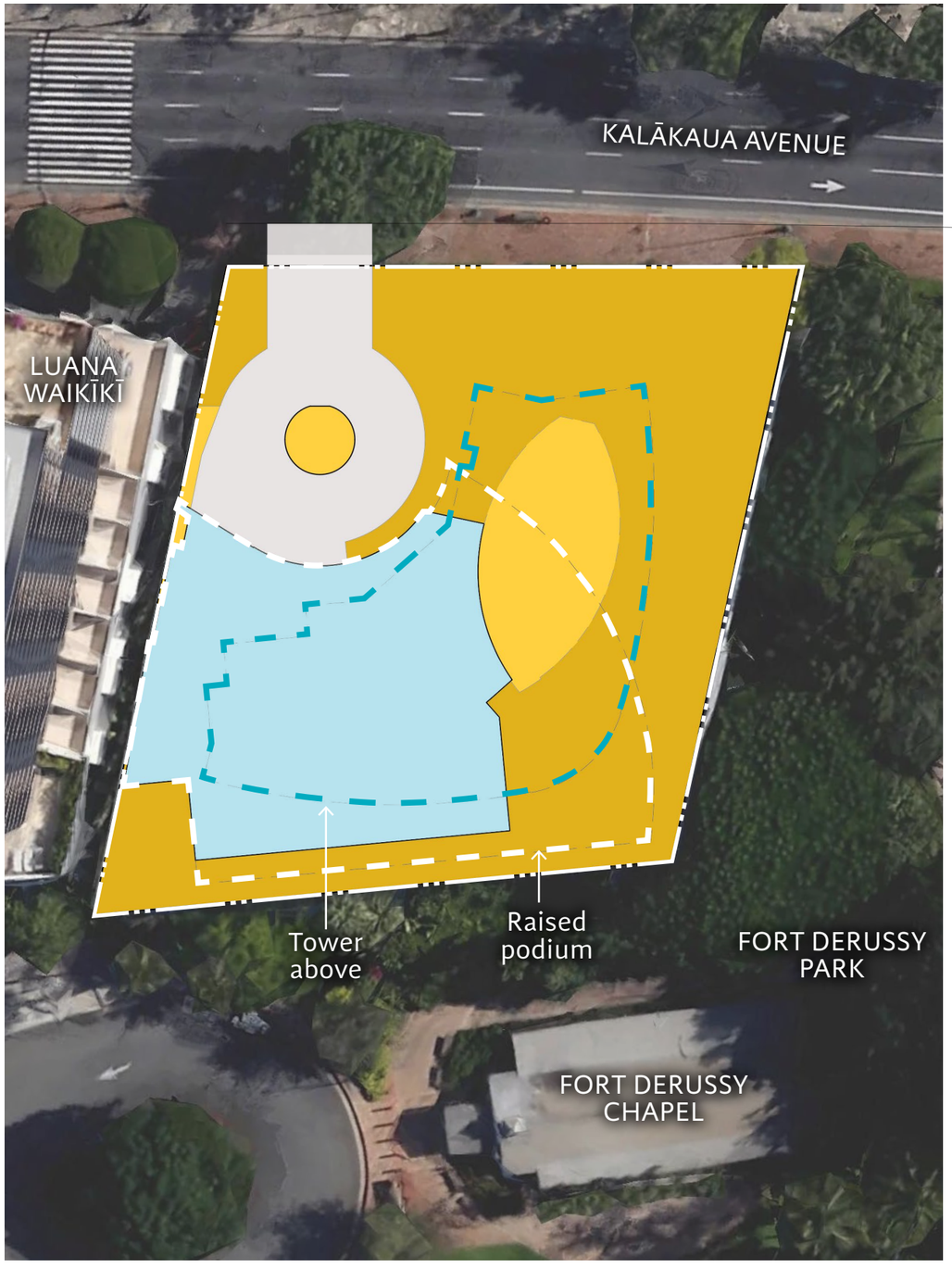
CONCEPT DESIGN
NOVEMBER 2015

BUILDING FOOTPRINT
(COMPARISON)

APPENDIX A

WCITARCHITECTURE

KYO-YA EXISTING FOOTPRINT



PARK KALIA PROPOSED FOOTPRINT

BUILDING FOOTPRINT

DRIVEWAY

PUBLIC GROUND ACCESS

0 20 40FT

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

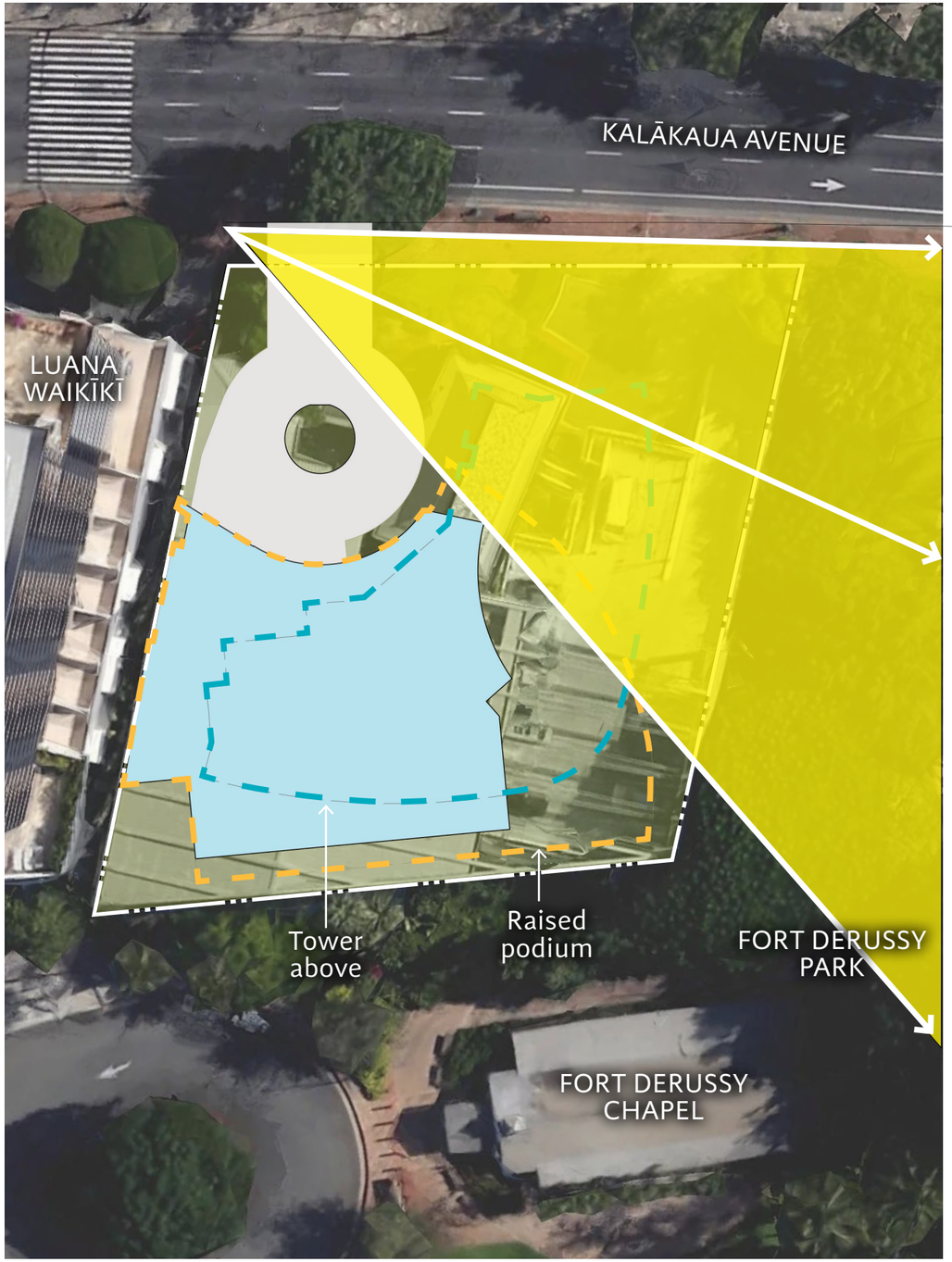
CONCEPT DESIGN
NOVEMBER 2015

PUBLIC GROUND ACCESS
PLAN

APPENDIX A

WCITARCHITECTURE

KYO-YA EXISTING FOOTPRINT



PARK KALIA PROPOSED FOOTPRINT

BUILDING FOOTPRINT

DRIVEWAY

VIEW PLANES

0 20 40FT

PARK KĀLIA
WAIKĪKĪ

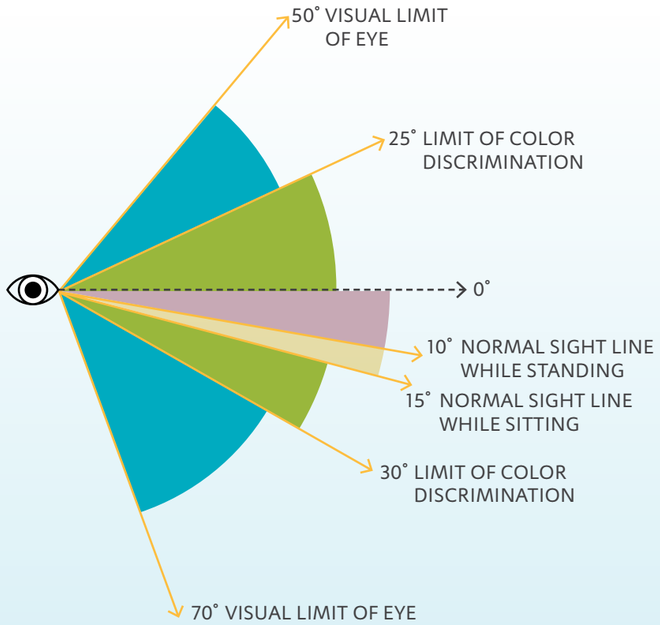
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

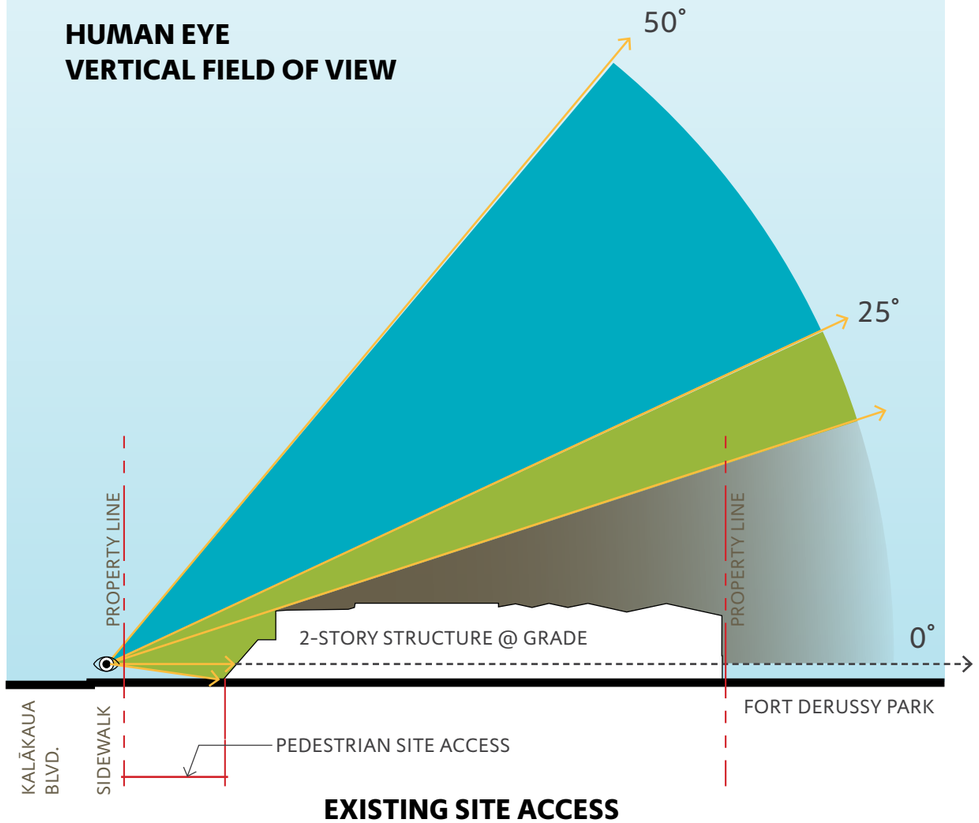
VIEW PLANES
PLAN

APPENDIX A

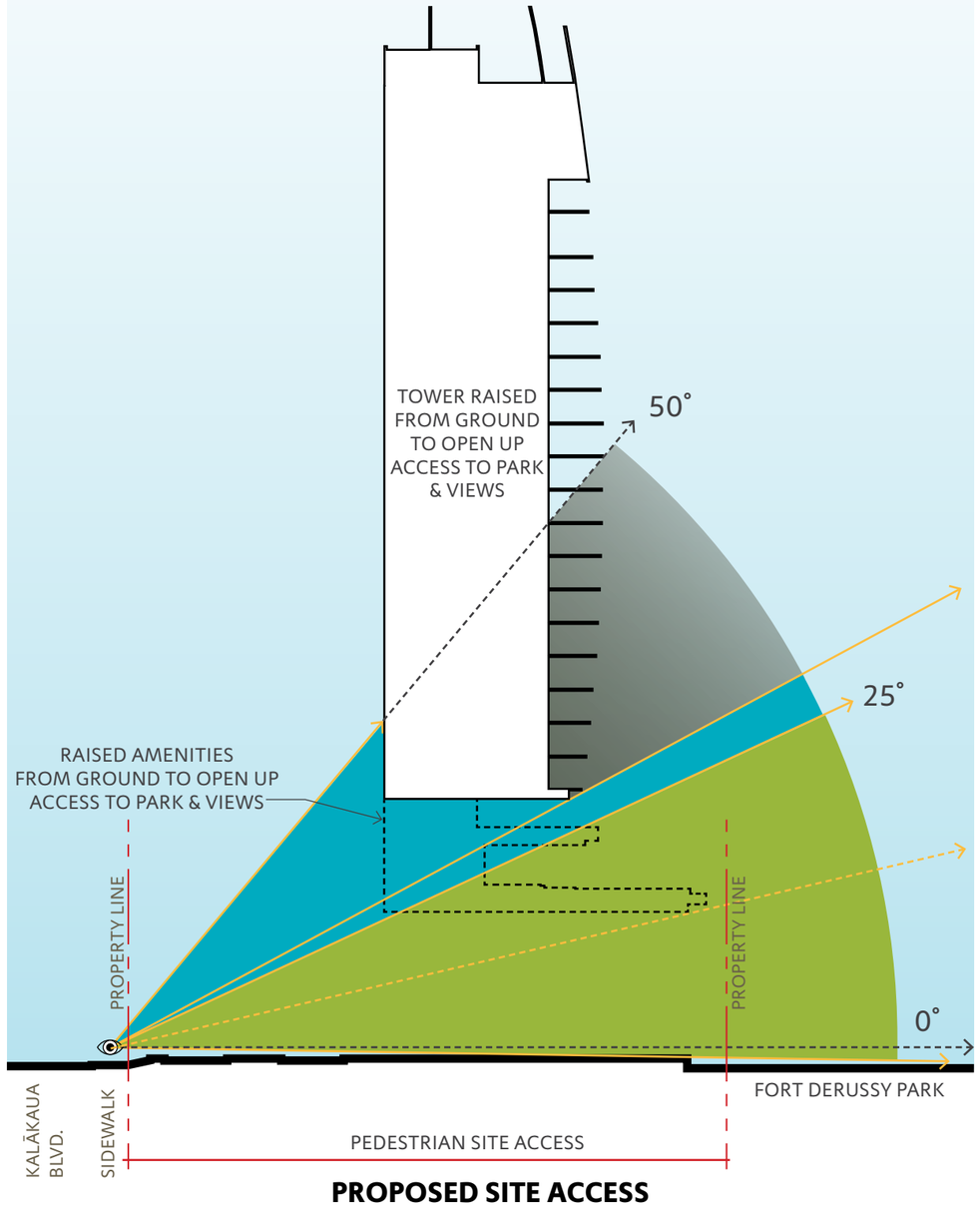
WCITARCHITECTURE



HUMAN EYE
VERTICAL FIELD OF VIEW



EXISTING SITE ACCESS



PROPOSED SITE ACCESS

PARK KĀLIA
WAIKĪKĪ

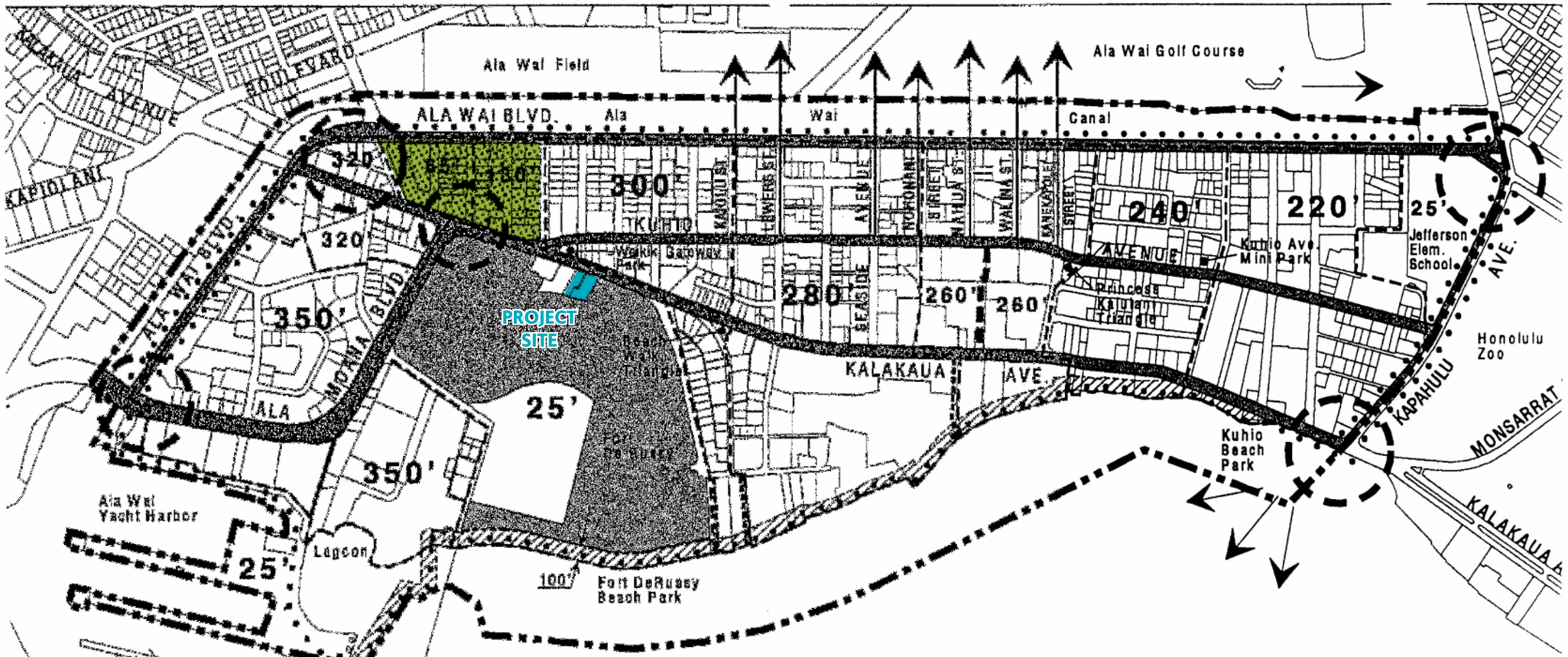
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

GROUND LEVEL ACCESS
SECTION

APPENDIX A

WCITARCHITECTURE

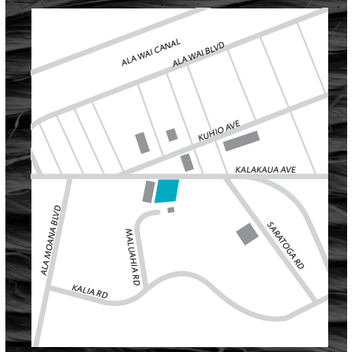


Note: Project site is outside of Fort DeRussy Mauka-Makai View Corridor

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



VICINITY MAP
(EXISTING)

APPENDIX XX

WCITARCHITECTURE

VIEW BEFORE KEONIANA ST.

VIEW BEFORE NIU ST / ALA MOANA BLVD.

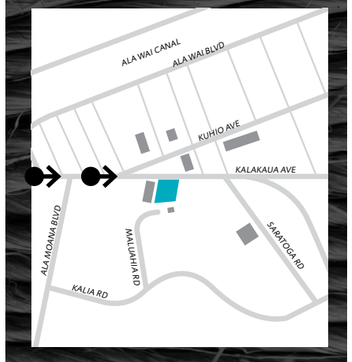
VIEW AT NIU ST / ALA MOANA BLVD.

VIEW BEFORE NIU ST / ALA MOANA BLVD.

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

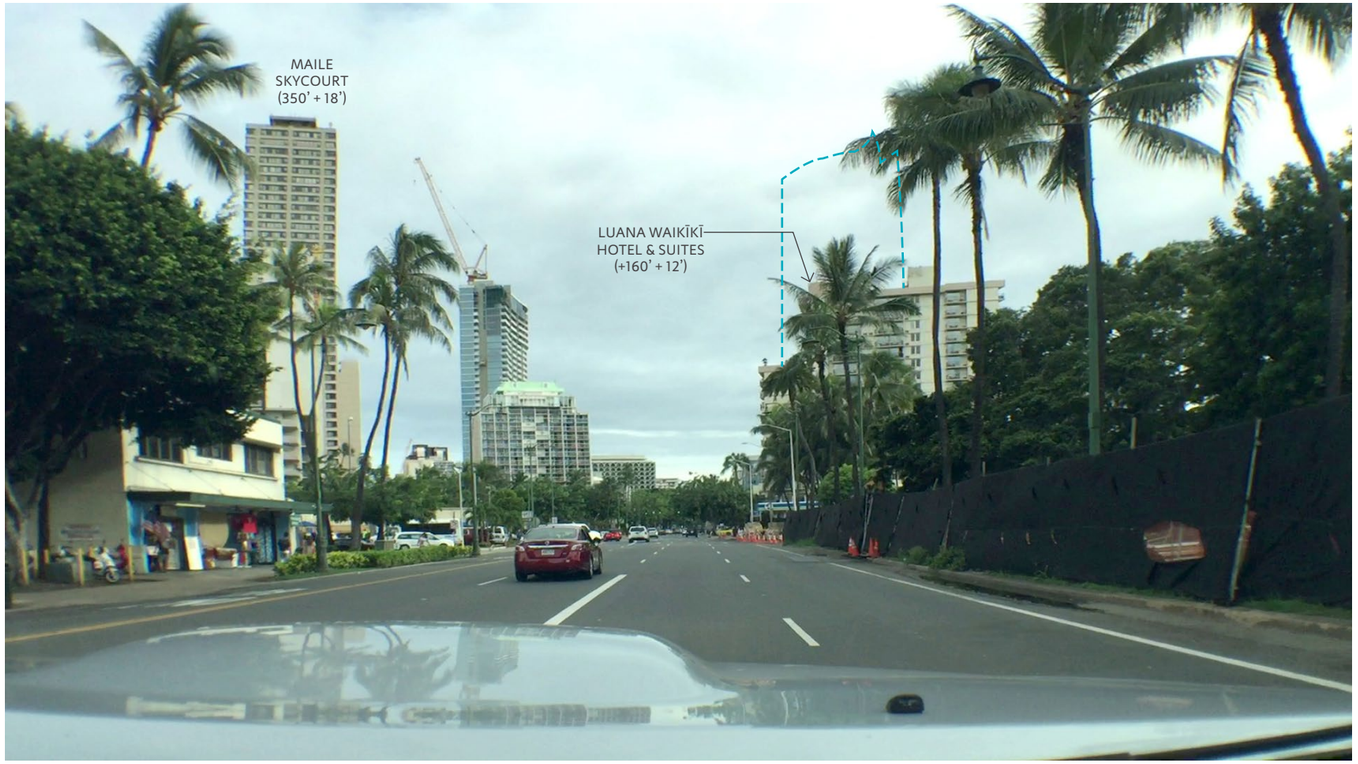
CONCEPT DESIGN
NOVEMBER 2015



MAJOR STREET SITE PHOTOS
(EXISTING)

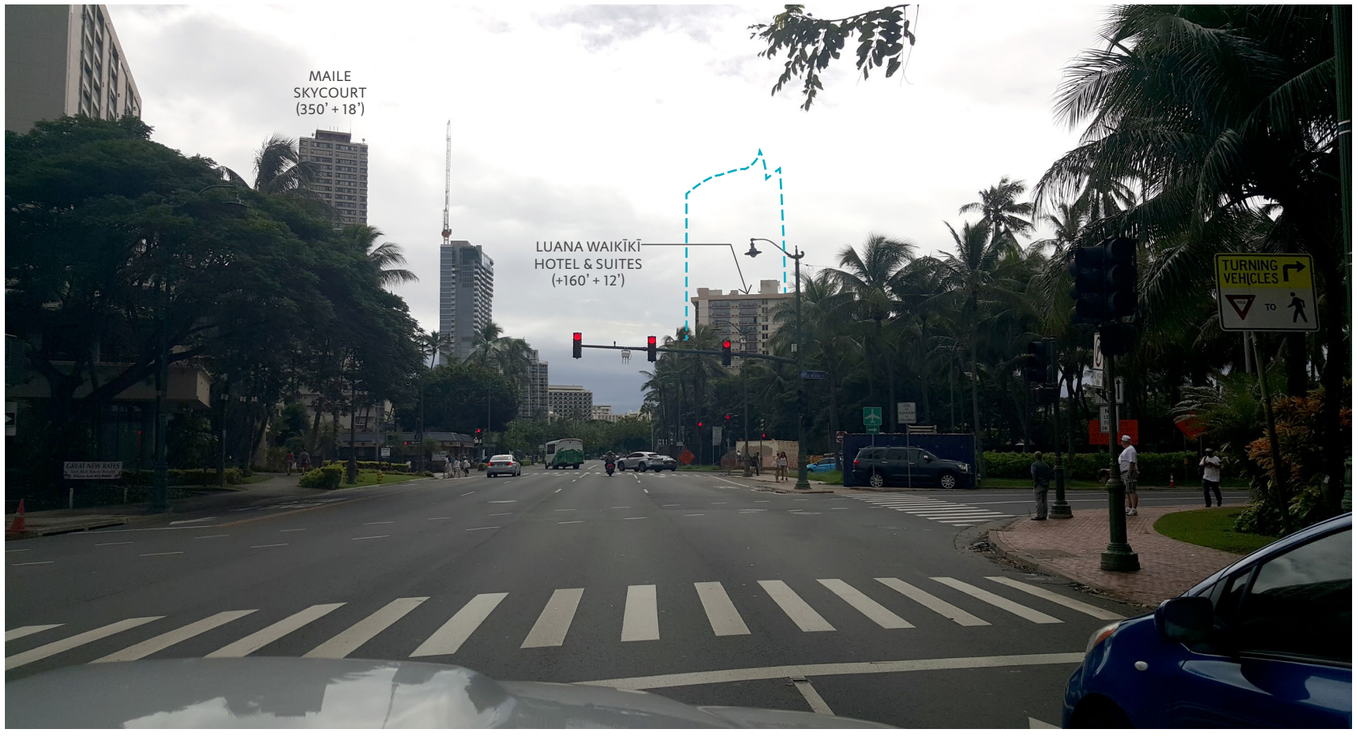
APPENDIX A

WCITARCHITECTURE



VIEW BEFORE KEONIANA ST.

VIEW BEFORE NIU ST / ALA MOANA BLVD. NOT VISIBLE



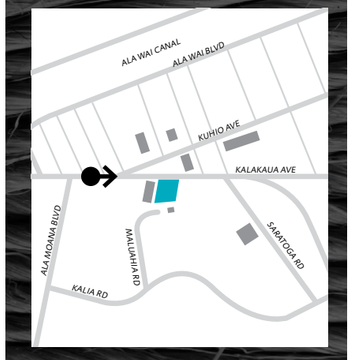
VIEW AT NIU ST / ALA MOANA BLVD.

VIEW NIU ST / ALA MOANA BLVD. NOT VISIBLE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



MAJOR STREET SITE PHOTOS
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

VIEW GOING ʻEWA FROM KALĀKAUA

VIEW FROM MEMORIAL*

VIEW FROM SARATOGA ROAD, POST OFFICE*

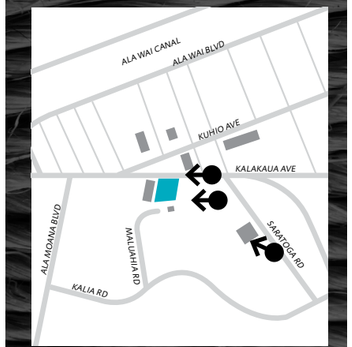
VIEW FROM SARATOGA ROAD, PARKING LOT*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

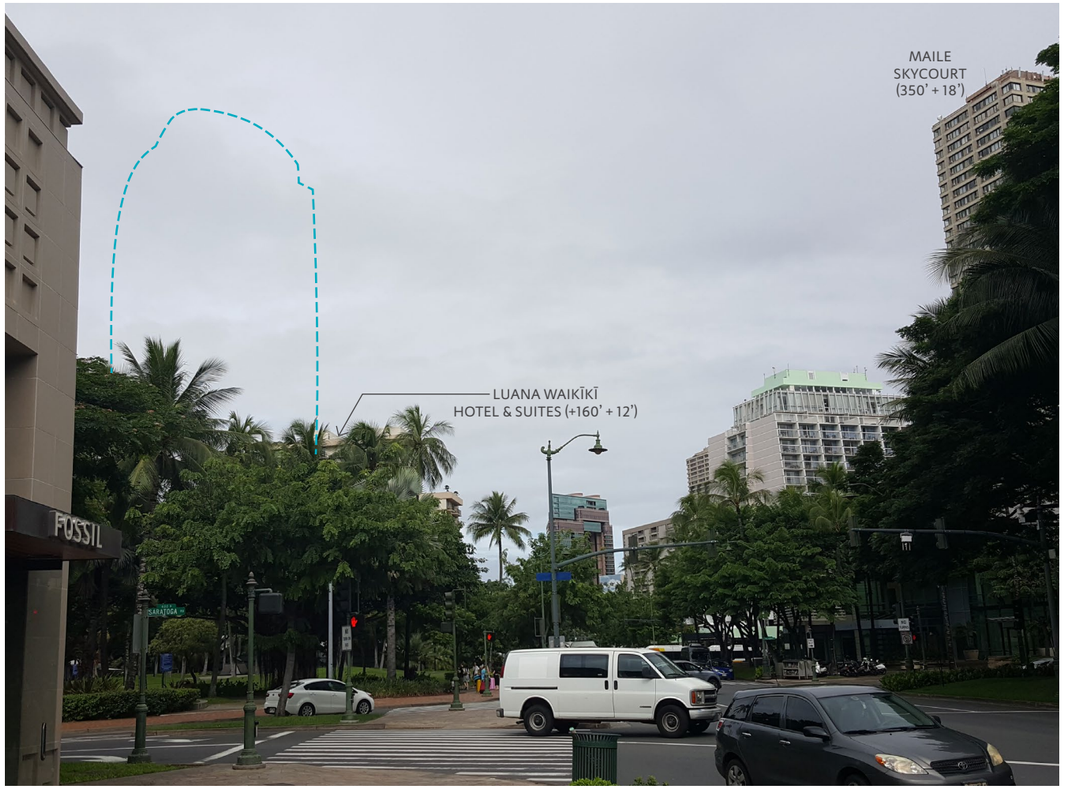
CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(EXISTING)

APPENDIX A

WCITARCHITECTURE



VIEW GOING ʻEWA FROM KALĀKAUA

VIEW FROM MEMORIAL*

VIEW FROM SARATOGA ROAD, POST OFFICE*

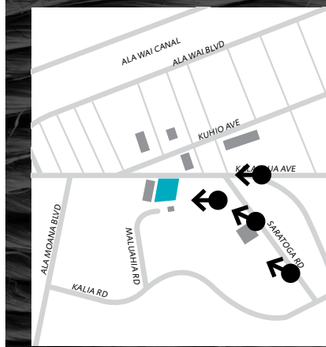
VIEW FROM SARATOGA ROAD, PARKING LOT*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

VIEW FROM FORT DERUSSY BEACH*

VIEW FROM KĀLIA ROAD, PARK*

VIEW FROM KĀLIA ROAD, PARKING*

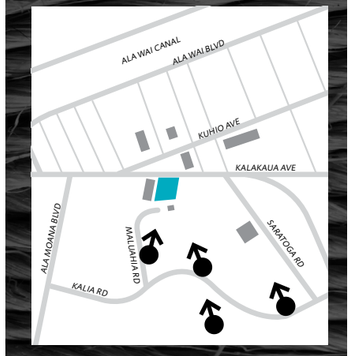
VIEW FROM KĀLIA ROAD, PARK*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(EXISTING)

APPENDIX A

WCITARCHITECTURE

VIEW FROM FORT DERUSSY BEACH, MOSTLY NOT VISIBLE*

VIEW FROM KĀLIA ROAD, PARK*

VIEW FROM KĀLIA ROAD, PARKING*

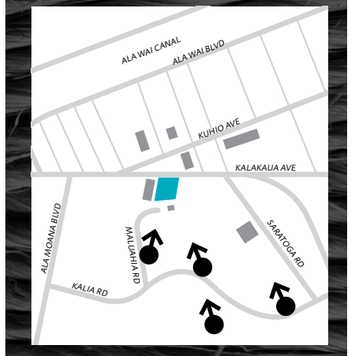
VIEW FROM KĀLIA ROAD, PARK*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

VIEW FROM OLOHANA STREET*

VIEW FROM NAMAHANA STREET*

VIEW FROM KUAMOʻO STREET*

VIEW FROM KEONIANA STREET, NOT VISIBLE*

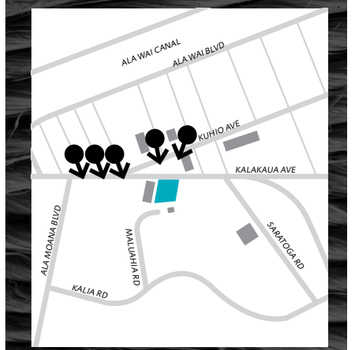
VIEW FROM PAU STREET, NOT VISIBLE*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(EXISTING)

APPENDIX A

WCITARCHITECTURE

VIEW FROM OLOHANA STREET*

VIEW FROM NAMAHANA STREET*

VIEW FROM KUAMOʻO STREET*

VIEW FROM KEONIANA STREET, NOT VISIBLE*

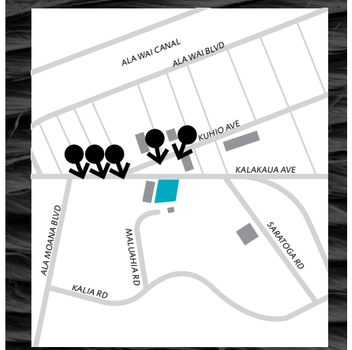
VIEW FROM PAU STREET, NOT VISIBLE*

** VIEW NOT IDENTIFIED BY LUO AS SIGNIFICANT VIEW CORRIDORS*

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



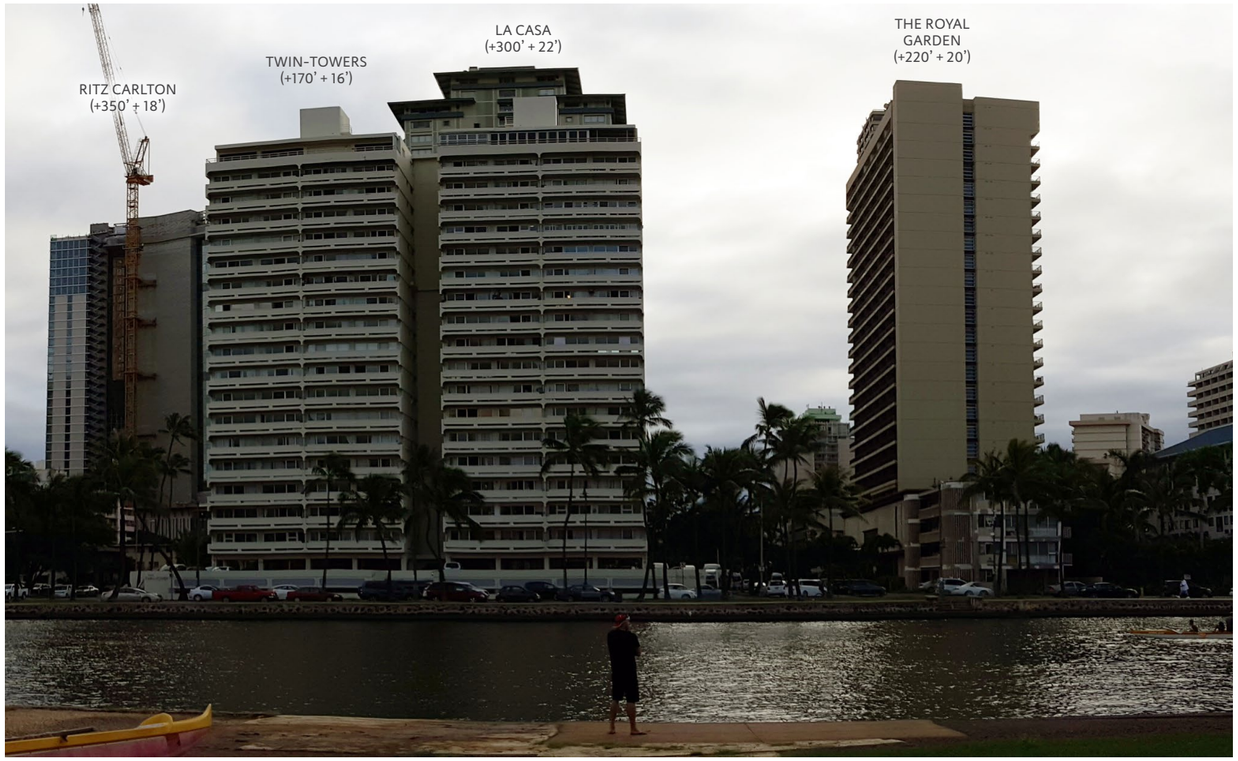
SITE PHOTOS
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

VIEW FROM UNIVERSITY AVENUE

VIEWS FROM ALA WAI CANOE CLUB



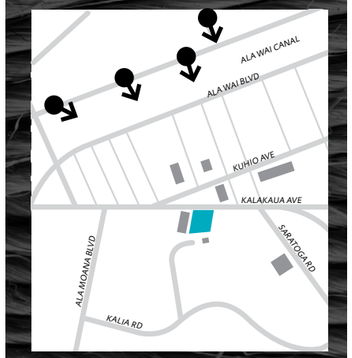
VIEW FROM ALA WAI PARK TRAIL

VIEW FROM ALA WAI PARK PARKING

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(EXISTING)

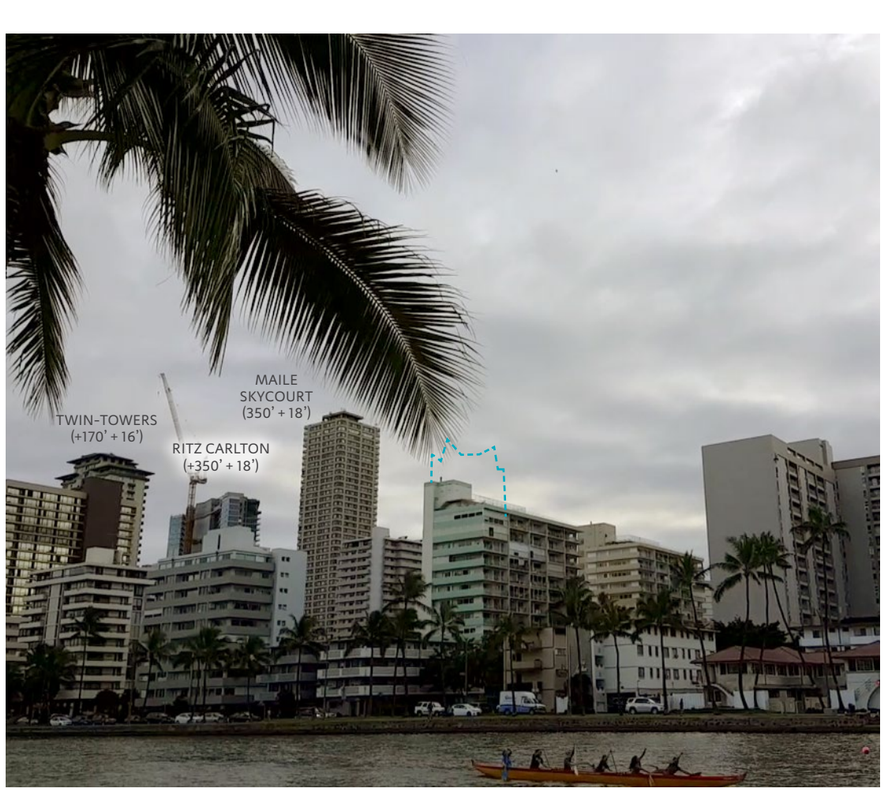
APPENDIX A

WCITARCHITECTURE

VIEW FROM UNIVERSITY AVENUE

VIEW FROM ALA WAI CANOE CLUB

VIEW FROM ALA WAI PARK TRAIL

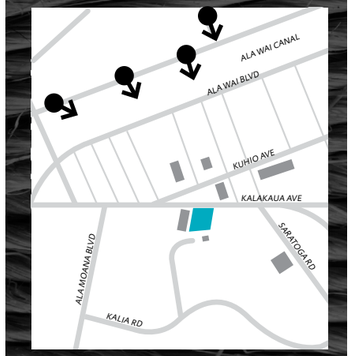


VIEW FROM ALA WAI PARK PARKING

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



SITE PHOTOS
(PROPOSED)

APPENDIX A

WCITARCHITECTURE

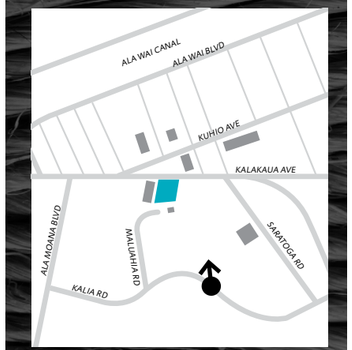
The Koʻolau Mountain Range was not visible three (3) of the four (4) site visits due to rain clouds, volcanic haze, and glare.

VIEW AT KURODA FIELD FROM KĀLIA ROAD

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



MAJOR STREET SITE PHOTOS
(EXISTING)

APPENDIX A

WCITARCHITECTURE

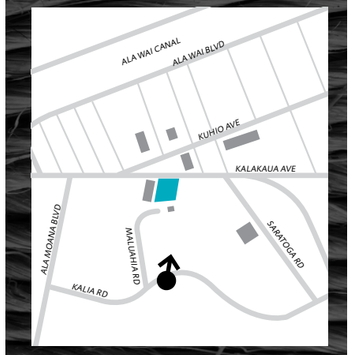
The Koʻolau Mountain Range was not visible three (3) of the four (4) site visits due to rain clouds, volcanic haze, and glare.

VIEW AT KURODA FIELD FROM KĀLIA ROAD

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



MAJOR STREET SITE PHOTOS
(EXISTING)

APPENDIX A

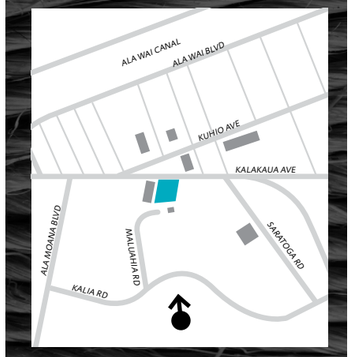
WCITARCHITECTURE

VIEW FROM HALE KOA HOTEL ROOF TOP

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015



MAJOR STREET SITE PHOTOS
(EXISTING)

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA

WAIKĪKĪ

MAUKA-MAKAI MASSING COMPARISSON

1 PARK KĀLIA

Building Height:	325 - ft
Appurtenance:	350-ft
Status:	Concept
Completion:	N/A

2 THE RITZ-CARLTON

Building Height:	350 - ft
Appurtenance:	
Status:	Construction
Completion:	2017

3 133 KAʻIULANI

Building Height:	358 - ft
Appurtenance:	370-ft
Status:	EA
Completion:	N/A

4 TRUMP TOWER

Building Height:	350 - ft
Appurtenance:	368-ft
Status:	BUILT
Completion:	20XX

5 SHERATON WAIKĪKĪ

Building Height:	300 - ft
Appurtenance:	315-ft
Status:	Complete
Completion:	1971

0 250 500 1000FT

PODIUM

TOWER

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

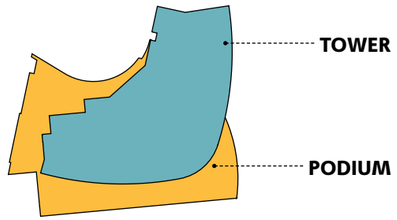
MAUKA-MAKAI MASSING STUDY
(BUILDING LOCATION)

APPENDIX A

WCITARCHITECTURE

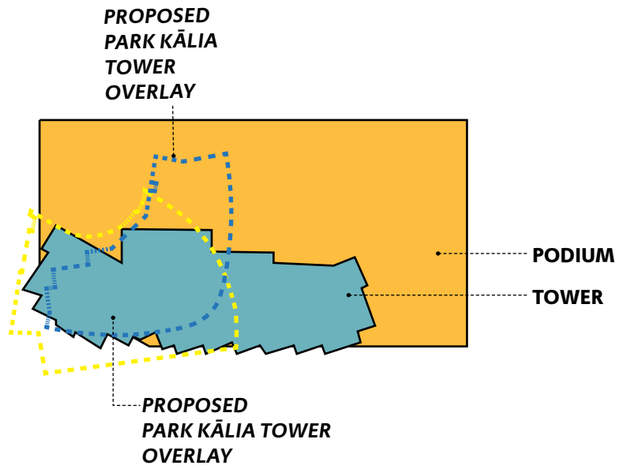
PROPOSED
PARK KĀLIA TOWER

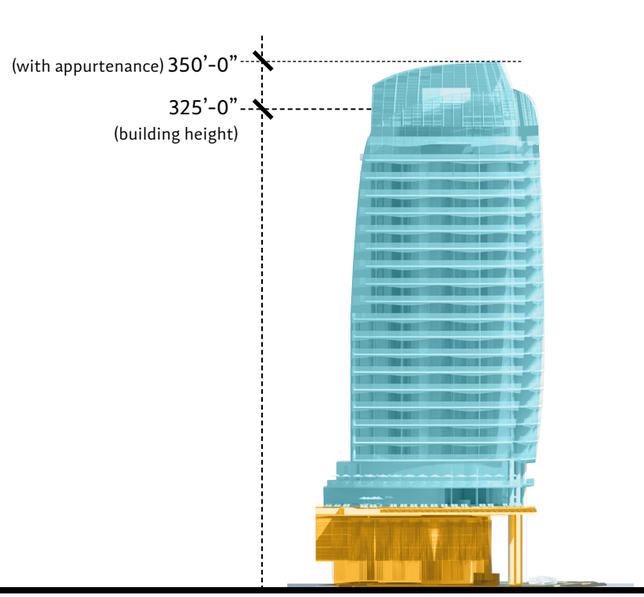
Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A



133 KAʻIULANI (KING'S VILLAGE)

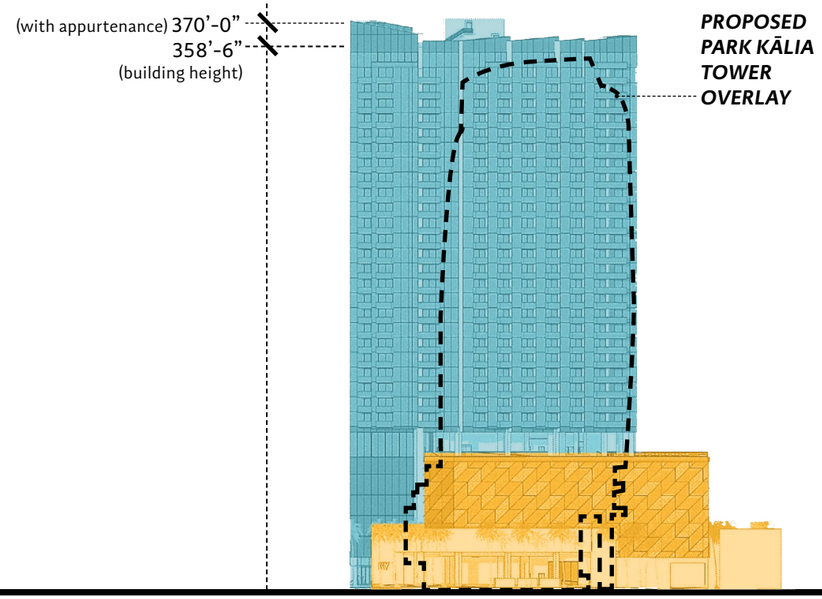
Building Height: 350 - ft
Appurtenance: 370-ft
Status: Entitlements
Completion: N/A





PROPOSED PARK KĀLIA TOWER

Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A



133 KAʻIULANI (KING'S VILLAGE)

Building Height: 350 - ft
Appurtenance: 370-ft
Status: Entitlements
Completion: N/A

0 25 50 100FT

TOWER

PODIUM

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

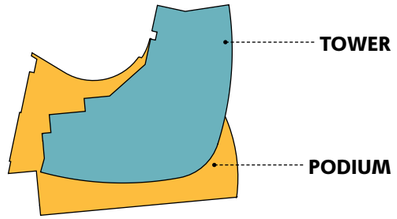
MAUKA-MAKAI MASSING STUDY
(COMPARISON)

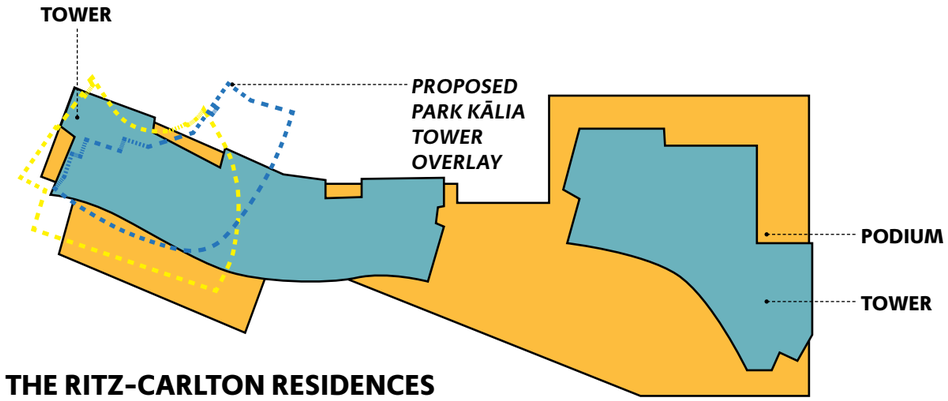
APPENDIX A

WCITARCHITECTURE

PROPOSED
PARK KĀLIA TOWER

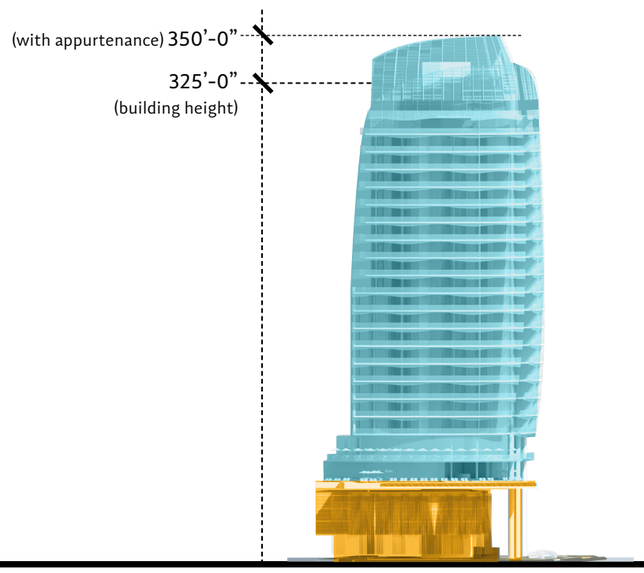
Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A

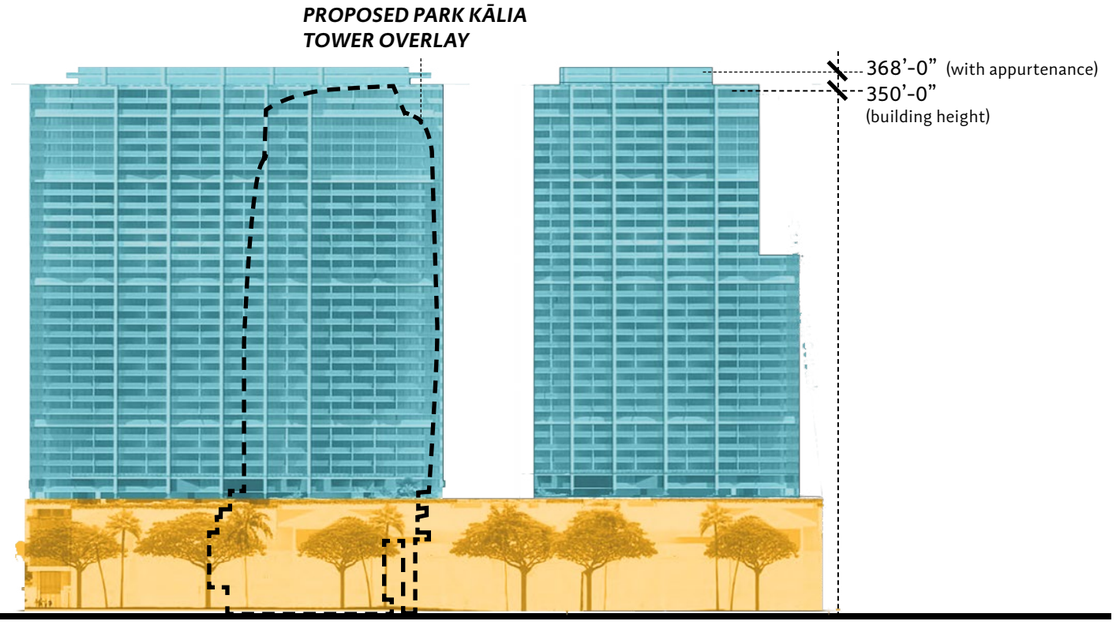




THE RITZ-CARLTON RESIDENCES

Building Height: 350 - ft
Appurtenance: 368-ft
Status: Construction
Completion: 2017 (both towers)





PROPOSED PARK KĀLIA TOWER

Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A

THE RITZ-CARLTON RESIDENCES

Building Height: 350 - ft
Appurtenance: 368-ft
Status: Construction
Completion: 2017 (both towers)

0 25 50 100FT

TOWER

PODIUM

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

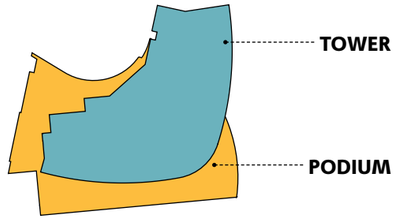
MAUKA-MAKAI MASSING STUDY
(COMPARISON)

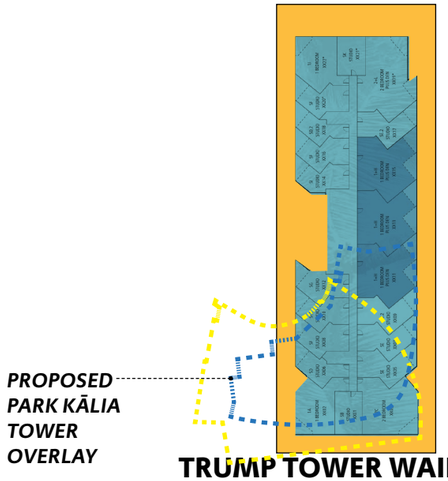
APPENDIX A

WCITARCHITECTURE

PROPOSED
PARK KĀLIA TOWER

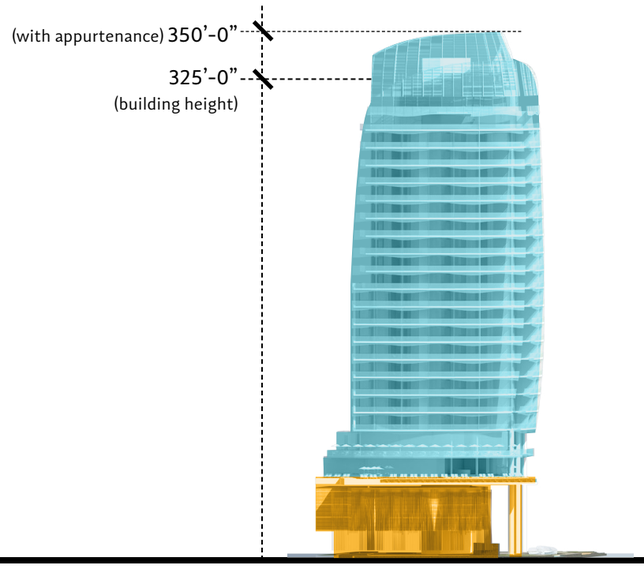
Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A





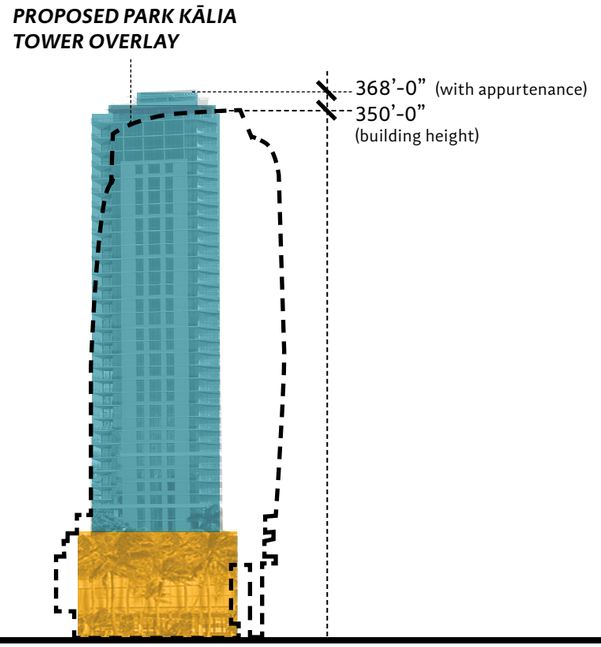
TRUMP TOWER WAIKĪKĪ

Building Height: 350 - ft
Appurtenance: 368-ft
Status: BUILT
Completion: 20XX



PROPOSED PARK KĀLIA TOWER

Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A



TRUMP TOWER WAIKĪKĪ

Building Height: 350 - ft
Appurtenance: 368-ft
Status: BUILT
Completion: 20XX

0 25 50 100FT

TOWER

PODIUM

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

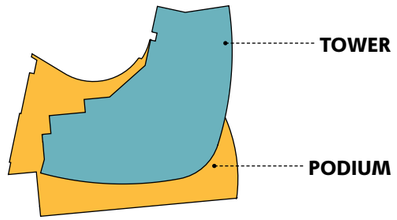
MAUKA-MAKAI MASSING STUDY
(COMPARISON)

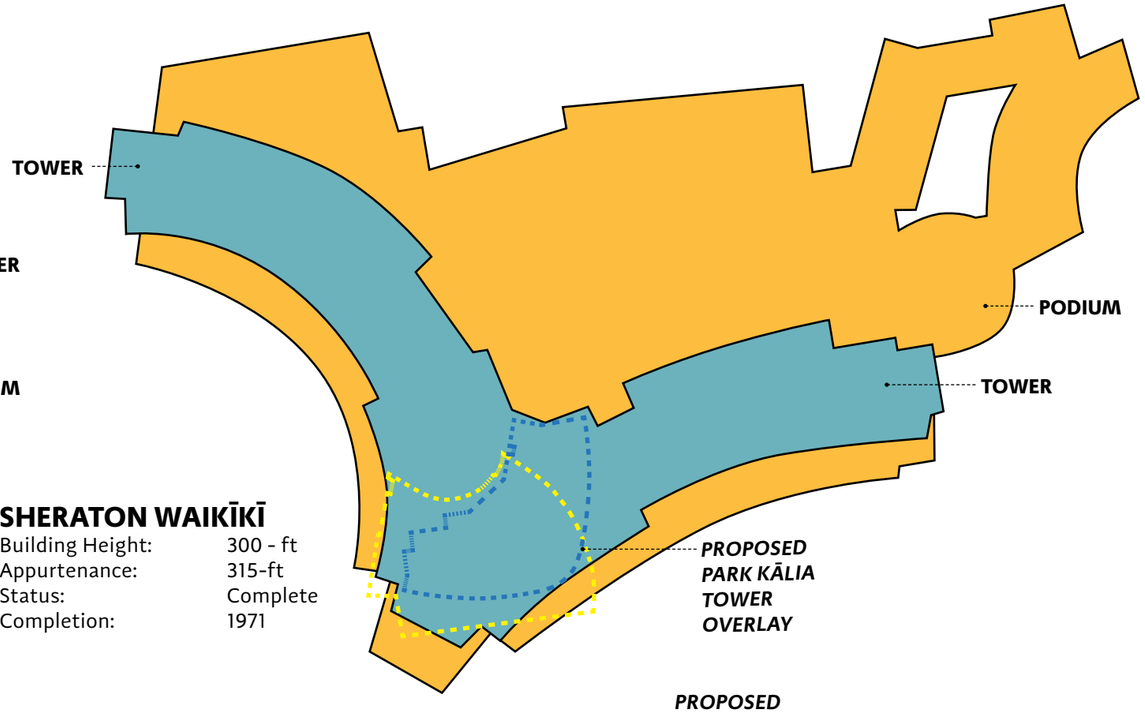
APPENDIX A

WCITARCHITECTURE

PROPOSED
PARK KĀLIA TOWER

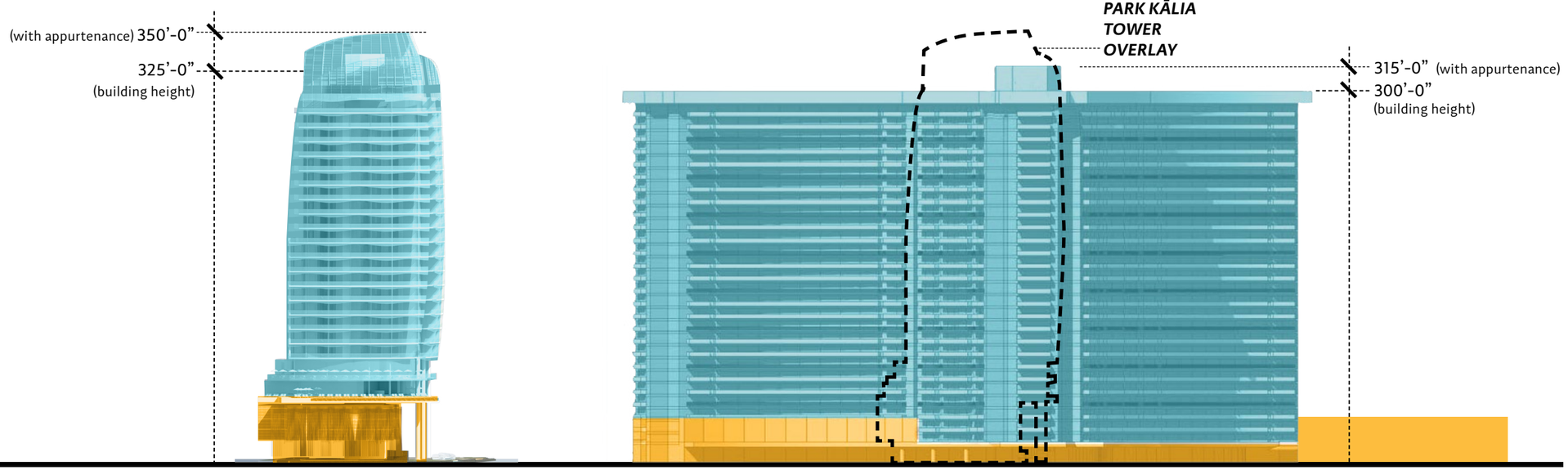
Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A





SHERATON WAIKĪKĪ

Building Height: 300 - ft
Appurtenance: 315-ft
Status: Complete
Completion: 1971



PROPOSED PARK KĀLIA TOWER

Building Height: 325 - ft
Appurtenance: 350-ft
Status: Concept
Completion: N/A

SHERATON WAIKĪKĪ

Building Height: 300 - ft
Appurtenance: 315-ft
Status: Complete
Completion: 1971

0 25 50 100FT

TOWER

PODIUM

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

MAUKA-MAKAI MASSING STUDY
(COMPARISON)

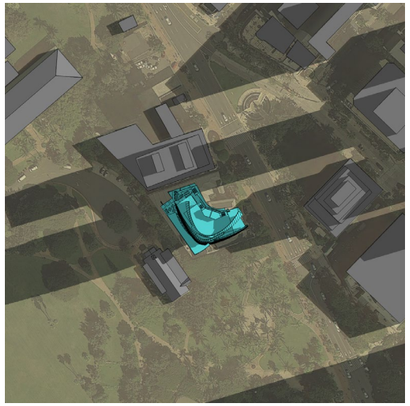
APPENDIX A

WCITARCHITECTURE

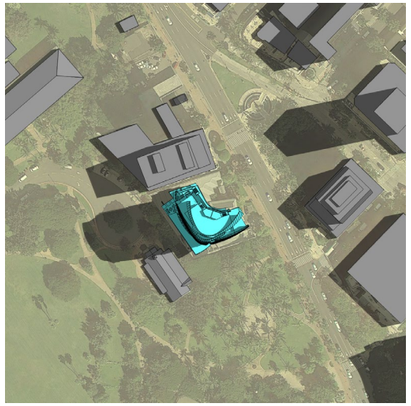
PARK KĀLIA

WAIKĪKĪ

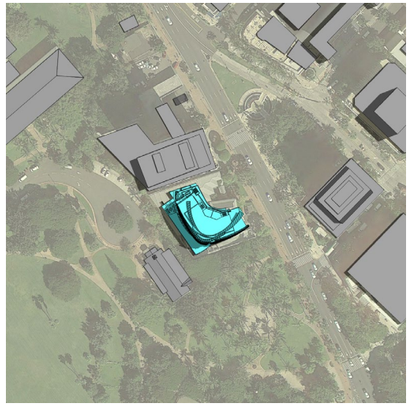
SHADOW STUDY



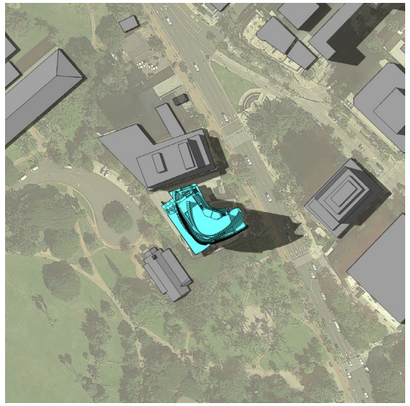
SUMMER SOLSTICE - *08:00 AM*



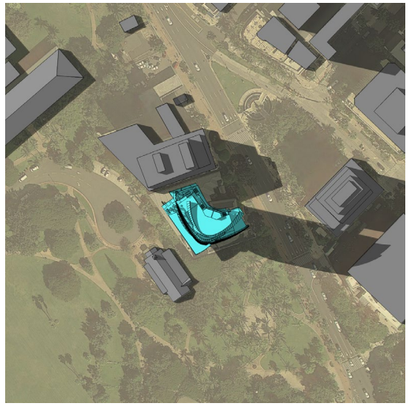
SUMMER SOLSTICE - *10:00 AM*



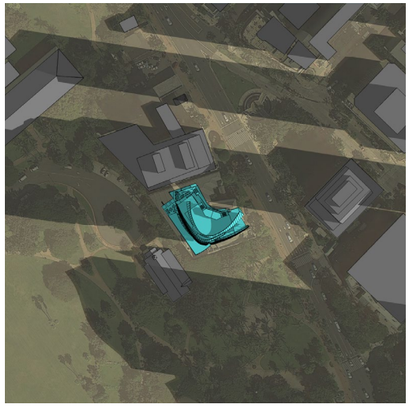
SUMMER SOLSTICE - *12:00 PM*



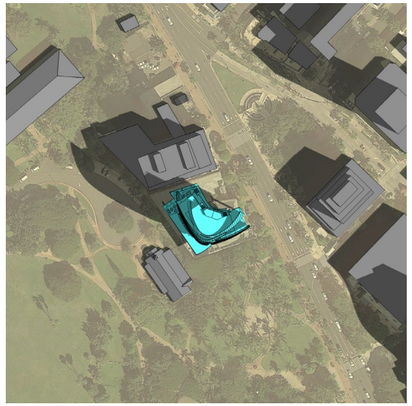
SUMMER SOLSTICE - *02:00 PM*



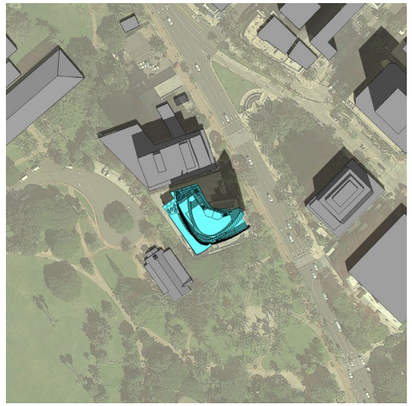
SUMMER SOLSTICE - *04:00 PM*



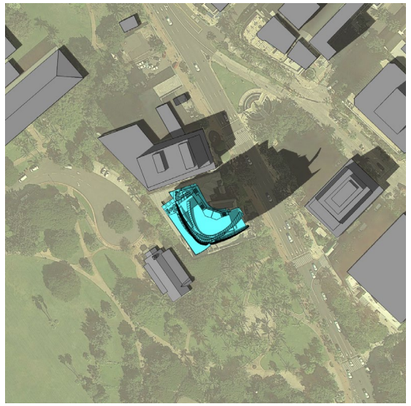
EQUINOX - *08:00 AM*



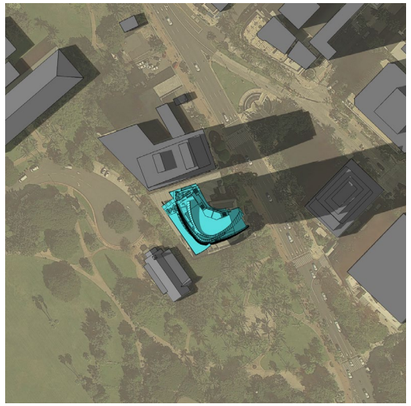
EQUINOX - *10:00 AM*



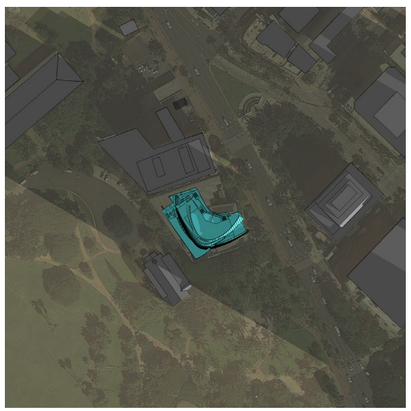
EQUINOX - *12:00 PM*



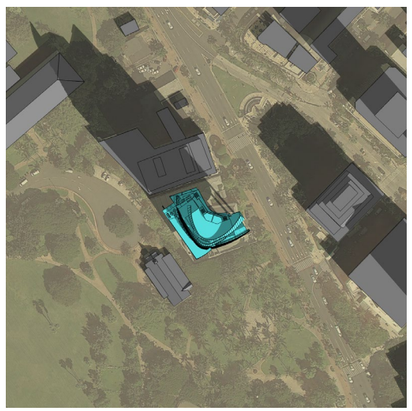
EQUINOX - *02:00 PM*



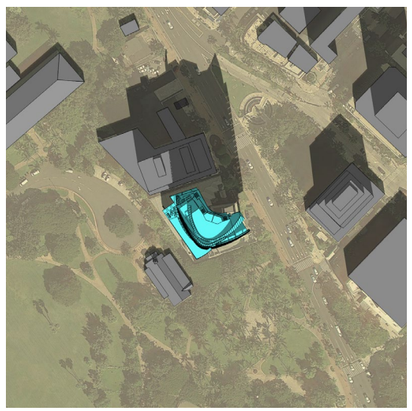
EQUINOX - *04:00 PM*



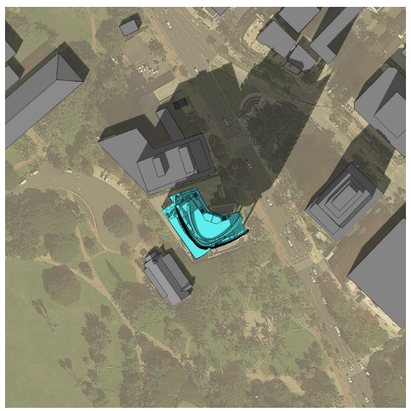
WINTER SOLSTICE - *08:00 AM*



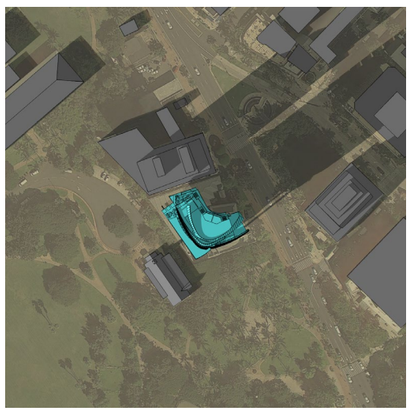
WINTER SOLSTICE - *10:00 AM*



WINTER SOLSTICE - *12:00 PM*



WINTER SOLSTICE - *02:00 PM*



WINTER SOLSTICE - *04:00 PM*

PARK KĀLIA

WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN

NOVEMBER 2015

SHADOW STUDY

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

WAIKĪKĪ PARKS & OPEN SPACES

IMPORTANCE OF PARKS

ECONOMIC BENEFITS

- indirect public health savings
- indirect environmental savings associated with pollution
- well designed and maintained parks spur economic development by attracting visitors and homeowners, and raising property values
- parks can be designed and programmed to promote commercial activity
- green infrastructure reduces the cost of urban stormwater management
- parks can be used help reduce cost of damages from storms and surges by acting as a flood barrier

HEALTH BENEFITS

- parks and access to nature promote physical activity critical to physical and mental well-being
- vegetation improves air quality by removing pollutants
- parks provide gathering spaces for programmed fitness

COMMUNITY BENEFITS

- well designed and maintained parks promote civic engagement and create safer neighborhoods
- parks are often catalysts for community development
- parks provide gathering spaces that improve quality of life
- parks encourage environmental stewardship
- parks provide a respite

ENVIRONMENTAL BENEFITS

- a strong network of parks and open space provides healthy habitats for all living beings
- natural landscapes help preserve regional ecosystems
- vegetation removes air pollutants that contribute to global warming
- vegetation reduces the amount of stormwater entering the city's stormwater system and waterways by capturing and filtering rainwater
- parks conserve vulnerable coastal and flood zone areas and can act as a barrier during storms and surges

EDUCATIONAL + CULTURAL OPPORTUNITIES

- programming for historical, environmental, and cultural education
- public art
- honoring local culture and history through design, art, interpretive signage, memorials, etc.

THE HIGH LINE, New York, NY

QIAOYUAN PARK, Tianjin, China

NOVARTIS HEADQUARTERS, Basel, Switzerland

MADISON SQUARE PARK, New York, NY

UNIVERSITY OF TEXAS, Dallas, TX

PALEY PARK, New York, NY

PARK KĀLIA
WAIKĪKĪ

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CONCEPT DESIGN
NOVEMBER 2015

THE IMPORTANCE OF PARKS

APPENDIX A

WCITARCHITECTURE

ROYAL HAWAIIAN CENTER

KŪHIŌ MINI PARK

WAIKĪKĪ GATEWAY PARK

2100 KALĀKAUA

ROYAL HAWAIIAN CENTER

HISTORIC TRAIL MARKERS

FORT DE RUSSY PARK

FORT DE RUSSY PARK

WAIKĪKĪ BEACHWALK

PARK KĀLIA
WAIKĪKĪ

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WAIKĪKĪ PRECEDENT PARKS

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WCITARCHITECTURE

Waikīkī Parks & Open Spaces

No.	Name	Acres	SF	Public/Private	Use
1	Park Kālia Waikīkī	0.16	7,000	Private	Open Space
	Fort DeRussy:	19.90	866,875		
2	*ʻĀina Hau*	5.74	250,000	Public	Park
3	*Museum Lawns*	4.85	211,250	Public	Park
4	*Hale Koa*	1.72	75,000	Public	Park
5	*Kalākaua Frontage*	1.43	62,500	Public	Park
6	*Ala Moana Frontage*	6.16	268,125	Public	Open Space
7	Kapiʻolani Park	300.00	13,068,000	Public	Park
8	Jefferson Elementary	5.93	250,000	Public	Playground
9	Queens Beach	4.48	195,000	Public	Park / Pathway
10	Ala Wai Blvd	4.34	189,000	Public	Pathway
11	Duke Kahanamoku Lagoon	2.24	97,500	Private	Park/Pathway
12	Seaside - Vacant Lot	0.78	33,800	Public	Vacant
13	King Kalākaua Park - "Gateway Park"	0.64	27,900	Public	Park
	Royal Hawaiian Hotel:	0.99	43,150		
14	*Coconut Grove*	0.46	20,125	Private	Open Space
15	*Royal Garden at Helumoa*	0.40	17,500	Private	Open Space
16	*Ocean Lawn*	0.13	5,525	Private	Open Space
17	Royal Hawaiian Shopping Center	0.41	18,000	Private	Open Space
18	2440 Ala Wai Blvd.	0.28	12,150	Private	Park
	International Market Place:	0.44	19,000		
19	*Banyan Court*	0.17	7,500	Private	Open Space
20	*Queen's Court*	0.17	7,500	Private	Open Space
21	*ʻAumakua Court*	0.09	4,000	Private	Open Space
22	"Triangle Park" at Kaʻiulani Ave.	0.15	6,500	Public	Park
23	Halekulani - Garden Courtyard	0.15	6,375	Private	Open Space
24	King's Village - Pocket Park	0.08	3,609	Private	Park
25	Kūhiō Garden - Pocket Park	0.07	2,850	Public	Bus Stop

PARK KĀLIA
WAIKĪKĪ

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WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Waikīkī Parks & Open Spaces

1 Park Kālia Waikīkī

Fort DeRussy:

2 *ʻĀina Hau*

3 *Museum Lawns*

4 *Hale Koa*

5 *Kalākaua Frontage*

6 *Ala Moana Frontage*

7 Kapʻiolani Park

8 Jefferson Elementary

9 Queens Beach

10 Ala Wai Blvd

11 Duke Kahanamoku Lagoon

12 Seaside - Vacant Lot

13 King Kalākaua Park - "Gateway Park"

Royal Hawaiian Hotel:

14 *Coconut Grove*

15 *Royal Garden at Helumoa*

16 *Ocean Lawn*

17 Royal Hawaiian Shopping Center

18 2440 Ala Wai Blvd.

International Market Place:

19 *Banyan Court*

20 *Queen's Court*

21 *ʻAumakua Court*

22 "Triangle Park" at Kaʻiulani Ave.

23 Halekulani - Garden Courtyard

24 King's Village - Pocket Park

25 Kūhiō Garden - Pocket Park

PARK KĀLIA

WAIKĪKĪ

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WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Waikīkī Parks & Open Spaces > 30,000 SF

Kapiʻolani Park

Queens Beach

Duke Kahanamoku Lagoon

Ala Wai Boulevard

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

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NOVEMBER 2015

WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Sites < 30,000 SF

1 Park Kālia Waikīkī

Fort DeRussy:

2 *ʻĀina Hau*

3 *Museum Lawns*

4 *Hale Koa*

5 *Kalākaua Frontage*

6 *Ala Moana Frontage*

7 Kapiʻolani Park

8 Jefferson Elementary

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24 King's Village - Pocket Park

25 Kūhiō Garden - Pocket Park

PARK KĀLIA

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WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Waikīkī Parks & Open Spaces < 30,000 SF

Seaside Vacant Lot

2440 Ala Wai Boulevard

Ka‘iulani Avenue “Triangle Park”

Kūhiō Garden Pocket Park

PARK KĀLIA
WAIKĪKĪ

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NOVEMBER 2015

WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Sites < 30,000 SF + Significant Cultural Programming

1 Park Kālia Waikīkī

Fort DeRussy:

2 *ʻĀina Hau*

3 *Museum Lawns*

4 *Hale Koa*

5 *Kalākaua Frontage*

6 *Ala Moana Frontage*

7 Kapiʻolani Park

8 Jefferson Elementary

9 Queens Beach

10 Ala Wai Blvd

11 Duke Kahanamoku Lagoon

12 Seaside - Vacant Lot

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23 Halekulani - Garden Courtyard

24 King's Village - Pocket Park

25 Kūhiōo Garden - Pocket Park

PARK KĀLIA

WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN

NOVEMBER 2015

WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Appropriate Cultural Programming in Open Spaces

Royal Hawaiian Center

King Kalākaua Park

International Market Place

Kapiʻolani Park

PARK KĀLIA
WAIKĪKĪ

WAIKĪKĪ PARKS & OPEN SPACES

NOVEMBER 2015

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

Fort DeRussy

19.9 Ac (866,875 SF)

PARK KĀLIA
WAIKĪKĪ

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NOVEMBER 2015

WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

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WAIKĪKĪ PARKS & OPEN SPACES

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

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RESTORING WHAT ONCE WAS

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

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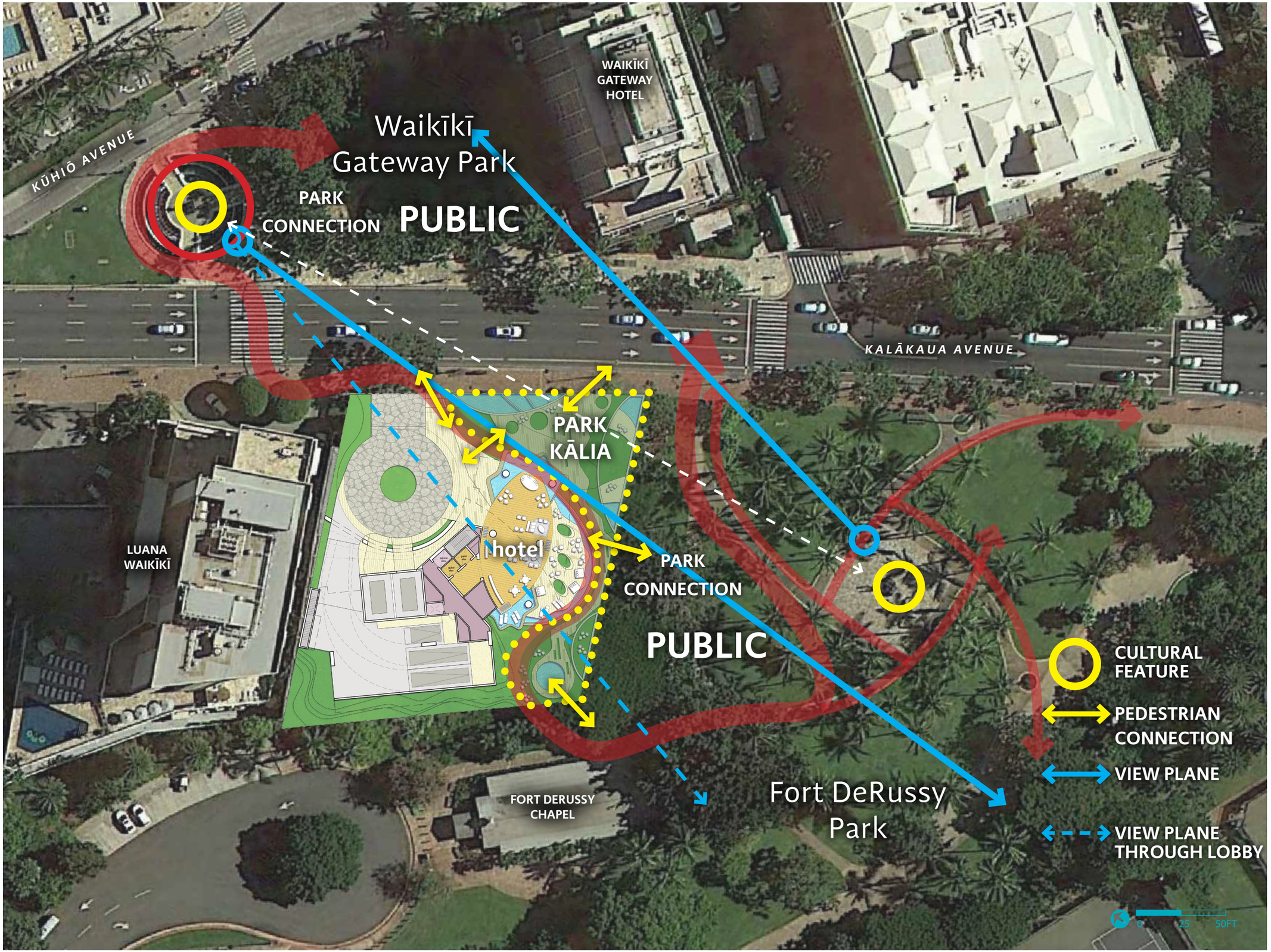
CONCEPT DESIGN
NOVEMBER 2015

HAWAIIAN SENSE OF PLACE PILINA
PUBLIC BENEFITS

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

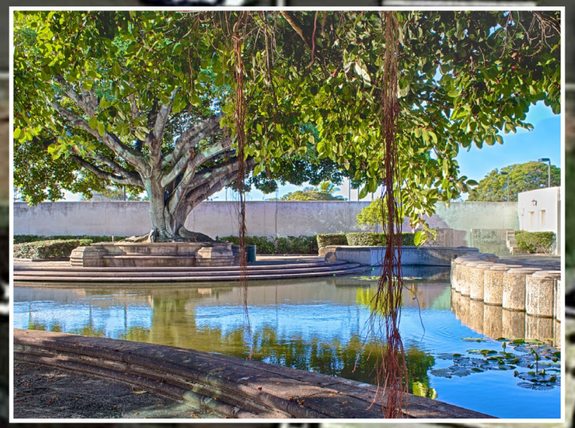
HAWAIIAN SENSE OF PLACE
PILINA
PUBLIC BENEFITS

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

A.3 HAWAIIAN SENSE OF PLACE



native & local flora create shade, tie stories to place. water features connect to fishponds, ʻauwai, and streams of yesterday.

modern artwork & found artifacts. japanese fishing net floats, glass-blown fish scultures

contemporary interpretations of traditional structures, mākāhā as screens & shading

Ovoid & curved shapes inspired by sails, loko puʻuone (sand-based fishponds), loko wai (fresh water fishponds), etc.

landscape & art forms recall iʻa, ʻoʻopu, ʻopae in loko puʻuone

flooring & artwork celebrate wai genealogy in Kālia

PARK KĀLIA
WAIKĪKĪ

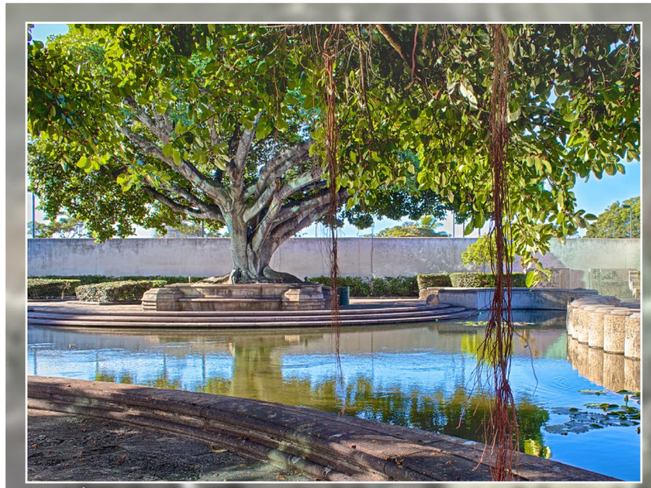
BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

HAWAIIAN SENSE OF PLACE
ʻĀINA
SITE PLAN

APPENDIX A

WCITARCHITECTURE



wai (Waikolu, Piʻianaio, loko puʻuone, loko wai, ʻauwai)

banyan (Cleghorns)

Kālia bathhouses

pōpolo (moʻolelo o Kēlea)

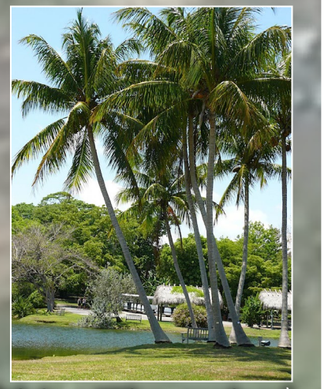
ferns (moʻolelo o Kēlea)

ʻiliʻili (moʻolelo o kamōʻiliʻili)

limu ʻeleʻele (moʻolelo o Kēlea)

limu līpoa (moʻolelo o Kēlea)

limu huluhuluwaena (Līliʻu)



niu (moʻolelo o Kēlea, cordage)

Kou (moʻolelo o Kēlea)

hala (lauhala)

koa (waʻa)

cut basaslt (ma uka, Koʻolau kua)

ʻākoʻakoʻa (ma kai, ancient reefs)

PARK KĀLIA

WAIKĪKĪ

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CONCEPT DESIGN

NOVEMBER 2015

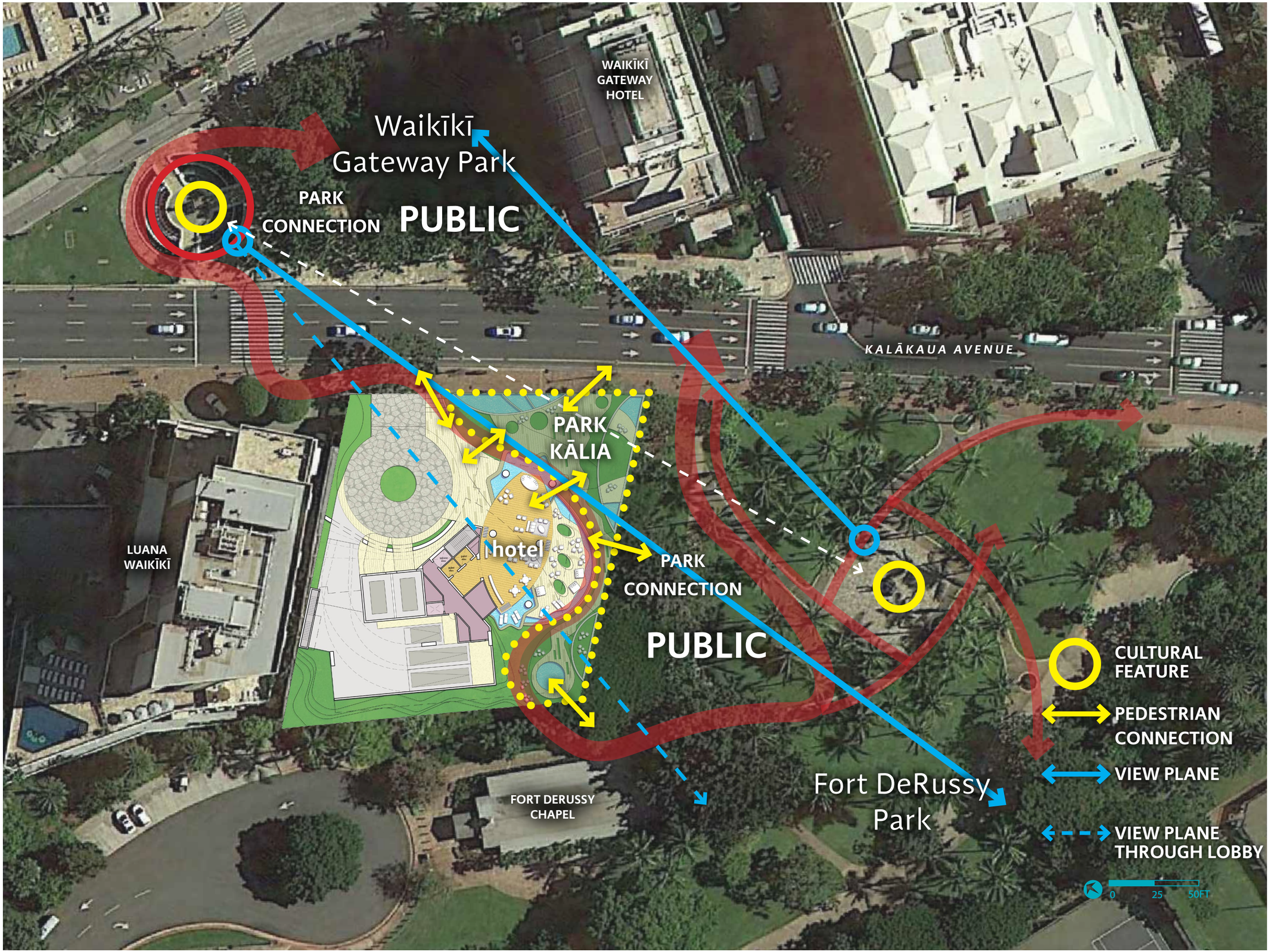
HAWAIIAN SENSE OF PLACE

ʻĀINA

LANDSCAPE

APPENDIX A

WCITARCHITECTURE



PARK KĀLIA
WAIKĪKĪ

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NOVEMBER 2015

HAWAIIAN SENSE OF PLACE PILINA

PUBLIC BENEFITS

APPENDIX A

WCITARCHITECTURE

PARK KĀLIA
WAIKĪKĪ

Fort DeRussy

19.9 Ac (866,875 SF)

0 50 100FT

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN
NOVEMBER 2015

HAWAIIAN SENSE OF PLACE
PILINA
PUBLIC BENEFITS OVERLAY
APPENDIX A

WCITARCHITECTURE

wetlands, functioning fishponds

raised paths

interpretive signage

genealogic references

PARK KĀLIA
WAIKĪKĪ

Fort DeRussy

19.9 Ac (866,875 SF)

CULTURAL / INTERPRETIVE SPACES

EXPANDED CULTURAL / INTERPRETIVE PATHS

CULTURAL POINTS OF INTEREST

0 50 100FT

PARK KĀLIA
WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN

NOVEMBER 2015

HAWAIIAN SENSE OF PLACE PILINA

PUBLIC BENEFITS

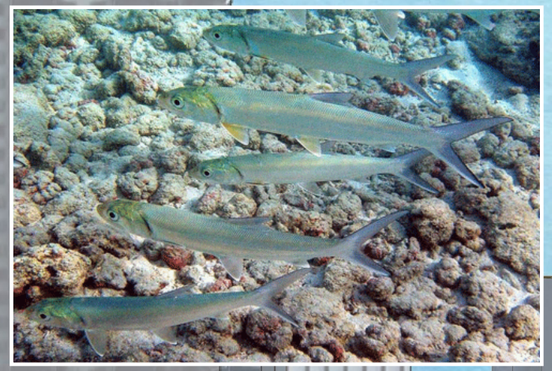
APPENDIX A

WCITARCHITECTURE

main flyby: vertical tubes and fins. structure inspired by traditional hale & hīnaʻi (fishtrap).

main flyby: forms inspired by peʻa (sails) of traditional and modern sailing canoes, billowing with the gentle breezes of ʻĀinahau

lānai: undulating rails with horizontal frit pattern. inspired by winds, currents, fish schools, and strands of limu.



north walls & parking levels with vertical fins, to create shadow play & visual interest. inspired by mākāhā (fishpond sluice gates)

glass walls and roof of the lobby disappear into sky. inspired by the water's surface, fishponds

Ovoid & curved shapes inspired by sails, loko pu'uone (sand-based fishponds), loko wai (fresh water fishponds), etc.

PARK KĀLIA
WAIKĪKĪ

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CONCEPT DESIGN
NOVEMBER 2015

HAWAIIAN SENSE OF PLACE HUAKAʻI

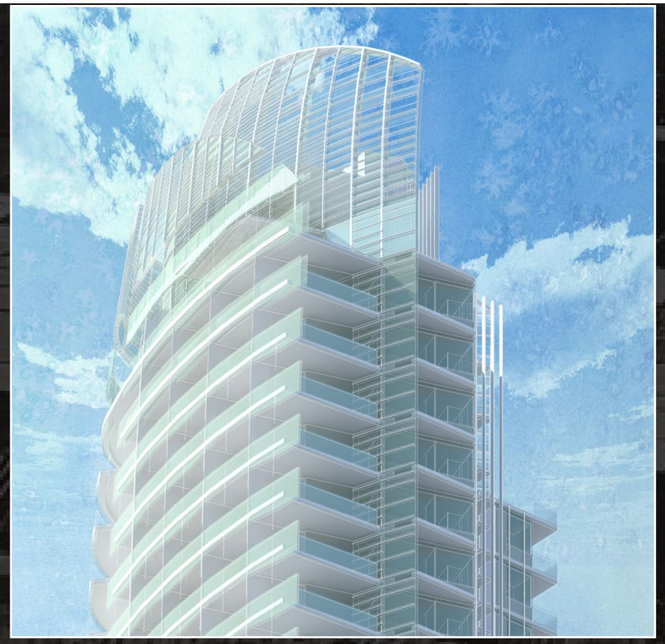
BUILDING DESIGN

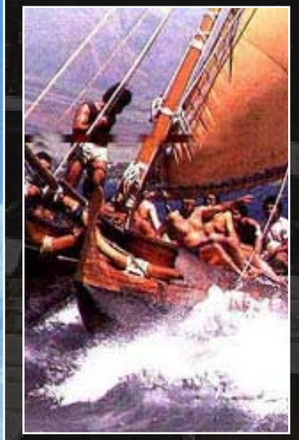
APPENDIX A

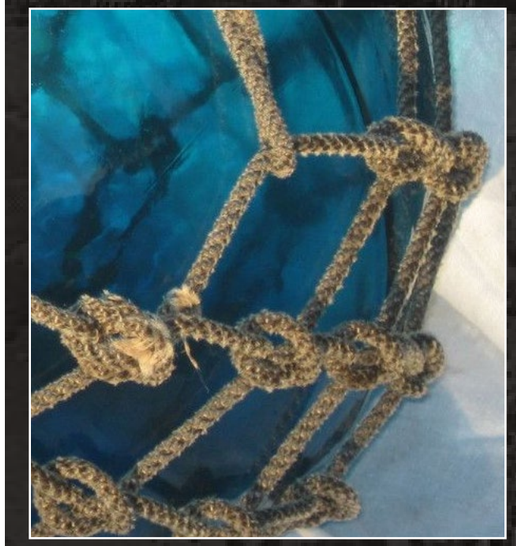
WCITARCHITECTURE

main flyby: vertical tubes and fins. structure inspired by traditional hale & hīnaʻi (fishtrap).

lānai: undulating rails with horizontal frit pattern. inspired by winds, currents, fish schools, and strands of limu.

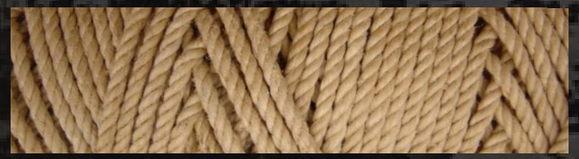


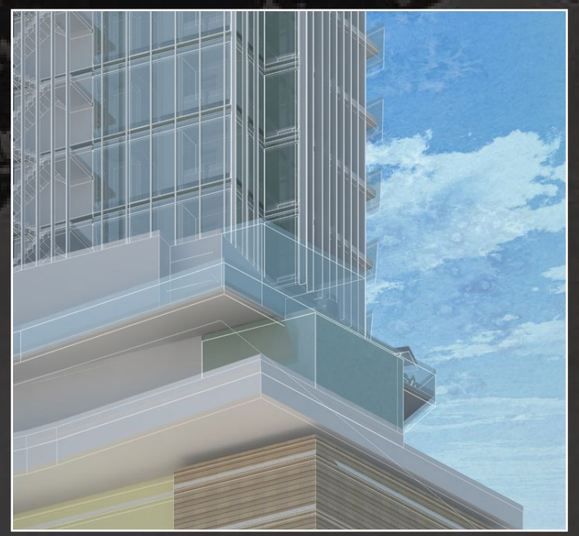




lānai glazing: frit pattern a contemporary interpretation of traditional ʻohe kāpala (bamboo stamp patterns), representing rains & winds, cordage of the waʻa.

accent glazing & screens inspired by glass floats from Japanese nets once found along Hawaiʻi beaches...





terraced & layered components break up massing, create visual interest. inspired by ridges of Ko'olau Ridge, terraced lo'i and 'auwai.

PARK KĀLIA

WAIKĪKĪ

BEST HOSPITALITY LLC

CONCEPT DESIGN

NOVEMBER 2015

HAWAIIAN SENSE OF PLACE HUAKAʻI

BUILDING DESIGN

APPENDIX A

WCITARCHITECTURE

Y. Ebisu & Associates
Acoustical and Electronic Engineers

1126 12th Ave., Room 305
Honolulu, Hawaii 96816
Ph. (808) 735-1634 – Fax (808) 732-0409
e-mail: ebisuyassoc@aol.com

YEA Job #53.020
July 6, 2015

Rider Levett Bucknall
1001 Bishop Street, Suite 1340
Honolulu, Hawaii 96813

Attention: Ms. Trina Belmonte, Project Administrator

Subject: Summary of Results of Traffic Noise Study; One Waikiki

Dear Ms. Belmonte:

Sound level measurements were obtained during 24-hour periods at the Outrigger Luana Waikiki and Waikiki Gateway Hotels in June 2015 to document existing traffic and background noise levels in the project environs. Sound level measurements obtained in 2012 and 2013 as well as State Department of Transportation (Highways Division) traffic counts were also used to validate the traffic noise model used (U.S. Federal Highway Administration Traffic Noise Model, Version 2.5). Traffic data from the project's traffic study (Wilson Okamoto Corporation, dated June 2015) were used to model existing and future traffic noise levels in the project environs and at planned living units on the four faces of the project's tower building. From these measurements, traffic data, and noise modeling efforts, conclusions were developed regarding the potential noise impacts at project living units as well as at off-site receptors located within the project environs. The noise impact threshold used for identifying adverse noise impacts was 65 DNL (Day-Night Average Sound Level), which is used by federal agencies, such as FHA/HUD, VA, and DOD.

Potential Traffic Noise Impacts At Project Living Units. The existing traffic and background noise levels at the proposed tower building range from 66 to 71 DNL on the mauka and Diamond Head sides; 66 to 69 DNL on the makai side; and 62 to 69 DNL on the Ewa side. The loudest noise sources are the sirens and horns of emergency vehicles (ambulances, fire trucks, and police vehicles), which will range from 89 to 106 dBA at the mauka face of the proposed tower building. Future (Year 2018) traffic and background noise levels at the proposed project living units are predicted to range from 64 to 72 DNL on the mauka and Diamond Head sides; 59 to 62 DNL on the makai side; and 61 to 68 DNL on the Ewa side. The presence of the project's tower building will reduce background noise levels at the Makai, Ewa, and Diamond Head sides of the tower building due to its noise shielding effects toward Kalakaua and Kuhio Avenues. Nevertheless, traffic noise mitigation measures in the form of closure and air conditioning should be applied to all noise sensitive spaces within the One Waikiki building. For those living units on the mauka, Diamond Head, and Ewa sides of the

proposed tower building, all glazing used should have a minimum STC (Sound Transmission Class) rating of STC 39, and all glazing used on the makai side of the proposed tower building should have a minimum STC 25 rating.

Potential Traffic Noise Impacts At Off Site Receptors. Traffic noise impacts resulting from project traffic are expected to be near zero primarily due to the very low volumes of project traffic when compared to the much higher levels of existing or non-project project traffic. Traffic noise level increases by CY 2018 due to project traffic are predicted to range from zero to 0.2 DNL, which will be very difficult to measure or perceive. Traffic noise level increases by CY 2018 due to non-project traffic are predicted to range from 0.5 to 2.3 DNL, which are orders of magnitude greater than the increases resulting from project traffic. For this reason, traffic noise mitigation applied at the project site as well as those which may be applied at off-site locations result from the preexisting high traffic noise levels in Waikiki rather than from the One Waikiki project.

Other Possible Noise Mitigation Measures Which May Need To Be Implemented. Possible noise mitigation measures which may need to be implemented for on-site noise sources include: the addition of a brushed or other coarse finish on the circulation driveways of the new parking facilities to prevent tire squeal noise; the addition of sound attenuation treatments to mechanical ventilation and air conditioning equipment, pumps, and emergency generator; and the use of high STC rated walls, glazing, and exterior doors at the Club Lounge if loud music venues need to be accommodated. Standard construction noise mitigation measures which comply with the State Department of Health Noise Permit requirements would also be required during the construction of the project.

Let me know if you have any questions regarding this summary report. I will be providing a complete noise study report within the next week.

Sincerely,

Yoichi Ebisu, P.E.

ACOUSTIC STUDY FOR THE ONE WAIKIKI PROJECT WAIKIKI, OAHU, HAWAII

Prepared for:

TSUKADA GLOBAL HOLDINGS, INC.

Prepared by:

Y. EBISU & ASSOCIATES
1126 12th Avenue, Room 305
Honolulu, Hawaii 96816

JULY 2015

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CHAPTER I. SUMMARY

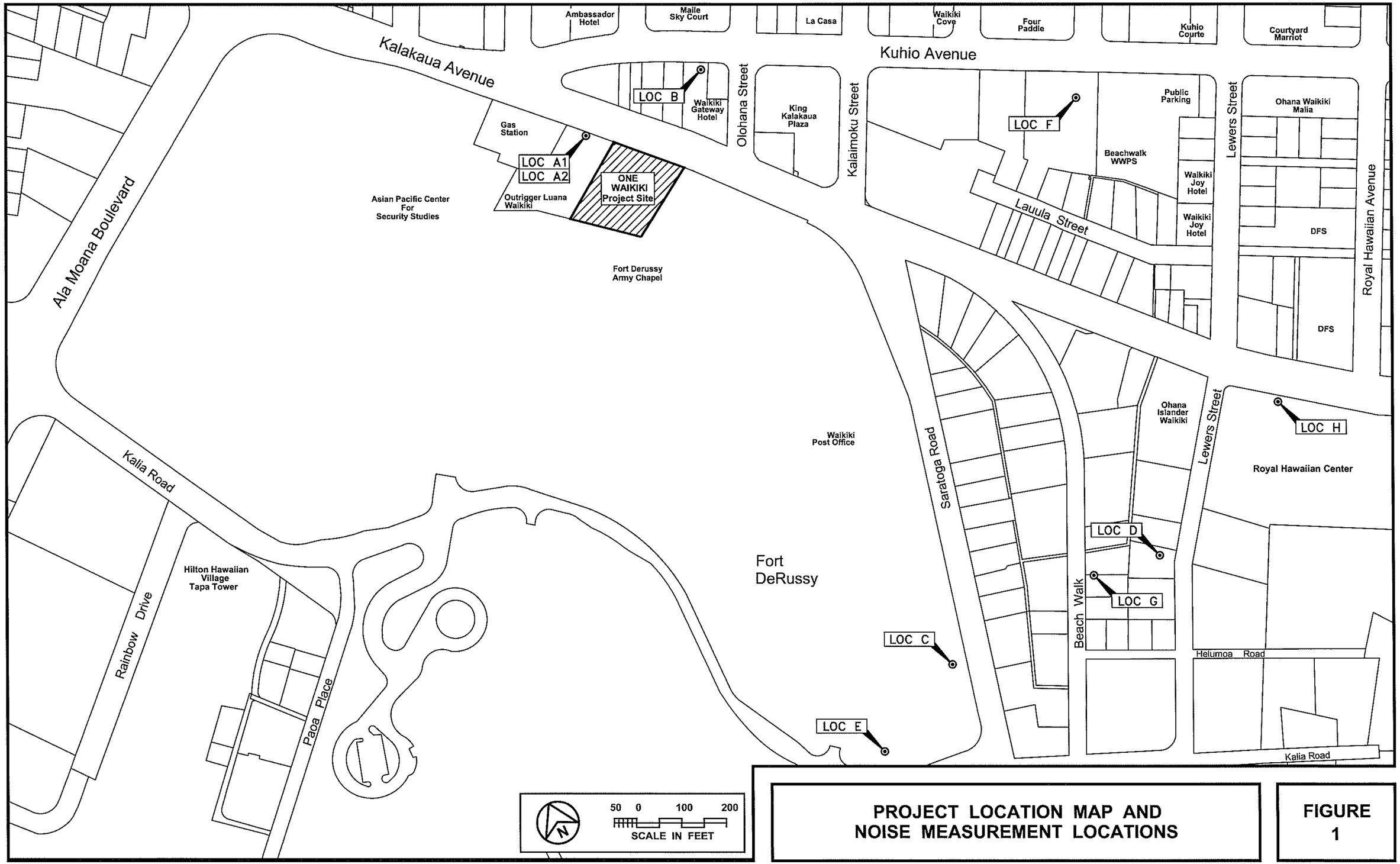
The existing and future traffic noise levels in the vicinity of the One Waikiki Project in Waikiki (see Figure 1) were evaluated for their potential impacts and their relationship to current FHA/HUD noise standard. The traffic noise level increases along the access roadways to and from the project site were calculated. No significant increases in traffic noise are predicted to occur along Kalakaua Avenue, Kuhio Avenue, Saratoga Road, Olohana Street, and Kalaimoku Street as a result of project plus non-project traffic following project build-out by CY 2018. Traffic noise from Kalakaua Avenue and Kuhio Avenue will continue to control background ambient noise levels in the project environs mauka of the project site, with traffic noise levels exceeding 70 DNL at existing and future resort units which front Kalakaua Avenue and Kuhio Avenue. On the makai side of the project site, traffic noise from Ala Moana Boulevard, Kalia Road, and Saratoga Road will continue to control background ambient noise levels, but at much lower levels. Mitigation of the high traffic noise levels will be required at all new condominium/resort units, and will be available in the form of closure and air conditioning of the future units of the One Waikiki Project.

Project traffic will add less than 0.2 DNL additional units of noise along the high noise roadways such as Kalakaua Avenue and Kuhio Avenue. The increases in future traffic noise levels resulting from project generated traffic are not considered to be significant and will be very difficult to measure or perceive. At locations more distant from the project site, project traffic is not expected to contribute to total traffic noise levels. Sirens and horns of emergency vehicles (ambulances and fire trucks) are the loudest sources in the project environs, and can be in the order of 90 to 105 dB on the project site.

The steady background noise levels associated with non-traffic noise sources, such as mechanical equipment (fans, chillers, and air conditioning condensers) control the minimum background noise levels at both street side and interior locations in the project environs. These steady background noise levels are typically higher than the 50 dBA limit for nighttime noise levels used by the Hawaii State Department of Health (DOH) for resort, commercial, and multifamily residential properties. Along Kalakaua Avenue fronting the project site, measured minimum background noise levels were approximately 56 dBA, and were controlled by mechanical equipment noise.

The aircraft noise component should not exceed the Hawaii State Department of Transportation, Airports Division, recommended planning level of 60 DNL for residences and resort units. Mitigation of aircraft noise levels is not required for the planned condominium/resort units within the One Waikiki Project, but will be available in the form of closure and air conditioning of these condominium/resort units.

Unavoidable, but temporary, noise impacts may occur during the demolition and construction activities within the project area, and particularly during the demolition and excavation activities on the project site. Because construction activities are predicted to



PROJECT LOCATION MAP AND NOISE MEASUREMENT LOCATIONS

FIGURE 1

be audible within the project site and at adjoining properties, the quality of the acoustic environment may be degraded to unacceptable levels during periods of construction. Mitigation measures to reduce construction noise to inaudible levels will not be practical in all cases, but the use of quiet equipment is recommended as a standard mitigation measure. Because casted-in-place piles are planned to be used as foundations for the new tower building, high noise and vibration levels at adjacent receptors and buildings will be avoided. The implementation of Hawaii State Department of Health permit procedures and curfew periods for construction activities is also expected for this project.

Possible noise mitigation measures which may need to be implemented for on-site noise sources include: the addition of a brushed or other coarse finish on the circulation driveways of the new parking facilities to prevent tire squeal noise; the addition of sound attenuation treatments to mechanical ventilation and air conditioning equipment, pumps, and emergency generator; the use of glazing and exterior wall systems with 20 to 35 dB of sound attenuation are recommended for the project's noise sensitive living areas, and the use of even higher sound attenuation may be required for the exterior walls, glazing, and exterior doors at the Club Lounge if loud music venues need to be accommodated. Standard construction noise mitigation measures which comply with the State Department of Health Noise Permit requirements would also be required during the construction of the project.

CHAPTER II. PURPOSE

The primary objective of this study was to describe the existing and future noise environment in the environs of the proposed One Waikiki Project in Waikiki on the island of Oahu. Traffic noise level increases and impacts associated with the proposed development were to be determined along the public roadways which are expected to service the project related traffic. A specific objective was to determine future traffic noise level increases associated with both project and non-project traffic, and the potential noise impacts associated with these increases.

Mitigation measures at noise sensitive spaces within the project were described in order to minimize risks of adverse noise impacts from existing and future exterior noise levels. Potential noise impacts at adjacent properties from on site sources were also evaluated. Minimizing risks of adverse noise impacts from the Club Lounge as well as from the project's mechanical equipment were discussed. Assessments of possible future impacts from short term construction noise at the project site were also included as noise study objectives. Recommendations for minimizing identified noise impacts were also to be provided as required.

CHAPTER III. NOISE DESCRIPTORS AND THEIR RELATIONSHIP TO LAND USE COMPATIBILITY

The noise descriptor currently used by federal agencies (such as FHA/HUD) to assess environmental noise is the Day-Night Average Sound Level (Ldn or DNL). This descriptor incorporates a 24-hour average of instantaneous A-Weighted Sound Levels as read on a standard Sound Level Meter. By definition, the minimum averaging period for the DNL descriptor is 24 hours. Additionally, sound levels which occur during the nighttime hours of 10:00 pm to 7:00 am are increased by 10 decibels (dB) prior to computing the 24-hour average by the DNL descriptor. A more complete list of noise descriptors is provided in Appendix B to this report.

Table 1, derived from Reference 1, presents current federal noise standards and acceptability criteria for residential land uses. Land use compatibility guidelines for various levels of environmental noise as measured by the DNL descriptor system are shown in Figure 2. As a general rule, noise levels of 55 DNL or less occur in rural areas, or in areas which are removed from high volume roadways. In urbanized areas which are shielded from high volume streets, DNL levels generally range from 55 to 65 DNL, and are usually controlled by motor vehicle traffic noise. Residences which front major roadways are generally exposed to levels of 65 DNL, and as high as 75 DNL when the roadway is a high speed freeway.

In the project area, traffic noise levels associated with Kalakaua Avenue and Kuhio Avenue are greater than 70 DNL along their Rights-of-Way due to the large volumes of traffic and heavy vehicles (trucks and buses) on those major thoroughfares. Adding to the traffic noise from the roadways are the relatively high noise levels of tour buses idling at curbside, sirens on police and emergency vehicles, outdoor mechanical equipment (fans and air conditioning equipment) at the commercial and resort buildings, maintenance activities, and garbage and delivery truck operations.

For purposes of determining noise acceptability for funding assistance from federal agencies (FHA/HUD and VA), an exterior noise level of 65 DNL or less is considered acceptable for residences. This standard is applied nationally (Reference 2), including Hawaii. Because of our open-living conditions, the predominant use of naturally ventilated dwellings, and the relatively low exterior-to-interior sound attenuation afforded by these naturally ventilated structures, an exterior noise level of 65 DNL does not eliminate all risks of noise impacts. Because of these factors, and as recommended in Reference 3, a lower level of 55 DNL is considered as the "Unconditionally Acceptable" (or "Near-Zero Risk") level of exterior noise. However, after considering the cost and feasibility of applying the lower level of 55 DNL, government agencies such as FHA/HUD and VA have selected 65 DNL as a more appropriate regulatory standard.

Hotel units can be considered to be similar to residential units, but with slightly higher levels of noise considered acceptable (see Figure 2). Because air conditioning

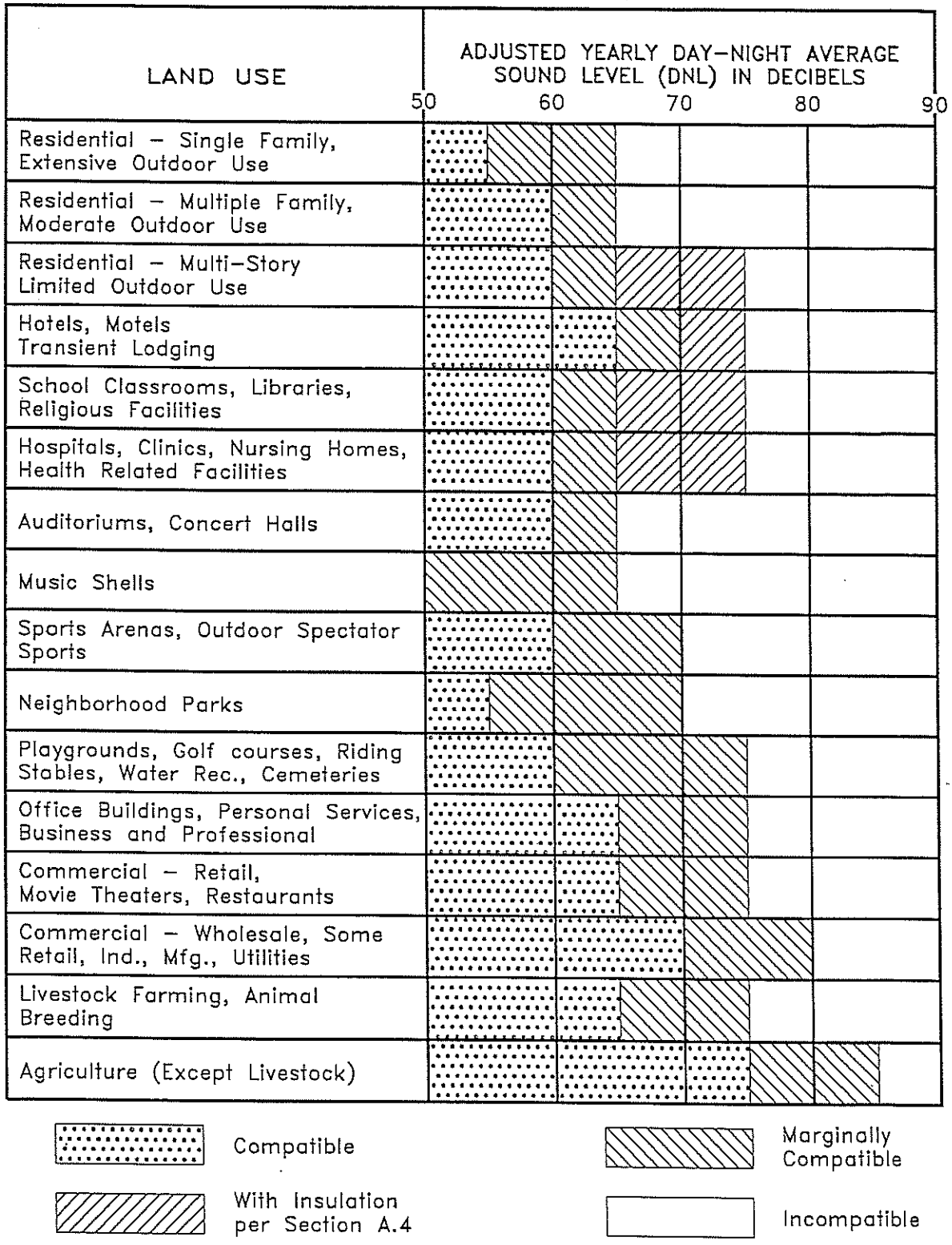
TABLE 1

EXTERIOR NOISE EXPOSURE CLASSIFICATION (RESIDENTIAL LAND USE)

NOISE EXPOSURE CLASS	DAY–NIGHT SOUND LEVEL	EQUIVALENT SOUND LEVEL	FEDERAL (1) STANDARD
Minimal Exposure	Not Exceeding 55 DNL	Not Exceeding 55 Leq	Unconditionally Acceptable
Moderate Exposure	Above 55 DNL But Not Above 65 DNL	Above 55 Leq But Not Above 65 Leq	Acceptable(2)
Significant Exposure	Above 65 DNL But Not Above 75 DNL	Above 65 Leq But Not Above 75 Leq	Normally Unacceptable
Severe Exposure	Above 75 DNL	Above 75 Leq	Unacceptable

Notes: (1) Federal Housing Administration, Veterans Administration, Department of Defense, and Department of Transportation.

(2) FHWA uses the Leq instead of the Ldn descriptor. For planning purposes, both are equivalent if: (a) heavy trucks do not exceed 10 percent of total traffic flow in vehicles per 24 hours, and (b) traffic between 10:00 PM and 7:00 AM does not exceed 15 percent of average daily traffic flow in vehicles per 24 hours. The noise mitigation threshold used by FHWA for residences is 67 Leq.



LAND USE COMPATIBILITY WITH YEARLY AVERAGE DAY–NIGHT AVERAGE SOUND LEVEL (DNL) AT A SITE FOR BUILDINGS AS COMMONLY CONSTRUCTED.
(Source: American National Standards Institute S12.9–1998/Part 5)

FIGURE 2

is typically available in hotel units, noise mitigation measures in the form of closure of the hotel units to attenuate outside noises are also typically available to hotel guests. This, and the transient and temporary nature of the hotel guest occupancies, tend to make hotel guests more tolerant of the higher background noise levels in the project area.

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

On the island of Oahu, the State Department of Health (DOH) regulates noise from fixed mechanical equipment and construction activities. The noise from project air conditioning and ventilation equipment would be regulated by the DOH, with a daytime noise limit of 60 dBA applicable during the hours of 7:00 am to 10:00 pm, and with a nighttime limit of 50 dBA applicable during the hours of 10:00 pm to 7:00 am. State DOH noise regulations are expressed in maximum allowable noise limits rather than DNL (see Reference 4). Although they are not directly comparable to noise criteria expressed in DNL, State DOH noise limits for single family residential lands equate to approximately 55 DNL. For multifamily residential, commercial, and resort lands, the State DOH noise limits equate to approximately 60 DNL. For light and heavy industrial lands, the State DOH noise limits equate to approximately 76 DNL. Construction activities, which are typically noisier than the State DOH noise limits, are regulated through the issuance of permits for allowing excessive construction noise during limited time periods.

CHAPTER IV. GENERAL STUDY METHODOLOGY

Existing traffic and background ambient noise levels were measured at 2 locations (A1 and B) in June 2015 at the Outrigger Luana Waikiki and Waikiki Gateway Hotels. In addition, the results of prior measurements at 7 other locations (A2, C, D, E, F, G, and H) in the project environs were used to provide a basis for describing the existing noise environment in the project environs. These traffic and background ambient noise measurements were performed between 2012 and 2015, and those results are summarized in Table 2. The locations of these measurement sites are shown in Figure 1. Location A1 was on the mauka lanai of an 8th floor guest room at the Outrigger Luana Waikiki Hotel; Location A2 was on the mauka lanai of a third floor guest room at the Outrigger Luana Waikiki Hotel; and Location B was on the mauka lanai of a fourteenth floor guest room at the Waikiki Gateway Hotel. The rest of the measurement locations shown in Figure 1 were at ground level.

Traffic noise calculations for the existing conditions as well as noise predictions for CY 2018 were performed using the Federal Highway Administration (FHWA) Traffic Noise Model Version 2.5 (Reference 5). Traffic data entered into the noise prediction model were: roadway and receiver locations; hourly traffic volumes, average vehicle speeds; estimates of traffic mix; and "Pavement" propagation loss factor. The traffic data and forecasts for the project through 2018 (Reference 6) were the primary sources of data inputs to the model. Appendix C summarizes the am and pm peak hour traffic volumes for CY 2012 and 2018, which were used to model existing and future traffic noise along the streets surrounding the project. Also shown at the bottom of Appendix C are estimates of the traffic volumes along Kalakaua Avenue west of the Kuhio Avenue intersection which were developed strictly for traffic noise modeling purposes. These estimates were generated by adding the traffic volumes shown for Kalakaua and Kuhio Avenues west of Olohana Street in Appendix C. For existing and future traffic along the streets surrounding the project site, it was assumed that the average noise levels, or Leq(h), during the peak traffic hour were approximately 1.0 to 2.2 dB less than the 24-hour DNL along those roadways. The Leq(h) to DNL conversion factors used were: 1.0 dB for Olohana and Kalaimoku Streets; 1.9 dB for Kuhio Avenue; 2.0 dB for Saratoga Road; and 2.2 dB for Kalakaua Avenue. These assumptions were based on the State Department of Transportation traffic counts from References 7 and 8, traffic noise measurements at Locations A1, A2, and B, and historical hourly traffic counts in Waikiki. Examples of calculated and measured hourly noise levels and their relationships to their 24-hour DNL values are shown in Figures 3 through 7.

Traffic noise calculations for both the existing and future conditions in the project environs were developed for ground level and elevated receptors. Traffic noise levels were also calculated for future conditions with (Build Alternative) and without (No Build Alternative) the proposed project. The forecasted changes in traffic noise levels over existing levels were calculated with and without the project, and noise impact risks evaluated. The relative contributions of non-project and project traffic to the total noise levels were also calculated, and an evaluation of possible traffic noise impacts was made.

TABLE 2

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
A1. 120 FT slant distance from the centerline of Kalakaua Avenue (6/2/15)	1600 TO 1700	32	1,631	36	41	65.7	66.0
A1. 120 FT slant distance from the centerline of Kalakaua Avenue (6/3/15)	0700 TO 0800	32	1,341	54	82	67.1	66.9
B. 120 FT slant distance from the centerline of Kuhio Avenue (6/9/15)	1600 TO 1700	32	829	16	46	65.4	65.2
B. 120 FT slant distance from the centerline of Kuhio Avenue (6/10/15)	0700 TO 0800	32	464	20	76	65.4	65.7
D. 57 FT from the center-line of Lewers Street (9/27/13)	1509 TO 1609	32	213	8	0	64.6	64.5
C. 50 FT from the center-line of Saratoga Road (12/09/13)	1600 TO 1700	25	642	28	125	66.4	66.4

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
E. 50 FT from the center-line of Kalia Road (12/09/13)	1430 TO 1530	25	484	38	144	64.6	64.9
G. 42 FT from the center-line of Beach Walk (09/25/14)	0800 TO 0900	30	116	11	27	63.8	64.6
G. 42 FT from the center-line of Beach Walk (09/25/14)	1130 TO 1230	30	137	12	20	63.9	63.8
G. 42 FT from the center-line of Beach Walk (09/25/14)	1500 TO 1600	30	182	9	8	62.6	61.8
H. 50 FT from the center-line of Kalakaua Ave. (09/25/14)	0910 TO 1010	30	930	60	118	67.1	67.5
H. 50 FT from the center-line of Kalakaua Ave. (09/25/14)	1240 TO 1340	30	1,143	57	79	66.5	66.7

TABLE 2 (CONTINUED)

TRAFFIC AND BACKGROUND NOISE MEASUREMENT RESULTS

LOCATION	Time of Day (HRS)	Ave. Speed (MPH)	Hourly Traffic Volume AUTO	M.TRUCK	H.TRUCK	Measured Leq (dB)	Predicted Leq (dB)
H. 50 FT from the center-line of Kalakaua Ave. (09/25/14)	1610 TO 1710	30	1,328	48	49	67.2	66.8
F. 75 FT from the center-line of Kuhio Avenue (3/13/12)	1559 TO 1659	32	1,005	10	95	68.3	68.7
A2. 71 FT from the center-line of Kalakaua Avenue (1/24/12)	1600 TO 1700	32	1,664	23	17	70.5 * 74.0 **	70.6
A2. 71 FT from the center-line of Kalakaua Avenue (1/25/12)	0700 TO 0800	32	1,284	51	27	70.4	69.6

Notes:
* Without Sirens
** With Sirens

FIGURE 3
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
STA. B72761200100, KALAKAUA AVENUE BETWEEN PAU ST. AND KEONIANA ST.; 12/18/13

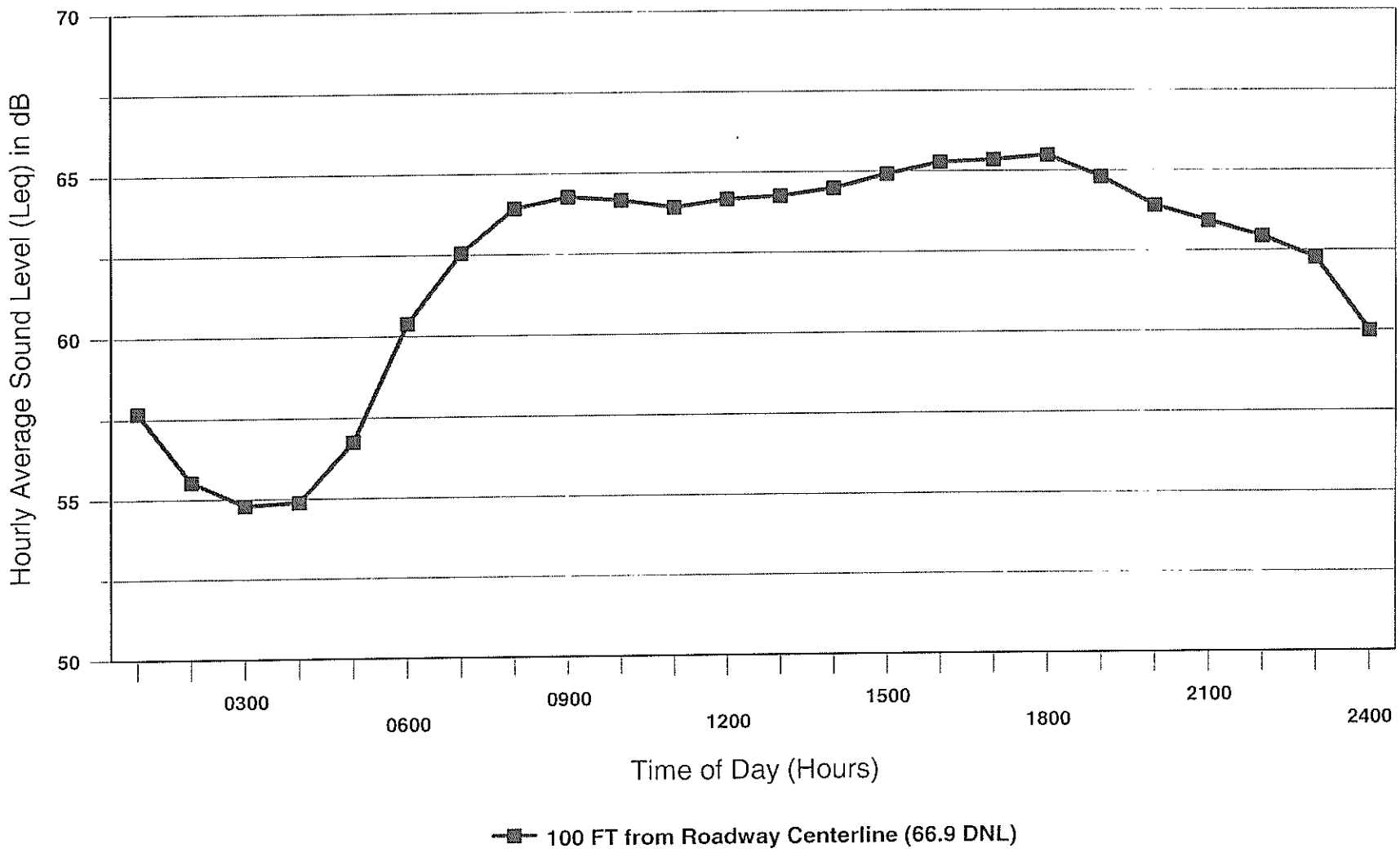


FIGURE 4
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
MEASURED AT SUITE 816, OUTRIGGER LUANA WAIKIKI HOTEL (6/2-3/15)

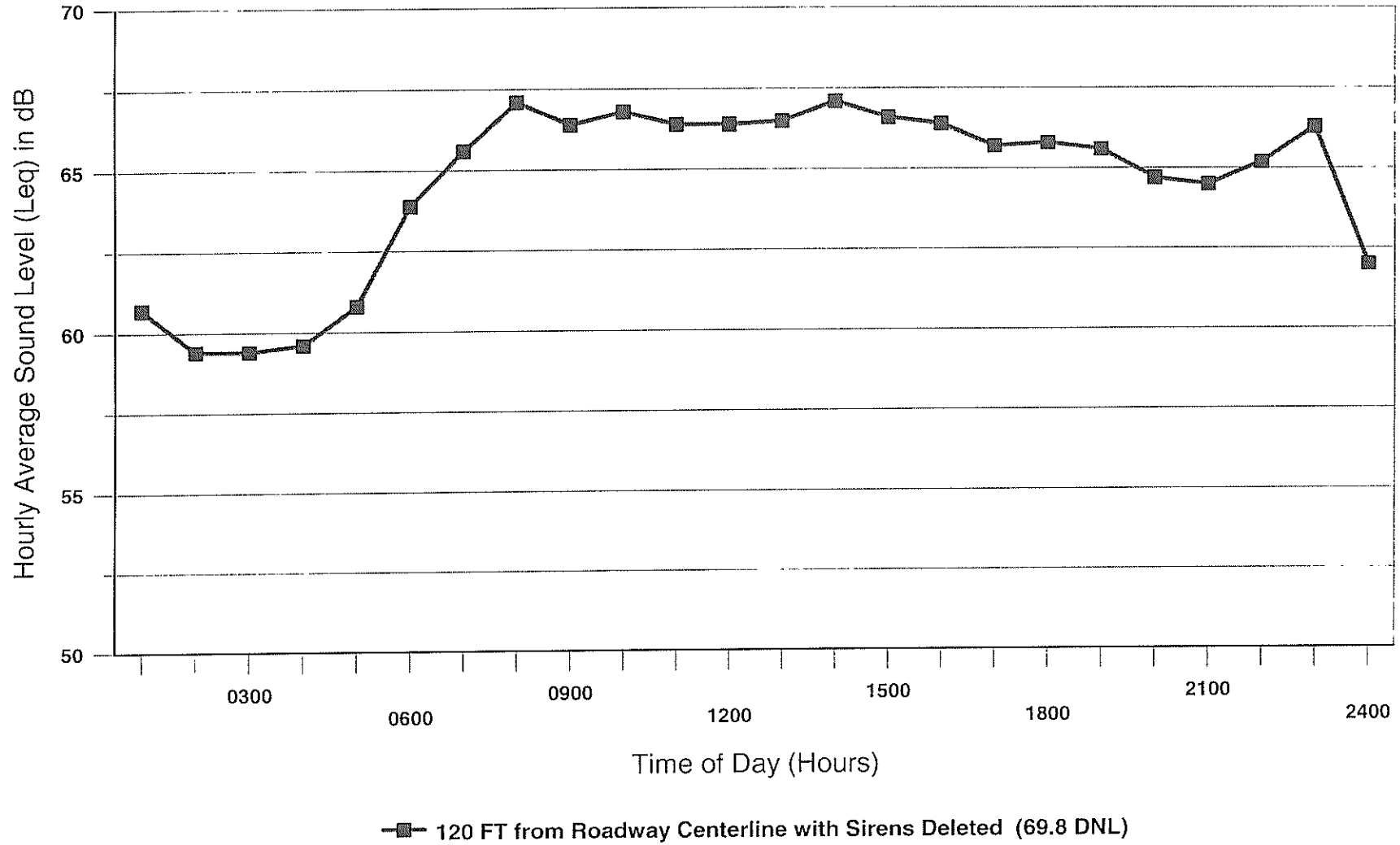


FIGURE 5
HOURLY TOTAL NOISE LEVELS VS. TIME OF DAY
MEASURED AT SUITE 816, OUTRIGGER LUANA WAIKIKI HOTEL (6/2-3/15)

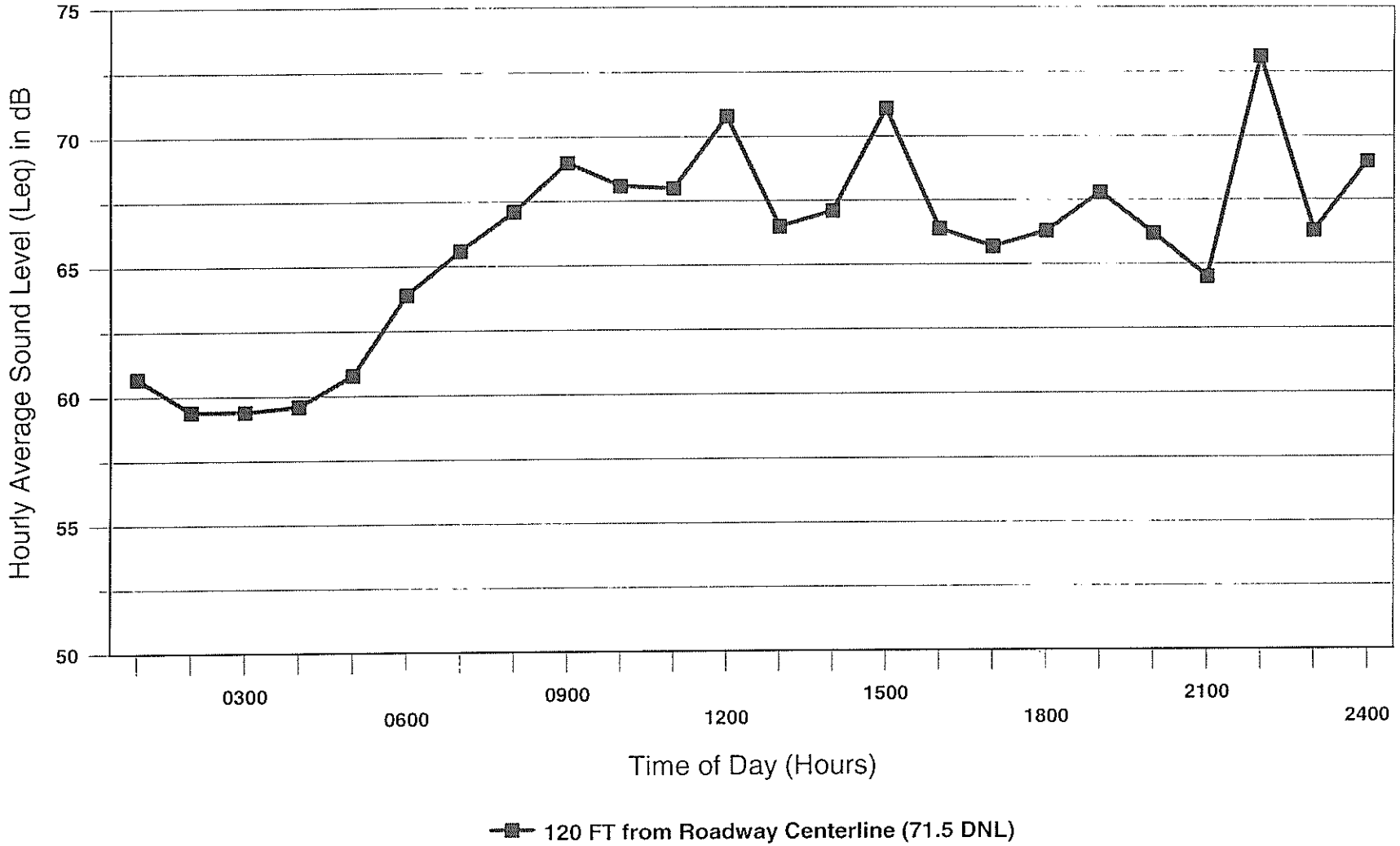


FIGURE 6
HOURLY TRAFFIC NOISE LEVELS VS. TIME OF DAY
MEASURED AT SUITE 1415, WAIKIKI GATEWAY HOTEL (6/9-10/15)

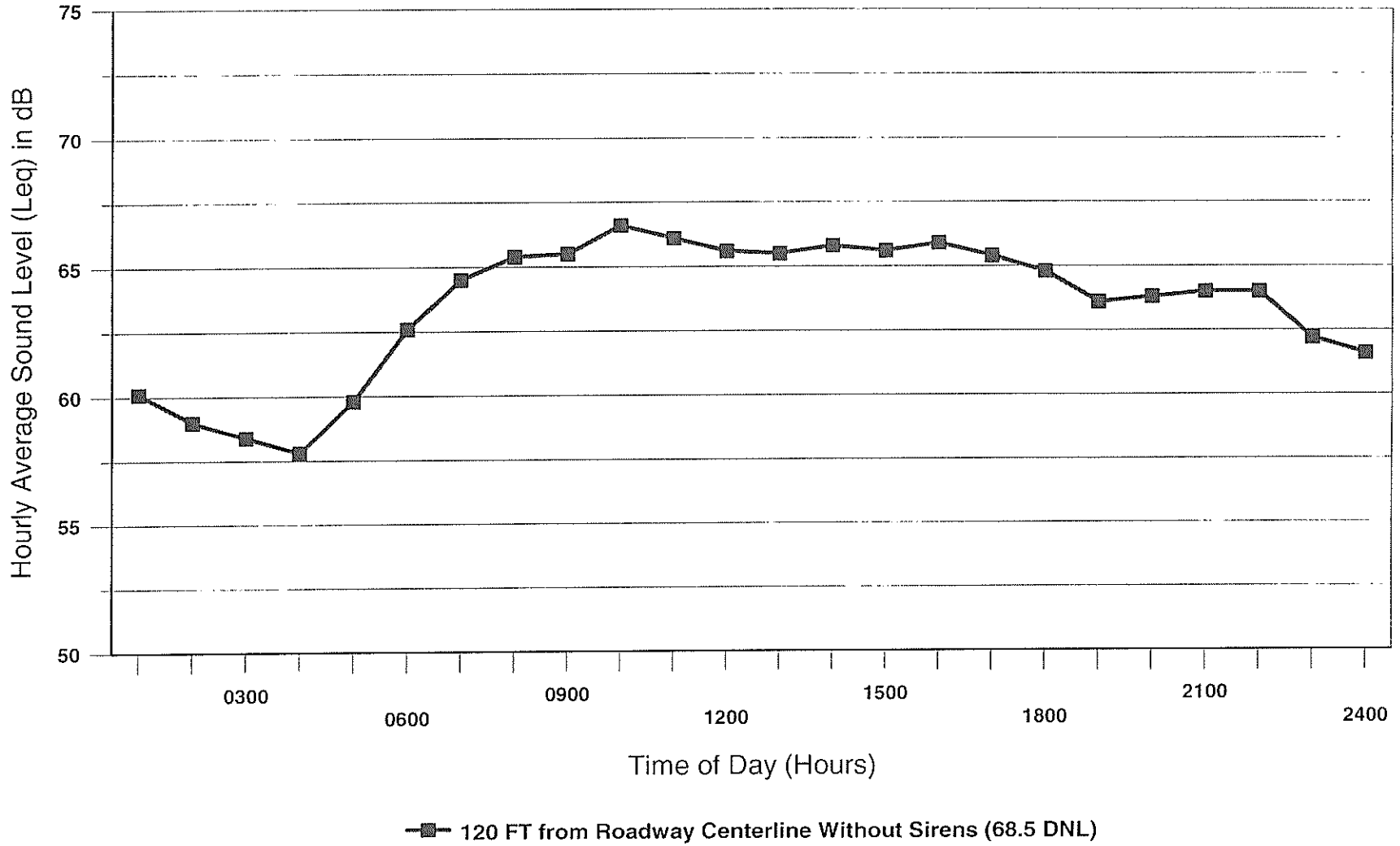
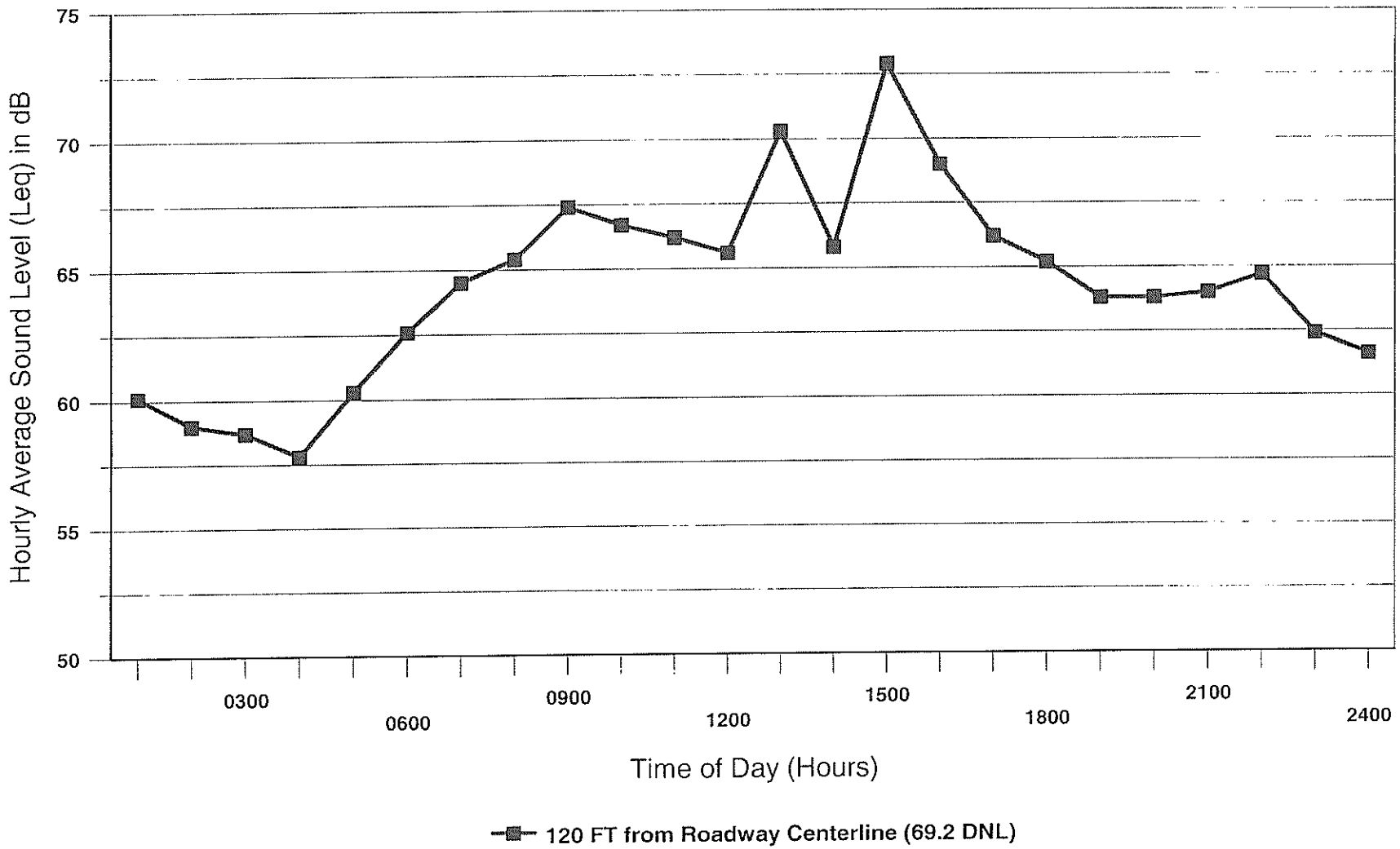


FIGURE 7
HOURLY TOTAL NOISE LEVELS VS. TIME OF DAY
MEASURED AT SUITE 1415, WAIKIKI GATEWAY HOTEL (6/9-10/15)



In addition to the traffic noise measurements, other background ambient noise measurements were obtained at Locations A1 and B, where other noise sources from emergency vehicles (sirens and horns) made significant contributions to the total noise environment. The results of these measurements plus the results of the traffic noise measurements and predictions were used to describe the existing and future noise levels in the project environs.

Calculations of average exterior and interior noise levels from construction activities were performed for typical naturally ventilated and air conditioned dwellings. or resort units. Predicted noise levels were compared with existing background ambient noise levels, and the potential for noise impacts was assessed. Potential noise impacts from construction operations were discussed, and mitigation measures recommended.

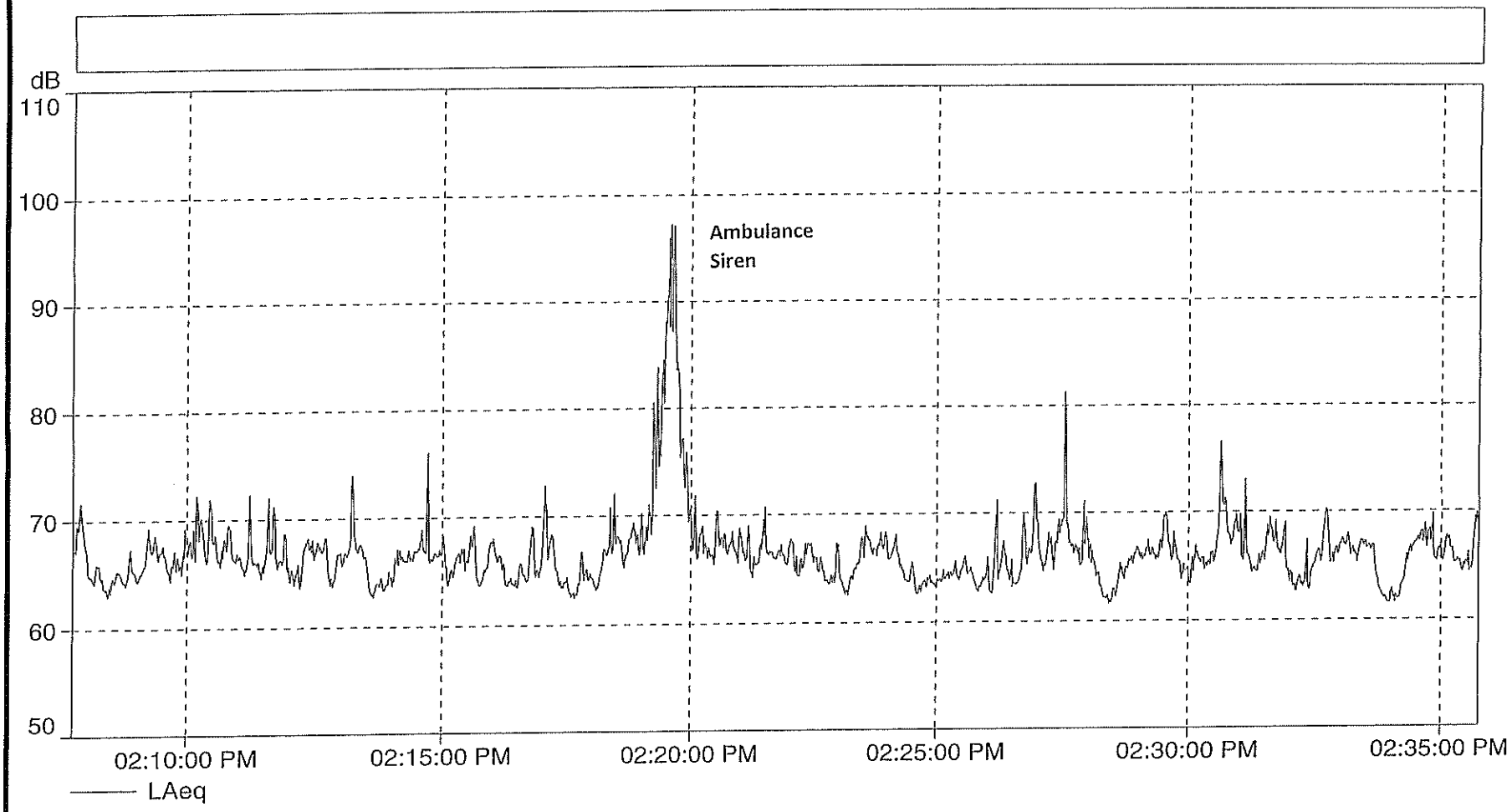
V. EXISTING ACOUSTICAL ENVIRONMENT

Major contributors to the existing background ambient noise levels within the project area are: traffic along Kalakaua Avenue, Kuhio Avenue, Saratoga Road, Ala Moana Boulevard, and Kalia Road; garbage collection trucks; tour buses and delivery trucks which are idling or positioning at curbside; loud motorcycles; the sirens of emergency and police vehicles; and nearby construction activities. Sample strip charts of the louder noise events which were recorded at the noise measurement locations are shown in Figures 8 through 10. The louder noise events can range from 90 to 105 dBA, are clearly audible above the other background ambient noise sources, and tend to dominate and distort the hourly [or Leq(h)] and 24-hour (or DNL) average noise levels.

The hourly variations in noise levels within the project area are controlled by both motor vehicle traffic along the high volume roadways as well as by the louder non-traffic noise sources, such as refuse and delivery trucks and sirens and horns. Traffic noise levels tend to be lowest during the early morning hours between 3:00 and 4:00 am, and tend to be highest during the daytime and evening hours when tour buses and trolleys operate. The measured variations in average hourly noise levels at measurement Locations A1 and B are shown in Figures 4 through 7. Superimposed on the hourly variations associated with traffic noise are the large increases in average hourly noise levels caused by the loud noise sources described previously, as well as the more steady noise levels from nearby mechanical equipment.

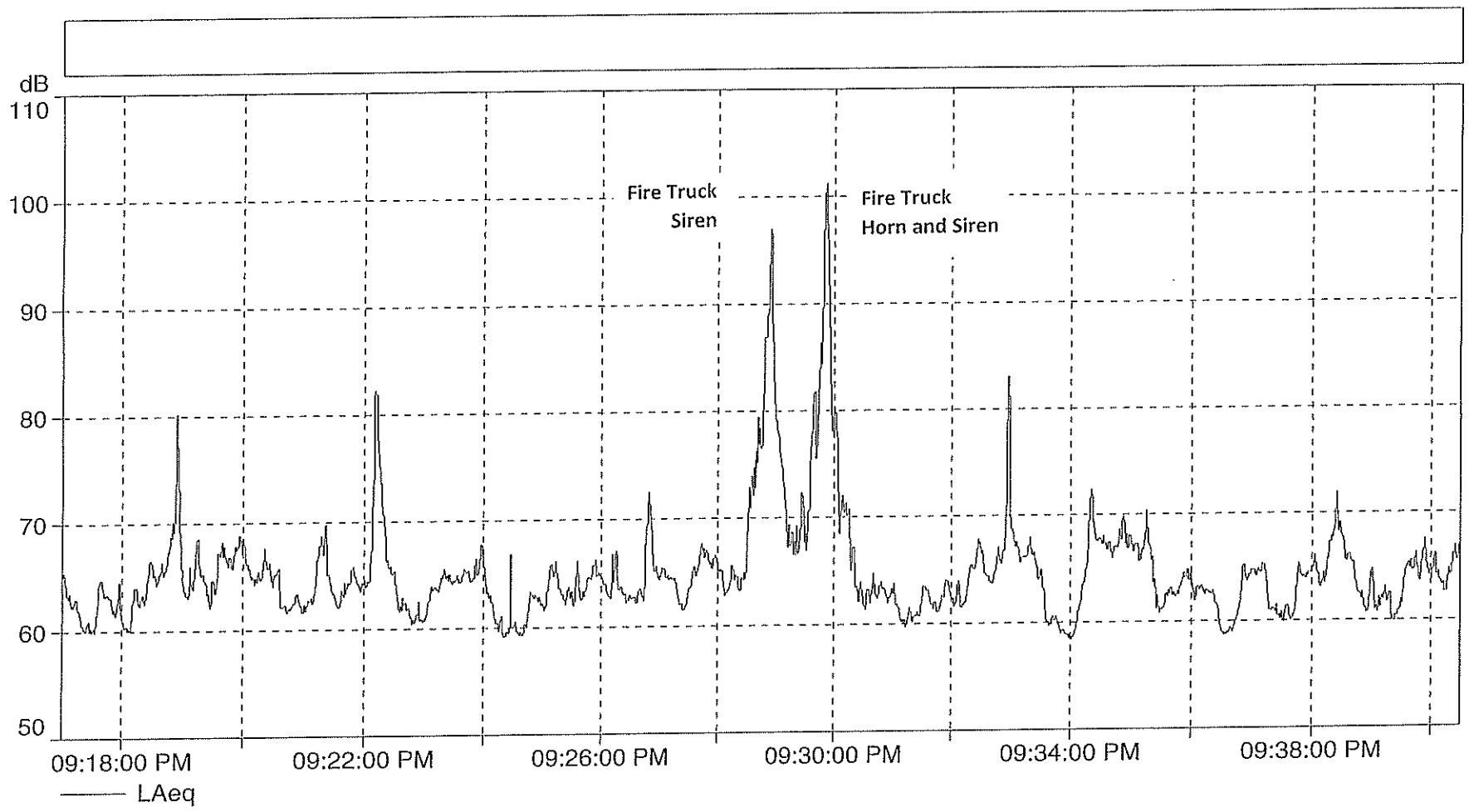
The existing traffic volumes and their noise contributions at 50, 75, and 100 feet setback distances from the centerlines of the roadways servicing the project are shown in Appendix C and Table 3. The corresponding setback distances from the roadways' centerlines to their corresponding 65, 70, and 75 DNL traffic noise contours for ground level receptors are shown in Table 4. Based on the results shown in Tables 3 and 4, as well as the measured sound levels at Locations A1 and B (see Figures 4 through 7), it was concluded that existing background noise levels in the project environs currently exceed 65 DNL at essentially all buildings which front Kalakaua Avenue and Kuhio Avenue. In addition, at the upper floors of buildings which front the lower volume streets such as Olohana and Kalaimoku Streets, distant traffic noise plus the other non-traffic noise sources in the area cause ambient noise levels to exceed 65 DNL. At those receptor locations which front Kalakaua Avenue, Kuhio Avenue, and Saratoga Road, existing background ambient noise levels exceed 65 DNL, and could exceed 70 DNL on days when very loud noise sources, such as emergency sirens and horns occur. As indicated in Tables 3 and 4, the existing noise levels in the project environs are highest along Kalakaua Avenue and Kuhio Avenue, and lowest along Olohana Street and Kalaimoku Street.

Existing noise levels on the mauka face of the proposed One Waikiki tower building currently range from 66 to 71 DNL. Existing noise levels on the makai face of the proposed One Waikiki tower building are slightly lower at 66 to 69 DNL due to their larger setback distances from Kalakaua Avenue. At receptor locations which are



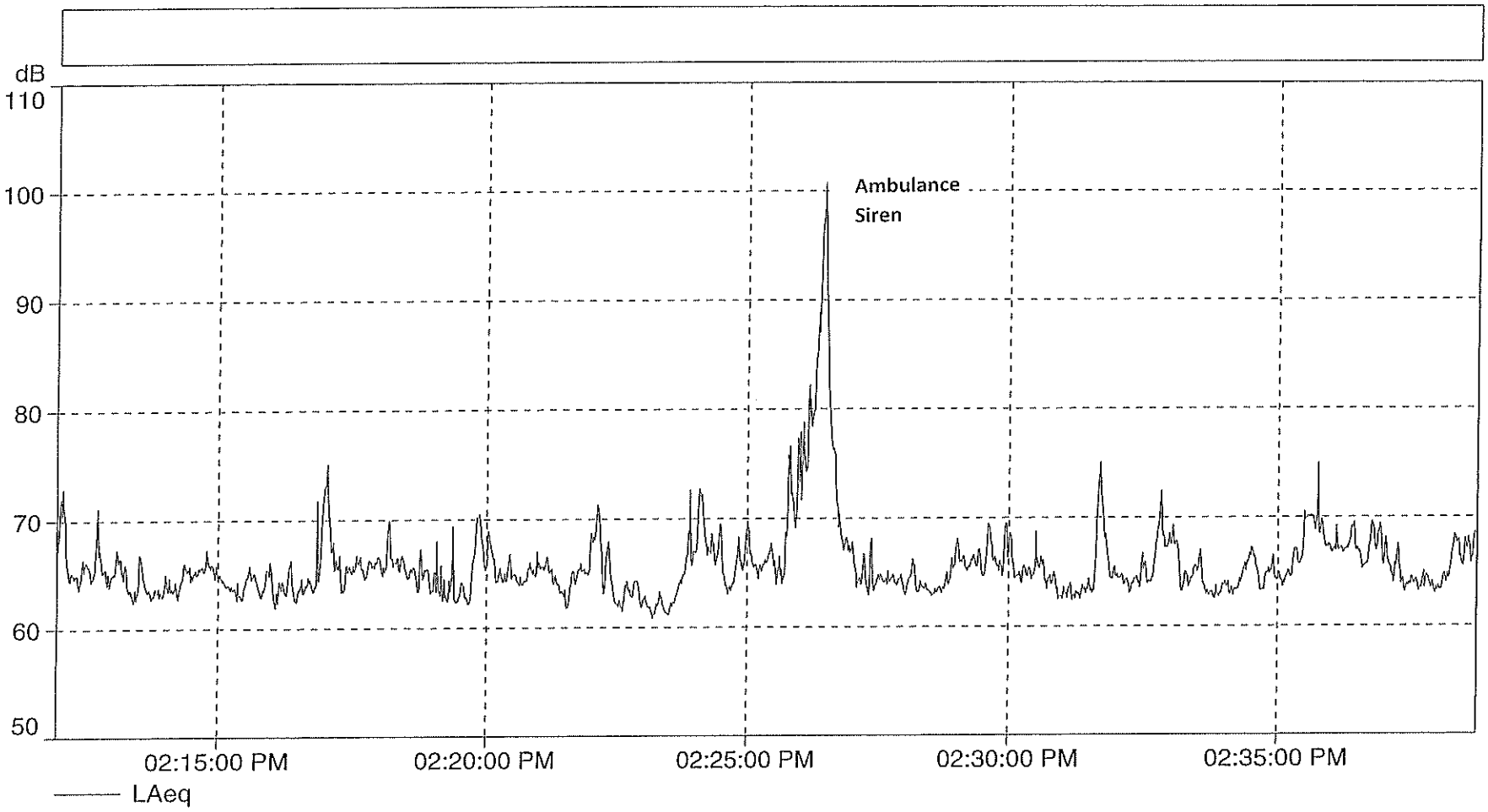
AMBULANCE SIREN RECORDED AT LOCATION A1 ON JUNE 6, 2015

FIGURE 8



FIRE TRUCK HORN AND SIREN RECORDED AT LOCATION A1 ON JUNE 6, 2015

FIGURE 9



AMBULANCE SIREN RECORDED AT LOCATION B ON JUNE 9, 2015

FIGURE 10

TABLE 3

EXISTING (CY 2012) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Kuhio Ave. W. of Olohana, PM	32	849	746	23	80	67.6	65.6	64.3
Kuhio Ave. Between Olohana & Kalaimoku, PM	32	992	872	27	93	68.3	66.3	65.0
Kuhio Ave. E. of Kalaimoku, PM	32	1,091	959	29	103	68.7	66.7	65.4
Kalakaua Ave. W. of Olohana, PM	32	1,811	1,686	53	72	69.6	67.6	66.3
Kalakaua Ave. Between Olohana & Saratoga, PM	32	1,983	1,846	58	79	70.0	68.0	66.7
Kalakaua Ave. E. of Saratoga, PM	32	2,023	1,883	59	81	70.1	68.1	66.8
Olohana St. N. of Kuhio, AM	25	156	151	3	2	53.8	52.1	50.9
Olohana St. Between Kuhio & Kalakaua, PM	25	247	239	5	3	55.8	54.1	52.8
Kalaimoku St. N. of Kuhio, PM	25	375	363	8	4	57.5	55.8	54.6
Kalaimoku St. Between Kalakaua & Kuhio, PM	25	355	343	8	4	57.3	55.6	54.4
Saratoga Rd. S. of Kalakaua, PM	25	842	673	34	135	66.5	64.7	63.5
Estimate for Kalakaua W. of Kuhio, PM	32	2,660	2,477	77	106	71.3	69.3	68.0

TABLE 4

EXISTING AND CY 2018 DISTANCES TO 65, 70, AND 75 DNL CONTOURS

STREET SECTION	65 DNL SETBACK (FT)		70 DNL SETBACK (FT)		75 DNL SETBACK (FT)	
	EXISTING	CY 2018	EXISTING	CY 2018	EXISTING	CY 2018
Kuhio Ave. W. of Olohana	130	146	45	50	16	18
Kuhio Ave. Between Olohana & Kalaimoku	152	178	52	60	19	22
Kuhio Ave. E. of Kalaimoku	166	199	56	66	20	24
Kalakaua Ave. W. of Olohana	215	262	71	87	26	30
Kalakaua Ave. Between Olohana & Saratoga	234	299	78	99	28	34
Kalakaua Ave. E. of Saratoga	240	268	79	89	29	32
Olohana St. N. of Kuhio	< 12	< 12	< 12	< 12	< 12	< 12
Olohana St. Between Kuhio & Kalakaua	< 12	< 12	< 12	< 12	< 12	< 12
Kalaimoku St. N. of Kuhio	< 12	16	< 12	< 12	< 12	< 12
Kalaimoku St. Between Kalakaua & Kuhio	< 12	18	< 12	< 12	< 12	< 12
Saratoga Rd. S. of Kalakaua	113	113	36	36	12	12
Estimate for Kalakaua W. of Kuhio	313	365	103	121	37	42

Notes:

(1) All setback distances are from the roadways' centerlines.
(2) See Tables 3 and 5 for traffic volume, speed, and mix assumptions.
(3) Setback distances are for ground level receptors.
(4) "Pavement" conditions assumed along all roadways.

shielded from traffic noise, such as along the makai (south) side of the former Kyoya Restaurant, existing background ambient noise levels are lower due to the noise shielding effects of the surrounding buildings. Noise reductions of 5 to 20 dBA can be expected from these noise shielding effects. Background ambient noise levels at these locations range from 50 to 60 DNL, and are controlled by the natural sounds of birds and foliage, operating machinery, and local street traffic rather than by traffic along Kalakaua Avenue.

The maximum noise levels from offshore aircraft range between 65 and 70 dB. The loudest aircraft noise events are typically associated with departures by interisland jet cargo or military jet aircraft, or with nearby light propeller or rotary wing aircraft. Aircraft noise events are audible above the background ambient noise at the quieter receptor locations. However, aircraft noise levels at the project site do not exceed 60 DNL, which is the level above which the Hawaii State Department of Transportation, Airports Division, considers to be unacceptable for residences and resorts. The most recently published airport noise contours for Honolulu International Airport indicate that the project site is located beyond (or outside) the 55 DNL contour for the Year 2007.

CHAPTER VI. FUTURE NOISE ENVIRONMENT

Predictions of future traffic noise levels for CY 2018 were made using the traffic volume assignments of Reference 6 without and with the proposed project. The future projections of non-project and project traffic volumes for the No Build and Build Alternatives are shown in Appendix C. In addition, the estimates (for traffic noise modeling purposes) of CY 2018 traffic volumes on Kalakaua Avenue west of the Kuhio Avenue intersection are also shown at the bottom rows of Appendix C.

Table 5 contains the CY 2018 traffic volumes and noise levels at 50, 75, and 100 feet from the roadways' centerlines for the Build Alternative. Table 4 contains the setback distances to the 65, 70, and 75 DNL contours for CY 2018 under the Build Alternative. Future average vehicle speeds and traffic mixes along all roadways were assumed to be identical to those used for CY 2012 (see Table 3).

In CY 2018, the dominant traffic noise sources in the project area will continue to be traffic noise from Kalakaua Avenue, Kuhio Avenue, Saratoga Road, Ala Moana Boulevard, and Kalia Road. Table 6 presents the calculated increases in future traffic noise levels attributable to non-project and project traffic under the Build Alternative. As indicated in Table 6, future increases in traffic noise attributable to non-project traffic are significantly greater than those traffic noise increases attributable to project traffic by CY 2018. Increases in future traffic noise levels attributable to project traffic will range from 0.0 to 0.2 dB, and will be difficult to measure or perceive.

Essentially all locations which front Kalakaua Avenue, Kuhio Avenue, Saratoga Road, Ala Moana Boulevard, and Kalia Road will continue to experience relatively high noise levels above 65 DNL. Lower elevation receptors which benefit from the noise shielding from existing and new buildings may experience traffic noise levels less than 65 DNL. In addition, those receptor locations on the makai (south) face of the proposed One Waikiki building which are removed from the major roadways and are shielded by the proposed new One Waikiki building and the existing Outrigger Luana Waikiki building, should experience traffic noise levels less than 65 DNL. Those receptor locations on the mauka (north) face of the proposed One Waikiki Building will experience relatively high traffic noise levels from Kalakaua Avenue and Kuhio Avenue. These relatively high traffic noise levels within the project at locations which are exposed to street traffic on Kalakaua and Kuhio Avenues are characteristic of Waikiki, and will remain high through CY 2018, with or without the project.

On the mauka (north) face of the proposed One Waikiki Tower building, future traffic noise levels are predicted to range from 65 to 70 DNL on a typical day, and are expected to be similar to existing noise levels. Whenever intermittently high level noise events (such as emergency sirens and horns) occur, total noise levels are predicted to be slightly higher and range from 65 to 72 DNL on the mauka face of the proposed One Waikiki tower building.

TABLE 5

FUTURE (CY 2018) TRAFFIC VOLUMES AND NOISE LEVELS ALONG ROADWAYS IN PROJECT AREA (AM OR PM PEAK HOUR, BUILD)

LOCATION	SPEED (MPH)	TOTAL VPH	****** VOLUMES (VPH) ******** AUTOS	M TRUCKS	H TRUCKS	50' Leq	75' Leq	100' Leq
Kuhio Ave. W. of Olohana, PM	32	956	840	26	90	68.1	66.1	64.8
Kuhio Ave. Between Olohana & Kalaimoku, PM	32	1,165	1,025	31	109	69.0	67.0	65.7
Kuhio Ave. E. of Kalaimoku, PM	32	1,317	1,157	36	124	69.5	67.5	66.2
Kalakaua Ave. W. of Olohana, PM	32	2,195	2,043	64	88	70.4	68.5	67.2
Kalakaua Ave. Between Olohana & Saratoga, PM	32	2,525	2,351	73	101	71.0	69.1	67.8
Kalakaua Ave. E. of Saratoga, PM	32	2,265	2,108	66	91	70.6	68.6	67.3
Olohana St. N. of Kuhio, AM	25	205	198	5	2	54.9	53.2	51.9
Olohana St. Between Kuhio & Kalakaua, PM	25	405	392	9	4	57.8	56.1	54.8
Kalaimoku St. N. of Kuhio, PM	25	535	517	12	6	59.1	57.4	56.2
Kalaimoku St. Between Kalakaua & Kuhio, PM	25	633	612	14	7	59.8	58.1	56.9
Saratoga Rd. S. of Kalakaua, PM	25	842	673	34	135	66.5	64.7	63.5
Estimate for Kalakaua W. of Kuhio, PM	32	3,151	2,934	91	126	72.0	70.0	68.7

TABLE 6

CALCULATIONS OF PROJECT AND NON-PROJECT TRAFFIC NOISE CONTRIBUTIONS (CY 2018) (PEAK HOUR LEQ OR DNL)

STREET SECTION	NOISE LEVEL INCREASE DUE TO: NON-PROJECT TRAFFIC	PROJECT TRAFFIC
Kuhio Ave. W. of Olohana	0.5	0.0
Kuhio Ave. Between Olohana & Kalaimoku	0.7	0.0
Kuhio Ave. E. of Kalaimoku	0.8	0.0
Kalakaua Ave. W. of Olohana	0.8	0.1
Kalakaua Ave. Between Olohana & Saratoga	1.0	0.1
Kalakaua Ave. E. of Saratoga	0.5	0.0
Olohana St. N. of Kuhio	1.1	0.0
Olohana St. Between Kuhio & Kalakaua	2.0	0.0
Kalaimoku St. N. of Kuhio	1.4	0.2
Kalaimoku St. Between Kalakaua & Kuhio	2.3	0.2
Saratoga Rd. S. of Kalakaua	0.0	0.0
Estimate for Kalakaua W. of Kuhio	0.7	0.0

On the Diamond Head (east) face of the proposed One Waikiki tower building, future noise levels are predicted to range from 64 to 71 DNL. On the Ewa (west) face of the proposed One Waikiki tower building, future noise levels are predicted to range from 61 to 68 DNL. On the makai (south) face of the proposed One Waikiki tower building, future noise levels are predicted to range from 59 to 62 DNL. The noise levels on the makai face of the proposed One Waikiki tower building are predicted to be lower than those on the mauka face of the proposed One Waikiki tower building due to the larger setback distance to Kalia Road, Ala Moana Boulevard, and Saratoga Road plus the added attenuation of traffic noise from Kalakaua Avenue and Kuhio Avenue due to noise shielding effects by the proposed One Waikiki tower building .

Aircraft noise levels over the project site should not change significantly between CY 2012 and 2018, and should remain below the acceptable level of 60 DNL.

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

Traffic Noise. For the living units in the proposed One Waikiki tower building, as well as for the Chapel, Restaurant, Club Lounge, and Reception spaces, noise mitigation measures are recommended. Closure and air conditioning of these spaces is an effective noise mitigation measure for this project. Approximately 30 to 35 dB of exterior-to-interior noise reduction is recommended for those interior spaces whose exterior walls or glazing have unobstructed lines-of-sight to Kalakaua Avenue and Kuhio Avenue. For those interior spaces which are located on the makai face of the new One Waikiki building, a lower amount of 20 to 25 dB of exterior-to-interior noise reduction should be adequate for mitigating potential traffic noise impacts. While 20 to 35 dB of exterior-to-interior noise reduction may be adequate to attenuate typical traffic noises to acceptable levels indoors, the louder noise events such as the emergency sirens and horns of 90 to 105 dBA sound level will still be audible indoors. Because of the inherently mediocre sound attenuation performance of exterior glazing, it will not be practical to achieve the 60 to 70 dB of exterior-to-interior noise reduction required to reduce the extremely loud noise events to inaudible levels indoors.

Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic noise when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled though the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a noise mitigation measure.

Mechanical equipment, such as air conditioning chillers or cooling towers, and garage and kitchen ventilation fans are the primary on-site noise sources expected to be located on the project site. These equipment, singly or together, have the potential of exceeding the allowable property line noise limits of the State DOH noise regulations (Reference 4). The State DOH noise limits which apply along the property boundaries of resort districts are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively, where the daytime period is from 7:00 am to 10:00 pm, and the nighttime period is from 10:00 pm to 7:00 am. Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations. Because the residual background ambient noise levels in the project area are similar to or even higher than the State

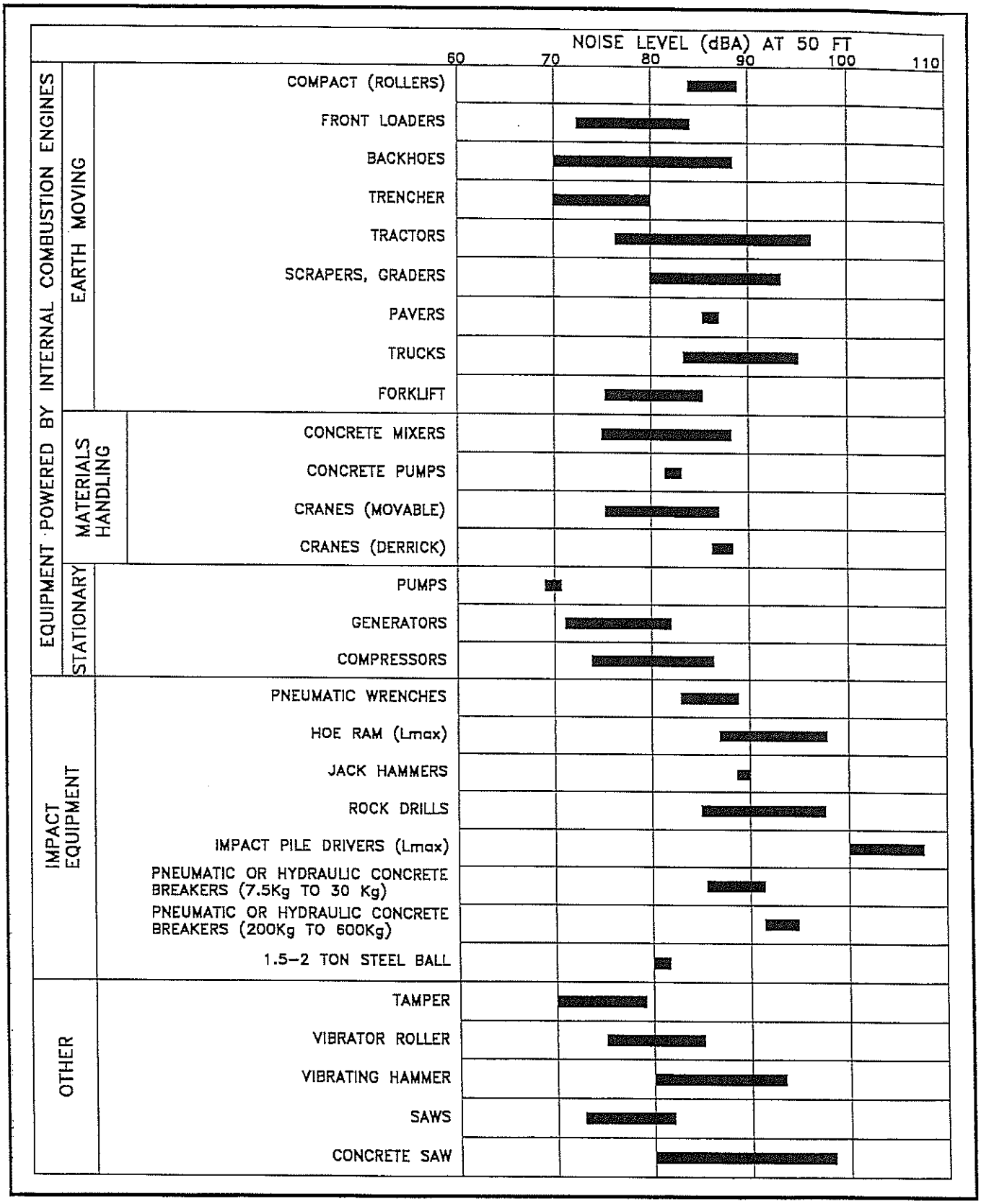
DOH noise limits, compliance with the DOH noise limits should minimize risks of adverse noise impacts on neighboring properties and within the project area.

The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge.

General Construction Noise. Audible construction noise will probably be unavoidable during the entire project construction period. The total time period for construction of the project is not known. It is expected that actual construction work will be moving from one location on the project site to another during that period. Actual length of exposure to construction noise at any receptor location will probably be less than the total construction period for the entire project. Figure 11 depicts the range of noise levels of various types of construction equipment when measured at 50 feet distance from the equipment.

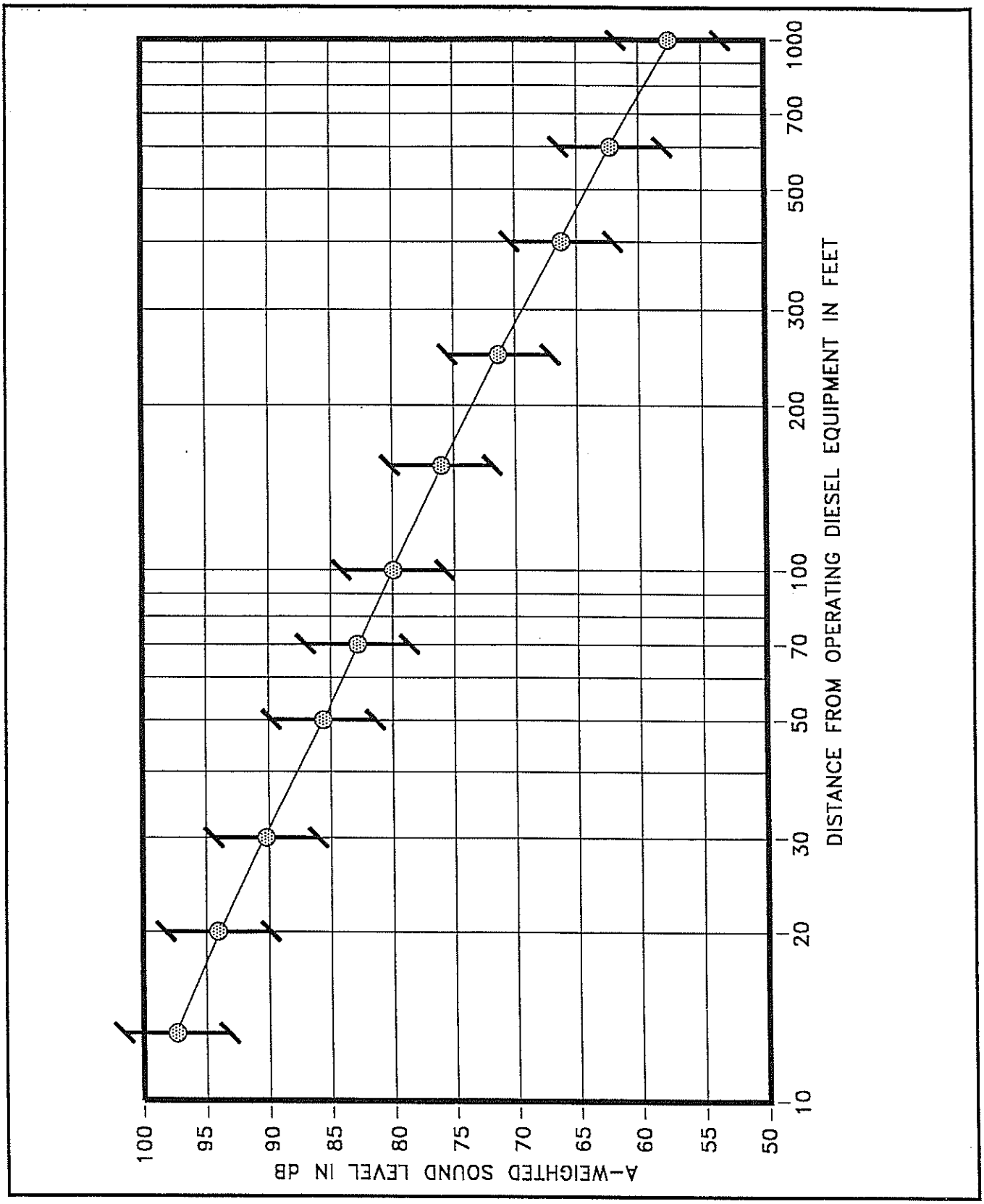
Typical levels of exterior noise from construction activity (excluding pile driving activity) at various distances from the operating equipment are shown in Figure 12. Casted-in-place piles are planned to be used for the foundations of the proposed One Waikiki building, so very high noise and vibration levels should be avoidable at nearby receptors and buildings. Figure 12 is useful for predicting exterior noise levels at short distances (within 100 feet) from the work when visual line of sight exists between the construction equipment and the receptor. Direct line-of-sight distances from the construction equipment to existing resort, Army Chapel, and commercial buildings will range from less than 50 feet to 600+ feet, with corresponding average noise levels of 95 to 62 dBA (plus or minus 5 dBA). For receptors along a cross-street, the construction noise level vs. distance curve of Figure 12 should be reduced by approximately 8 dBA when the work is occurring at the intersection with the cross street, and should be reduced by 15 dBA when work is occurring at least 100 feet from the intersection (and the visual line-of-sight is blocked by intervening buildings). Typical levels of construction noise inside naturally ventilated and air conditioned structures are approximately 10 and 20 dB less, respectively, than the levels shown in Figure 12.

Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities are located at the neighboring Outrigger Luana Waikiki Hotel and at the Fort DeRussy Chapel. Predicted construction noise levels at these buildings during the demolition and site preparation phase of the work on the project site ranged from 53 to 95 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the Outrigger Luana Waikiki Hotel west of the project site during demolition and site preparation work, where buffer distances are



RANGES OF CONSTRUCTION EQUIPMENT NOISE LEVELS

FIGURE 11



ANTICIPATED RANGE OF CONSTRUCTION NOISE LEVELS VS. DISTANCE

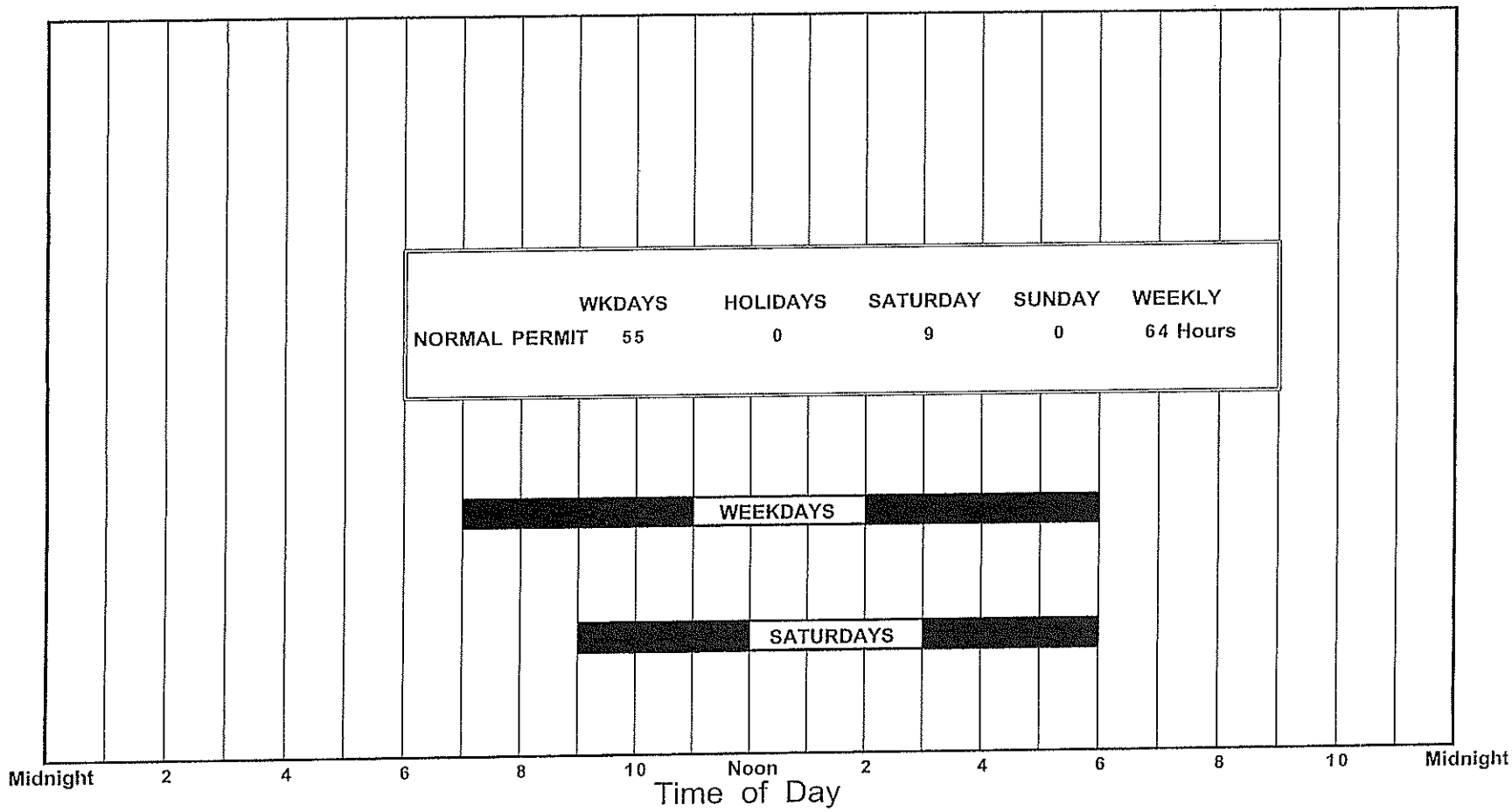
FIGURE 12

relatively small (in the order of 15 to 50 feet). On the makai (south) side of the project site where the Fort DeRussy Chapel is located, construction noise levels during demolition and site preparation are predicted to range from 52 to 86 dBA. Adverse impacts from construction noise are not expected to be in the "public health and welfare" category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site.

Mitigation of construction noise to inaudible levels will not be practical in all cases due to the intensity of construction noise sources (80 to 90+ dB at 50 feet distance), and due to the exterior nature of the work (excavation, grading, trenching, concrete pouring, hammering, etc.). The use of properly muffled construction equipment should be required on the job site.

Severe noise impacts are not expected to occur inside air conditioned structures which are beyond 70 to 450 feet from the project construction sites. Inside naturally ventilated structures, interior noise levels (with windows or doors opened) are estimated to range between 73 to 55 dBA at 70 feet to 450 feet distances from the construction site. Closure of all doors and windows facing the construction site would generally reduce interior noise levels by an additional 5 to 10 dBA.

The incorporation of State Department of Health construction noise limits and curfew times, which are applicable throughout the State of Hawaii (Reference 4), is another noise mitigation measure which is normally applied to construction activities. Figure 13 depicts the normally permitted hours of construction. Noisy construction activities are not allowed on Sundays and holidays, during the early morning, and during the late evening and nighttime periods under the DOH permit procedures.



AVAILABLE WORK HOURS UNDER DOH PERMIT PROCEDURES FOR CONSTRUCTION NOISE

FIGURE 13

APPENDIX A. REFERENCES

(1) "Guidelines for Considering Noise in Land Use Planning and Control;" Federal Interagency Committee on Urban Noise; June 1980.

(2) "Environmental Criteria and Standards, Noise Abatement and Control, 24 CFR, Part 51, Subpart B;" U.S. Department of Housing and Urban Development; March 26, 1996.

(3) "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety;" Environmental Protection Agency (EPA 550/9-74-004); March 1974.

(4) "Title 11, Administrative Rules, Chapter 46, Community Noise Control;" Hawaii State Department of Health; September 23, 1996.

(5) "FHWA Traffic Noise Model User's Guide;" FHWA-PD-96-009, DOT-VNTSC-FHWA-98-1, Federal Highway Administration; Washington, D.C.; January 1998 and Version 2.5 Upgrade (April 14, 2004).

(6) "Traffic Impact Report for One Waikiki;" Wilson Okamoto Corporation; June 2015.

(7) Hourly Traffic Counts At Station B72761200100, Kalakaua Avenue Between Pau Street and Keoniana Street; Hawaii State Department of Transportation, Highways Division; December 18, 2013.

(8) Hourly Traffic Counts At Station B72761200132, Kalakaua Avenue Between Beach Walk and Lewers Street; Hawaii State Department of Transportation, Highways Division; December 16, 2013.

APPENDIX B

EXCERPTS FROM EPA'S ACOUSTIC TERMINOLOGY GUIDE

Descriptor Symbol Usage

The recommended symbols for the commonly used acoustic descriptors based on A-weighting are contained in Table I. As most acoustic criteria and standards used by EPA are derived from the A-weighted sound level, almost all descriptor symbol usage guidance is contained in Table I.

Since acoustic nomenclature includes weighting networks other than "A" and measurements other than pressure, an expansion of Table I was developed (Table II). The group adopted the ANSI descriptor-symbol scheme which is structured into three stages. The first stage indicates that the descriptor is a level (i.e., based upon the logarithm of a ratio), the second stage indicates the type of quantity (power, pressure, or sound exposure), and the third stage indicates the weighting network (A, B, C, D, E.....). If no weighting network is specified, "A" weighting is understood. Exceptions are the A-weighted sound level and the A-weighted peak sound level which require that the "A" be specified. For convenience in those situations in which an A-weighted descriptor is being compared to that of another weighting, the alternative column in Table II permits the inclusion of the "A". For example, a report on blast noise might wish to contrast the LCdn with the LAdn.

Although not included in the tables, it is also recommended that "Lpn" and "LepN" be used as symbols for perceived noise levels and effective perceived noise levels, respectively.

It is recommended that in their initial use within a report, such terms be written in full, rather than abbreviated. An example of preferred usage is as follows:

The A-weighted sound level (LA) was measured before and after the installation of acoustical treatment. The measured LA values were 85 and 75 dB respectively.

Descriptor Nomenclature

With regard to energy averaging over time, the term "average" should be discouraged in favor of the term "equivalent". Hence, Leq, is designated the "equivalent sound level". For Ld, Ln, and Ldn, "equivalent" need not be stated since the concept of day, night, or day-night averaging is by definition understood. Therefore, the designations are "day sound level", "night sound level", and "day-night sound level", respectively.

The peak sound level is the logarithmic ratio of peak sound pressure to a reference pressure and not the maximum root mean square pressure. While the latter is the maximum sound pressure level, it is often incorrectly labelled peak. In that sound level meters have "peak" settings, this distinction is most important.

"Background ambient" should be used in lieu of "background", "ambient", "residual", or "indigenous" to describe the level characteristics of the general background noise due to the contribution of many unidentifiable noise sources near and far.

With regard to units, it is recommended that the unit decibel (abbreviated dB) be used without modification. Hence, DBA, PNdB, and EPNdB are not to be used. Examples of this preferred usage are: the Perceived Noise Level (Lpn was found to be 75 dB. Lpn = 75 dB). This decision was based upon the recommendation of the National Bureau of Standards, and the policies of ANSI and the Acoustical Society of America, all of which disallow any modification of bel except for prefixes indicating its multiples or submultiples (e.g., deci).

Noise Impact

In discussing noise impact, it is recommended that "Level Weighted Population" (LWP) replace "Equivalent Noise Impact" (ENI). The term "Relative Change of Impact" (RCI) shall be used for comparing the relative differences in LWP between two alternatives.

Further, when appropriate, "Noise Impact Index" (NII) and "Population Weighed Loss of Hearing" (PHL) shall be used consistent with CHABA Working Group 69 Report Guidelines for Preparing Environmental Impact Statements (1977).

TABLE I

A-WEIGHTED RECOMMENDED DESCRIPTOR LIST

	TERM	SYMBOL
1.	A-Weighted Sound Level	L_A
2.	A-Weighted Sound Power Level	L_{WA}
3.	Maximum A-Weighted Sound Level	L_{max}
4.	Peak A-Weighted Sound Level	L_{Apk}
5.	Level Exceeded x% of the Time	L_x
6.	Equivalent Sound Level	L_{eq}
7.	Equivalent Sound Level over Time (T) (1)	$L_{eq(T)}$
8.	Day Sound Level	L_d
9.	Night Sound Level	L_n
10.	Day-Night Sound Level	L_{dn}
11.	Yearly Day-Night Sound Level	$L_{dn(Y)}$
12.	Sound Exposure Level	L_{SE}

(1) Unless otherwise specified, time is in hours (e.g. the hourly equivalent level is $L_{eq(1)}$). Time may be specified in non-quantitative terms (e.g., could be specified a $L_{eq(WASH)}$ to mean the washing cycle noise for a washing machine).

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

TABLE II

RECOMMENDED DESCRIPTOR LIST

TERM	A-WEIGHTING	ALTERNATIVE[1] A-WEIGHTING	OTHER[2] WEIGHTING	UNWEIGHTED
1. Sound (Pressure)[3] Level	L_A	L_{pA}	L_B, L_{pB}	L_p
2. Sound Power Level	L_{WA}		L_{WB}	L_W
3. Max. Sound Level	L_{max}	L_{Amax}	L_{Bmax}	L_{pmax}
4. Peak Sound (Pressure) Level	L_{Apk}		L_{Bpk}	L_{pk}
5. Level Exceeded x% of the Time	L_x	L_{Ax}	L_{Bx}	L_{px}
6. Equivalent Sound Level	L_{eq}	L_{Aeq}	L_{Beq}	L_{peq}
7. Equivalent Sound Level[4] Over Time(T)	$L_{eq(T)}$	$L_{Aeq(T)}$	$L_{Beq(T)}$	$L_{peq(T)}$
8. Day Sound Level	L_d	L_{Ad}	L_{Bd}	L_{pd}
9. Night Sound Level	L_n	L_{An}	L_{Bn}	L_{pn}
10. Day-Night Sound Level	L_{dn}	L_{Adn}	L_{Bdn}	L_{pdn}
11. Yearly Day-Night Sound Level	$L_{dn(Y)}$	$L_{Adn(Y)}$	$L_{Bdn(Y)}$	$L_{pdn(Y)}$
12. Sound Exposure Level	L_S	L_{SA}	L_{SB}	L_{Sp}
13. Energy Average Value Over (Non-Time Domain) Set of Observations	$L_{eq(e)}$	$L_{Aeq(e)}$	$L_{Beq(e)}$	$L_{peq(e)}$
14. Level Exceeded x% of the Total Set of (Non-Time Domain) Observations	$L_{x(e)}$	$L_{Ax(e)}$	$L_{Bx(e)}$	$L_{px(e)}$
15. Average L_x Value	L_x	L_{Ax}	L_{Bx}	L_{px}

(1) "Alternative" symbols may be used to assure clarity or consistency.

(2) Only B-weighting shown. Applies also to C,D,E,.....weighting.

(3) The term "pressure" is used only for the unweighted level.

(4) Unless otherwise specified, time is in hours (e.g., the hourly equivalent level is Leq(1). Time may be specified in non-quantitative terms (e.g., could be specified as Leq(WASH) to mean the washing cycle noise for a washing machine.

APPENDIX C

SUMMARY OF BASE YEAR AND YEAR 2018 TRAFFIC VOLUMES DURING AM AND PM PEAK HOURS

ROADWAY LANES	******** CY 2012 ****** AM	PM	CY 2018 (NO BUILD) AM	PM	*** CY 2018 (BUILD) **** AM	PM
Kuhio Ave. W. of Olohana (EB)	548	723	611	805	611	805
Kuhio Ave. W. of Olohana (WB)	106	126	125	151	125	151
Two-Way	654	849	736	956	736	956
Kuhio Ave. Btwn. Olohana & Kalaimoku (EB)	539	767	602	849	602	849
Kuhio Ave. Btwn. Olohana & Kalaimoku (WB)	165	226	245	316	245	316
Two-Way	703	992	847	1,165	847	1,165
Kuhio Ave. E. of Kalaimoku (EB)	547	832	671	1,011	671	1,011
Kuhio Ave. E. of Kalaimoku (WB)	204	259	236	306	236	306
Two-Way	751	1,091	907	1,317	907	1,317
Kalakaua Ave. West of Olohana (EB)	1,543	1,811	1,821	2,142	1,860	2,195
Kalakaua Ave. Btwn. Olohana & Saratoga (EB)	1,656	1,983	2,093	2,472	2,132	2,525
Kalakaua Ave. E. of Saratoga (EB)	1,601	2,023	1,786	2,240	1,803	2,265
Olohana St. N. of Kuhio (SB)	156	141	205	190	205	190
Olohana St. Between Kuhio & Kalakaua (SB)	206	247	365	405	365	405
Kalaimoku St. N. of Kuhio (NB)	233	375	338	507	360	535
Kalaimoku St. Btwn. Kalakaua & Kuhio (NB)	219	355	428	605	450	633
Saratoga Rd. S. of Kalakaua (NB)	427	654	427	654	427	654
Saratoga Rd. S. of Kalakaua (SB)	172	188	172	188	172	188
Two-Way	599	842	599	842	599	842
Kalakaua Ave. W. of Kuhio (EB) (Noise Model)	2,091	2,534	2,432	2,947	2,471	3,000
Kalakaua Ave. W. of Kuhio (WB) (Noise Model)	106	126	125	151	125	151
Two-Way	2,197	2,660	2,557	3,098	2,596	3,151

Air Quality Study

For the Proposed

Park Kalia-Waikiki Condo-Hotel Development

November 2015

Prepared For:
Tsukada Global Holdings, Inc.
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SUMMARY

Tsukada Global Holdings, Inc. is proposing a condo-hotel development in Honolulu on the island of Oahu. The development will be bounded by the Luana Waikiki Hotel to the north and a park to the south. The development will involve replacement of the former Kyo-ya Restaurant building with a new condo-hotel expected to include approximately 180 units with recreational amenities and on-site parking. The development will also include a wedding chapel. The Project is expected to be completed and occupied by the year 2018.

Federal and state standards have been put in place to maintain air quality. At both the federal and state levels, standards have been established to regulate particulate matter, sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, and lead. Hawaii has also established a standard for hydrogen sulfide at the state level. The Hawaii standards for carbon monoxide and nitrogen dioxide are significantly more stringent than the national standards. Data from the nearest monitoring station indicates that both federal and state standards are being met.

The Hawaiian climate is characterized by mild and fairly consistent temperatures everywhere except at high elevations, a dominance of trade-wind flow, and generally high humidity and cloudiness except on the driest coasts and high elevations. Hawaii receives an annual average rainfall of about 70 inches while the average annual rainfall in Honolulu is about 17 inches. The warmest month in downtown Honolulu is August with an average temperature of 78°F and an average high at the Honolulu International Airport of 89°F. The coldest month is February with an average temperature of about 72°F in downtown Honolulu and an average low at the Honolulu International Airport of 66°F. Data from the Honolulu International Airport for the period of 1980 to 2009 indicates that wind from the northeast and east-northeast is predominant in both the winter (November through April) and summer (May through October) seasons. Winds exceeding 15 miles per hour at the airport occurred 27% of the time in the summer and 21% in the winter. These stronger winds occur in both the northeast and east-northeast directions in the summer and winter.

If undertaken, the proposed project may have short- and long-term impacts on air quality. These impacts may be caused directly in the short-term by construction. Construction impacts would include fugitive dust and engine exhaust. Indirect impacts may result in the short-term from increased traffic during the construction phase from transport of equipment and crew to and from the construction site and in the long-term from increased traffic due to operation of the proposed condo-hotel development.

Hawaii air pollution control regulations stipulate that no person shall cause fugitive dust to pass over the property line on which it was generated. A dust control plan is recommended to ensure compliance state air quality regulations. There are a number of possible measures that may be appropriate to include in the dust control plan, such as spraying water on unpaved roads, storage piles, and disturbed areas that may be present to suppress dust, establishing and monitoring speed

limits for on-site vehicles, and covering material being transported. Routinely cleaning the access road to the site and washing tires will help prevent track-out of dirt onto paved roads, reducing the potential for fugitive dust emissions. Additional measures to prevent fugitive emissions from the occurrence of wind include the use of wind screens to block disturbed areas and placement of landscape plants and berms as early as possible. Construction exhaust emissions would be short term and not expected to impact ambient air quality significantly. Exhaust emissions during construction can be mitigated by minimizing idling times and moving equipment and workers to and from the site during off-peak traffic hours.

The long-term impact of emissions was studied by modeling the effect increased motor vehicle traffic from operation of the proposed project will have on carbon monoxide concentrations. Worst-case 1-hour and 8-hour concentrations of carbon monoxide were modeled at numerous receptors located at four nearby intersections. Concentrations were estimated for three scenarios: the year 2014 baseline, the year 2018 without the project, and the year 2018 with the project. The results indicated that the air quality impact of the proposed project will be minimal and not significant. No measures are recommended to mitigate long-term emissions impacts.

1.0 INTRODUCTION

Tsukada Global Holdings, Inc. is proposing the Park Kalia-Waikiki condo-hotel development (Project), formerly referred to as ONE Waikiki. The Project will be bounded by the Luana Waikiki Hotel to the north and a park to the south. The project will be accessed via a driveway off Kalakua Avenue. The Project site is identified by Tax Map Keys: 2-6-006: por. 001, and 004. The development will involve replacement of the former Kyo-ya Restaurant building with a new condo-hotel expected to include approximately 155 units with recreational amenities and on-site parking. The development will also include a wedding chapel. The Project is expected to be completed and occupied by the year 2018. The Project site is shown in Figure 1.

The purpose of this study is to examine the existing air quality in the project area and assess the potential short- and long- term air quality impact, direct and indirect, that could result from construction and operation of the proposed facilities. Measures to mitigate potential impacts are recommended where appropriate.

Figure 1: Project Location

2.0 AMBIENT AIR QUALITY STANDARDS

National air quality policies are regulated through the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 amendments. The CAA requires the U.S. Environmental Protection Agency (EPA) set National Ambient Air Quality Standards (NAAQS) for pollutants determined harmful to the environment and public health. EPA has set NAAQS for seven criteria air pollutants as detailed in the Code of Federal Regulations (CFR) Section 40, Part 50. These pollutants include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2, which is a form of nitrogen oxides known as NO_x), sulfur dioxide (SO_2, which is a form of sulfur oxides known as SO_x), particulate matter less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead. These pollutants are referred to as criteria pollutants because USEPA has established numerical criteria that define acceptable levels of exposure for each pollutant and these standards are summarized in Table 1.

The EPA separates their standards in two categories, primary standards and secondary standards. Primary standards are intended to protect public health including populations such as asthmatics, children, and the elderly. These populations are typically referred to as sensitive receptors because they are particularly vulnerable impacts from air pollutants. The other category is secondary standards, which are intended to protect public welfare including protecting against decreased visibility and damage to animals, crops, vegetation and buildings.

EPA designates federal nonattainment areas if they have not achieved the NAAQS. The CAA also permits states to adopt additional ambient air quality standards if necessary. Hawaii's ambient air quality standards (HAAQS) are codified in Chapter 11-59 of the Hawaii Administrative Rules and also summarized in Table 1. The HAAQS include CO, lead, NO_2, O_3, PM, and SO_2 similar to the NAAQS, but also includes hydrogen sulfide. As the NAAQS and HAAQS differ in many cases, it is possible for an area to be designated attainment by EPA (meets NAAQS) and nonattainment by Hawaii (does not meet HAAQS) for the same pollutant. In some cases, the HAAQS are stricter than NAAQS. This is particularly true for 1 hour CO standard, which is 74% lower than the national standard (9 parts per million by volume [ppm] versus 35 ppm).

Table 1: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Hawaii AAQS	NAAQS	
			Primary [a]	Secondary [b]
Ozone	8 hours	0.08 ppm [c]	0.075 ppm [c]	0.075 ppm [c]
Carbon monoxide (CO)	1 hour 8 hours	9 ppm [d] 4.4 ppm [d]	35 ppm [d] 9 ppm [d]	-- --
Nitrogen dioxide (NO_2)	1 hour Annual Arithmetic Mean	-- 0.04 ppm [f]	0.100 ppm [e] 0.053 ppm [f]	-- 0.053 ppm [f]
Sulfur dioxide (SO_2)	1 hour 3 hours 24 hours Annual Arithmetic Mean	-- 0.05 ppm [d] 0.14 ppm [d] 0.03 ppm	0.075 ppm [g] -- -- --	-- 0.5 ppm [d] -- --
Particulate matter less than 10 microns (PM_{10})	24 hours Annual Arithmetic Mean	150 µg/m^3 [h] 50 µg/m^3	150 µg/m^3 [h] --	150 µg/m^3 [h] --
Particulate matter less than 2.5 microns ($PM_{2.5}$)	24 hours Annual Arithmetic Mean	-- --	35 µg/m^3 [i] 12 µg/m^3 [j]	35 µg/m^3 [i] 15 µg/m^3 [j]
Lead [g]	Calendar Quarter Rolling 3-month Average	1.5 µg/m^3	1.5 µg/m^3 0.15 µg/m^3 [k]	1.5 µg/m^3 0.15 µg/m^3 [k]
Hydrogen sulfide (H_2S)	1 hour	25 ppb	--	--

Notes:

ppm = parts per million

µg/m^3 = micrograms per cubic meter

-- = No standard has been adopted for this averaging time

[a] Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

[b] Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[c] Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years.

[d] Not to be exceeded more than once per year.

[e] 98th percentile of 1-hour daily maximum concentrations, averaged over 3 years.

[f] Annual mean.

[g] 99th percentile of 1-hour daily maximum concentrations, averaged over 3 years.

[h] Not to be exceeded more than once per year on average over 3 years.

[i] 98th percentile, averaged over 3 years.

[j] Annual mean, averaged over 3 years.

[k] Not to be exceeded.

3.0 REGIONAL AND LOCAL CLIMATOLOGY

The Hawaiian climate is characterized by mild and fairly consistent temperatures everywhere except at high elevations, a dominance of trade-wind flow, and generally high humidity and cloudiness except on the driest coasts and high elevations. Despite Hawaii's relatively moderate climate throughout the state, there are some differences between locations primarily caused by mountainous topography. Hawaii receives an annual average rainfall of about 70 inches while the average annual rainfall in Honolulu is about 17 inches.

Ambient temperature has a significant effect on motor vehicle emissions. Emissions, especially CO, tend to increase significantly at lower temperatures. The warmest month in downtown Honolulu is August with an average temperature of 78°F and an average high at the Honolulu International Airport of 89°F. The coldest month is February with an average temperature of about 72°F in downtown Honolulu and an average low at the Honolulu International Airport of 66°F.

Regional concentrations of pollutants are inversely proportional to wind speeds. Trade winds blow across the water and onto the Hawaiian Islands at a fairly constant speed a high percentage of the time. This flow is disrupted by the mountains, hills, and valleys. Local wind regimes may either oppose or reinforce this flow depending on local characteristics. The Honolulu International Airport is about 5 miles from the Project site and expected to have similar, representative wind conditions. Data from the Honolulu International Airport for the period of 1980 to 2009 indicates that wind from the northeast and east-northeast is predominant in both the winter (November through April) and summer (May through October) seasons. Winds exceeding 15 miles per hour at the airport occurred 27% of the time in the summer and 21% in the winter. These stronger winds occur in both the northeast and east-northeast directions in the summer and winter.

Another factor in ground-level pollution concentrations is mixing height. Mixing height is the height to which the lower atmosphere will undergo mechanical or turbulent mixing resulting in a nearly homogenous air mass. When mixing heights are low, emissions generated at or near ground level are not dispersed as well and can result in higher concentrations of pollutants. Though low mixing heights may occur, mixing heights for Hawaii tend to be high as a result of the trade winds and consistent, moderate temperatures. According to data provided by the EPA, mixing heights for Hawaii typically exceed 3,000 feet with nighttime averages around 3,300 feet and afternoon averages around 4,300 feet.

4.0 PRESENT AIR QUALITY

The State of Hawaii Department of Health maintains 14 air monitoring stations on four islands. The two monitoring stations on Maui are primarily to measure the impacts from agricultural activities. There are seven stations on the island of Hawaii which are intended to measure air quality impacts from the volcano and geothermal energy production. There is one monitoring station on Kauai used to measure the impacts from cruise ships. Most of Hawaii's commercial, industrial, and transportation activities occur on the island of Oahu and there are four air monitoring stations located there to measure the impact. The monitoring stations on Oahu are located in Honolulu, Kapolei, Pearl City, and Sand Island. Each station monitors a different array of pollutants. Annual summaries of air quality measurements made nearest the project site are provided in Table 2 for the five year period from 2010 to 2014. The data indicate that the project site has excellent air quality with no monitored violations of ambient air quality standards.

The station nearest the Project site monitoring SO_2 during to 2010 to 2014 period was located in downtown Honolulu. As an urban monitoring site, the measured concentrations at the Honolulu monitoring station are expected to be higher than the concentrations at the project site, and thus are conservative. The concentrations of SO_2 were consistently below the standards with no recorded exceedances during this period. The highest annual 1-hour average was only available for the years 2012 to 2014 and ranged from 0.018 to 0.031 ppm SO_2. The highest annual 3-hour average ranged between 0.010 and 0.017 ppm SO_2 and the highest annual 24-hour average ranged between 0.004 and 0.009. The annual average concentration for all five years was a steady maintained 0.001 ppm.

PM_{10} is also measured at the Honolulu monitoring station. The annual second highest 24-hour average ranged from 30 to 63 micrograms per cubic meter ($\mu g/m^3$) indicating no exceedances over the five year period. The annual average concentration ranged from 11 to 13 $\mu g/m^3$.

Measurements of CO were taken at the Honolulu monitoring station. There were no exceedances of HAAQS or NAAQS reported. The annual second highest 1-hour concentration ranged from 1.0 to 1.8 ppm and the annual second highest 8-hour concentration ranged from 0.7 to 1.2 ppm. There were no reported exceedances of CO measurements over this five year period.

The closest monitoring station to the Project site for NO_2 is the Kapolei station. There were no exceedances of HAAQS or NAAQS reported. The annual average concentration has been from 0.003 to 0.004 ppm.

The closest station monitoring O_3 to the Project site is the Sand Island monitoring station. The reported annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years, over the period of 2010 to 2014 has ranged from 0.044 to 0.057 ppm. No exceedance of standards has been reported.

Lead is monitored at the Kaolei monitoring station. Two years of data was available, from 2013 and 2014. In both cases, the annual average was 0.001 $\mu g/m^3$ with no occurrences of 3-month averages exceeding 0.15 $\mu g/m^3$.

Table 2: Annual Summaries of Air Quality Measurements for Monitoring Stations Nearest the Project

Pollutant Parameter / Station Location	2010	2011	2012	2013	2014
Sulfur Dioxide / Downtown Honolulu					
1-Hour Averaging Period					
Highest Concentration (ppm)	-	-	0.031	0.022	0.018
2nd Highest Concentration (ppm)	-	-	0.028	0.015	0.006
No. of Hawaii AAQS Exceedances	-	-	0	0	0
3-Hour Averaging Period					
Highest Concentration (ppm)	0.010	0.012	0.026	0.017	0.015
2nd Highest Concentration (ppm)	0.010	0.008	0.021	0.011	0.014
No. of Hawaii AAQS Exceedances	0	0	0	0	0
24-Hour Averaging Period					
Highest Concentration (ppm)	0.004	0.005	0.009	0.005	0.008
2nd Highest Concentration (ppm)	0.003	0.002	0.005	0.003	0.006
No. of Hawaii AAQS Exceedances	0	0	0	0	0
Annual Average Concentration (ppm)	0.001	0.001	0.001	0.001	0.001
Particulate (PM-10) / Downtown Honolulu					
24-Hour Averaging Period					
Highest Concentration ($\mu g/m^3$)	63	50	32	34	30
2nd Highest Concentration ($\mu g/m^3$)	57	35	28	28	29
No. of Hawaii AAQS Exceedances	0	0	0	0	0
Annual Average Concentration ($\mu g/m^3$)	12	12	12	11	13
Carbon Monoxide / Downtown Honolulu					
1-Hour Averaging Period					
Highest Concentration (ppm)	1.8	1.4	1.0	1.6	2.0
2nd Highest Concentration (ppm)	1.5	1.1	1.0	1.5	1.8
No. of Hawaii AAQS Exceedances	0	0	0	0	0
8-Hour Averaging Period					
Highest Concentration (ppm)	0.8	0.8	0.7	1.2	1.0
2nd Highest Concentration (ppm)	0.8	0.8	0.7	1.2	1.0
No. of Hawaii AAQS Exceedances	0	0	0	0	0
Nitrogen Dioxide / Kapolei					
3-year average of the 98th percentile	-	-	0.019	0.023	0.022
No. of Hawaii AAQS Exceedances	-	-	0	0	0
Annual Average Concentration (ppm)	0.003	0.003	0.003	0.003	0.004
No. of Hawaii AAQS Exceedances	0	0	0	0	0
Ozone / Sand Island					
8-Hour Averaging Period					
Highest Concentration (ppm)	0.052	0.047	0.045	0.051	0.062
2nd Highest Concentration (ppm)	0.048	0.047	0.044	0.050	0.061
4th Highest Concentration (ppm)	0.047	0.046	0.044	0.047	0.057
No. of Hawaii AAQS Exceedances	0	0	0	0	0
Lead /					
3-Month Averaging Period					
Highest Concentration ($\mu g/m^3$)	-	-	-	0.002	0.001
2nd Highest Concentration ($\mu g/m^3$)	-	-	-	0.001	0.001
No. of Hawaii AAQS Exceedances	-	-	-	0	0
Annual Average Concentration ($\mu g/m^3$)	-	-	-	0.001	0.001

5.0 SHORT-TERM PROJECT IMPACTS

The potential for short term impacts to air quality exists during the construction of this project. These potential impacts could occur from two general types of emissions. The first is engine exhaust. Engine exhaust from on-site construction equipment may directly impact air quality in the short term. Indirectly, engine exhaust from workers commuting to and from the site and the transportation of equipment to and from the site have the potential to impact air quality in the short term. The second type of emissions that has the potential to cause a short term impact is fugitive dust. Fugitive dust could occur from construction activities such as demolition of existing structures, movement of vehicles, soil excavation, and from wind blowing across disturbed or loose soil.

For construction projects such as this, the largest on-site equipment emissions generally come from diesel engine exhaust. The main pollutants contributed by diesel engines are NO_x and CO. The CO emissions from the diesel-powered construction engines is expected to be low compared to the vehicles on nearby roads. In addition, existing concentrations of CO measured are well below, approximately 80% below, the more stringent of the applicable standards. Diesel engine NO_x emissions do tend to be higher in comparison to gasoline engines. However, construction emissions are temporary (as opposed to a permanent engine installation such as a generator) and unlikely to cause a violation of state or federal standards. In 2014, the recorded 1-hour NO_2 emissions value was approximately 80% below the applicable federal standard (there is no state standard), and this value is the result of a three year average. Also in 2014, the recorded annual NO_2 value was approximately 90% below the state standard, the more stringent of the two standards.

Fugitive dust is another potential impact of a construction project and will require a control strategy. Hawaii Administrative Rule 11-60.1-33(a) states that:

> *No person shall cause or permit visible fugitive dust to become airborne without taking reasonable precautions.*

Hawaii Administrative Rule 11-60.1-33(b) states:

> *...no person shall cause or permit the discharge of visible fugitive dust beyond the property lot line on which the fugitive dust originates.*

Though reasonable precautions to avoid fugitive dust are expected to be determined on a case by case basis, the Clean Air Branch of the Hawaii Department of Health provides a number of emission control techniques. These precautions can include measures such as using water to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. It is recommended that a dust control plan be created and implemented during construction.

Construction activities can potentially impact traffic. Reduced flow of traffic can have the effect of locally increasing air emissions. Reducing the number of construction related vehicles on local roadways during peak traffic times will help mitigate this. It is recommended that workers and equipment be moved to and from the project site at off-peak traffic times.

6.0 LONG-TERM PROJECT IMPACTS

Potential long-term impacts could be caused by increased motor vehicle activity in this area resulting from use of the facility after construction is complete. The majority of this activity will be gasoline-powered engines. Gasoline-powered engines produce a number of pollutants such as NOx, CO, and organic compounds. For this study, CO has been selected for modeling for a number of reasons. CO is the most abundant of the pollutants generated by motor vehicles and the majority of CO emissions present in ambient air come from motor vehicles. CO is also significantly more stable than other pollutants generated by motor vehicles. Hawaii's standards for CO are also significantly more stringent than the federal NAAQS. Finally, CO has been selected to remain consistent with air quality studies conducted for similar projects in the region.

Three scenarios were selected for this study. The first scenario models the year 2014 with present conditions. The second scenario models the year 2018 without implementation of the project, and the third scenario models the year 2018 with implementation of the project. Primary areas of concern are typically intersections due to higher concentrations of emissions resulting from traffic queuing. A traffic impact report was recently prepared for the Project in June of 2015 by Wilson Okamoto Corporation (Traffic Impact Report). This Traffic Impact Report studied the affect the project will have by examining four nearby intersections. These intersections are:

- Intersection A: Kalakaua Avenue and Olohana Street
- Intersection B: Kalakaua Avenue, Kalaimoku Street, and Saratoga Road
- Intersection C: Kuhio Avenue and Olohana Street
- Intersection D: Kuhio Avenue and Kalaimoku Street

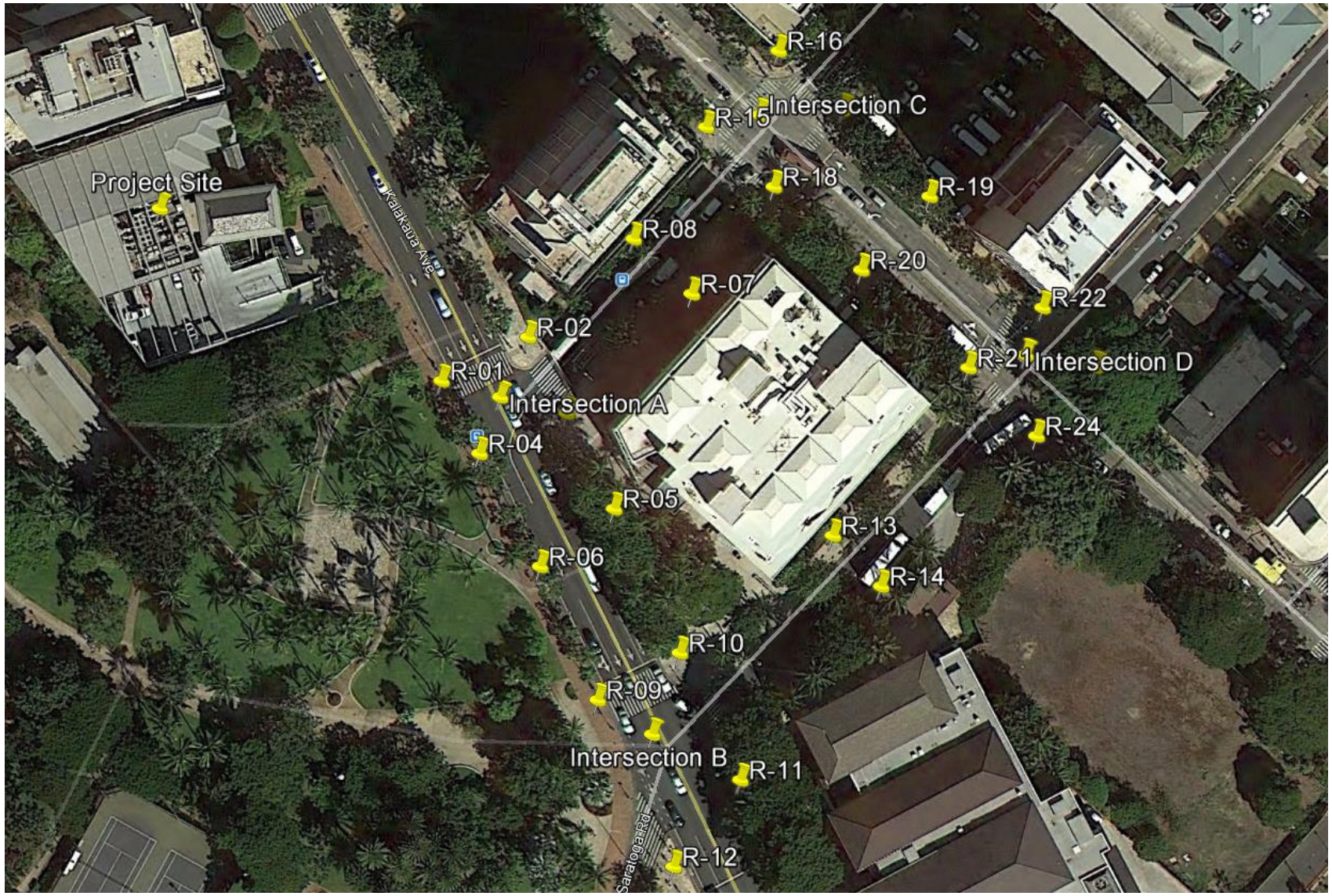
These intersections are shown on Figure 2.

The purpose of this study is to evaluate the impact to air quality the proposed Project may have by estimating the maximum 1-hour concentration for CO resulting from each of the three scenarios discussed. These modeled concentrations will be compared with each other and to the NAAQS and HAAQS for CO.

Peak carbon monoxide emissions can be expected to coincide with peak traffic periods. The peak morning and evening peak traffic periods from the traffic impact report were evaluated in this study.

FIGURE 2: PROJECT STUDY INTERSECTIONS

FIGURE 3: PROJECT STUDY RECEPTORS



EPA's Office of Transportation and Air Quality has developed and made available a program for modeling motor vehicles called the Motor Vehicle Emission Simulator, or MOVES. The current version at the time this study was conducted was MOVES2014. MOVES2014 was used to estimate emissions for traffic using conditions specific to the Project. Assumptions included an urban, unrestricted road type, default fuel supply and fuel formulation, and ambient temperature of 73°F.

Emissions generated using the MOVES2014 model were used as inputs into EPA's CAL3QHC program. CAL3QHC is an air dispersion model based on the CALINE3 model but specialized for use in modeling CO emissions with a traffic model to calculate delays and queues that occur at signalized intersections. CAL3QHC is a preferred and recommended model by EPA and has been employed for this study.

Traffic data was obtained from the Traffic Impact Report. This data included average signal durations, vehicles per hour approach volumes, vehicles per hour per lane saturation flow rates, and vehicle per hour traffic volumes.

Roadways were modeled to reflect road dimensions and operating characteristics. The dimensions and geometry were measured using scaled aerial photographs obtained from Google Earth, catalogued, and input into the model. Per EPA guidelines, the mixing zone width was assumed to include 10 feet on either side of the roadway and receptor height was assumed to be 6 feet. All receptors were assumed to be pedestrians located at the edge of mixing zones on existing sidewalks. The same receptors were used for all three scenarios. Locations of receptors used in the model are shown in Figure 3.

Meteorological conditions for this model were selected to provide worst-case condition results and follow EPA guidelines for modeling CO from roadway intersections. The average wind speed was assumed to be 1 meter per second (the lowest the modeling program has been validated for) and concentration estimates were made a wind direction increments of 10 degrees. While local average wind speeds are higher, this will provide a worst-case condition for modeling. The atmospheric stability class was assumed to be 4, consistent with EPA guidelines for an urban area. The mixing height was assumed to be 1,000 meters. A surface roughness length of 175 centimeters was used. Background concentrations of CO were assumed to be low, and set to 1.0 parts per million by volume (ppm) for all scenarios. Although traffic is predicted to increase over time, the emissions of motor vehicles are also forecast to decrease over time. In addition, this provides a consistent background concentration for ease of comparison of the three scenarios.

Estimated Worst-Case 1-Hour Concentrations

The estimated worst-case 1-hour concentration modeling results are provided in Table 3. Results are provided for peak traffic times (AM for morning and PM for evening) for each of the

three scenarios discussed previously. The results shown represent the highest concentration of CO experienced by a modeled receptor at each intersection. The resulting concentrations modeled for all receptors in all scenarios was between the 1.0 (the assumed background) and 2.1 ppm. All results were below the 1-hour NAAQS of 35 ppm and the HAAQS of 9 ppm.

The maximum concentration experienced by modeled receptors for all three scenarios was found to be at the Kalakaua Avenue and Olohana Street intersection for both the AM and PM peak traffic times. The results predict the project will raise the CO concentration at the highest concentration receptor, Receptor 2, by approximately 0.1 ppm CO in 2018 over the scenario without the project, which will still be lower than the 2014 value. Despite the projected increase in traffic between 2014 and 2018, the model predicts lower emissions in 2018 resulting from older cars with higher emissions being taken out of operation as newer cars are put in operation. The results also indicate that the CO concentration experienced by the maximum receptor at the other three intersections will not increase appreciably.

Table 3: Estimated Worst-Case 1-Hour CO Concentrations (ppm)

Intersection	2014 - Baseline		2018 – W/o Project		2018 – W/ Project	
	AM	PM	AM	PM	AM	PM
Kalakaua Avenue and Olohana Street	2.0	2.1	1.7	1.9	1.8	2.0
Kalakaua Avenue, Kalaimoku Street, and Saratoga Road	1.8	1.9	1.6	1.7	1.6	1.7
Kuhio Avenue and Olohana Street	1.8	1.8	1.7	1.8	1.7	1.8
Kuhio Avenue and Kalaimoku Street	1.7	1.9	1.5	1.7	1.5	1.7

HAAQS: 9 ppm NAAQS: 35 ppm

Estimated Worst-Case 8-Hour Concentrations

Worst-case 8-hour CO concentrations were estimated by applying a persistence factor to the predicted maximum 1-hour concentration as described in EPA's guideline for modeling CO from roadway intersections. The 8-hour CO NAAQS is 9 ppm and HAAQS is 4.4 ppm. The EPA guidelines recommend a factor of 0.7 as a conservative estimate if a factor has not been determined from local data. Given all modeled 1-hour maximum CO concentrations were below the HAAQS of 4.4 ppm, the conservative factor of 0.7 has been used and no further investigation was warranted. The results are provided in Table 4. All modeled values were below the HAAQS and NAAQS.

Table 4: Estimated Worst-Case 8-Hour CO Concentrations (ppm)

Intersection	2014 - Baseline		2018 – W/o Project		2018 – W/ Project	
	AM	PM	AM	PM	AM	PM
Kalakaua Avenue and Olohana Street	1.4	1.5	1.2	1.3	1.3	1.4
Kalakaua Avenue, Kalaimoku Street, and Saratoga Road	1.3	1.3	1.1	1.2	1.1	1.2
Kuhio Avenue and Olohana Street	1.3	1.3	1.2	1.3	1.2	1.3
Kuhio Avenue and Kalaimoku Street	1.2	1.3	1.1	1.2	1.1	1.2

HAAQS: 4.4 ppm NAAQS: 9 ppm

7.0 CONCLUSIONS AND RECOMMENDATIONS

The most significant potential short-term impacts from the proposed project will occur during construction. The primary potential impact of concern is from fugitive dust emissions. It is recommended that a dust control plan be developed that includes measures specific to this project and implemented during construction. There are a number of possible measures that may be appropriate, such as spraying water on unpaved roads, storage piles, and disturbed areas that may be present to suppress dust, establishing and monitoring speed limits for on-site vehicles, and covering material being transported. Routinely cleaning the access road to the site and washing tires will help prevent track-out of dirt onto paved roads, reducing the potential for fugitive dust emissions. Additional measures to prevent fugitive emissions from the occurrence of wind include the use of wind screens to block disturbed areas and placement of landscape as early as possible.

Though highly unlikely to impact local air quality related to the NAAQS and HAAQS, engine exhaust emissions will also occur during construction. These emissions will occur from both equipment used on site and motor vehicles used by construction workers to commute to and from the job site. To minimize these emissions, it is recommended equipment and crew be moved to and from site during off-peak traffic hours. It is also recommended that idling of equipment be minimized during construction.

Long-term impacts from the project, occurring after construction when the facility is operational, are not expected to be significant. The modeled worst-case concentrations resulting from increased traffic from operation of the proposed project for CO remain well within the national and state air quality standards. No measures are recommended to mitigate long-term air quality impacts.

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Traffic Impact Report

Park Kalia - Waikiki

Prepared for:
Tsukada Global Holdings, Inc.

Prepared by:
Wilson Okamoto Corporation

November 2015

TRAFFIC IMPACT REPORT

FOR

PARK KALIA - WAIKIKI

Prepared for:

Tsukada Global Holdings, Inc.
3-11-10 Higashi, Shibuya-ku
Tokyo, Japan 150-0011

Prepared by:

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Ref #10116-02

November 2015

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the development of Park Kalia - Waikiki in Honolulu on the island of Oahu. The project entails developing a new condo-hotel on the site of the former Kyo-ya restaurant adjacent to Kalakaua Avenue.

B. Scope of Study

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

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

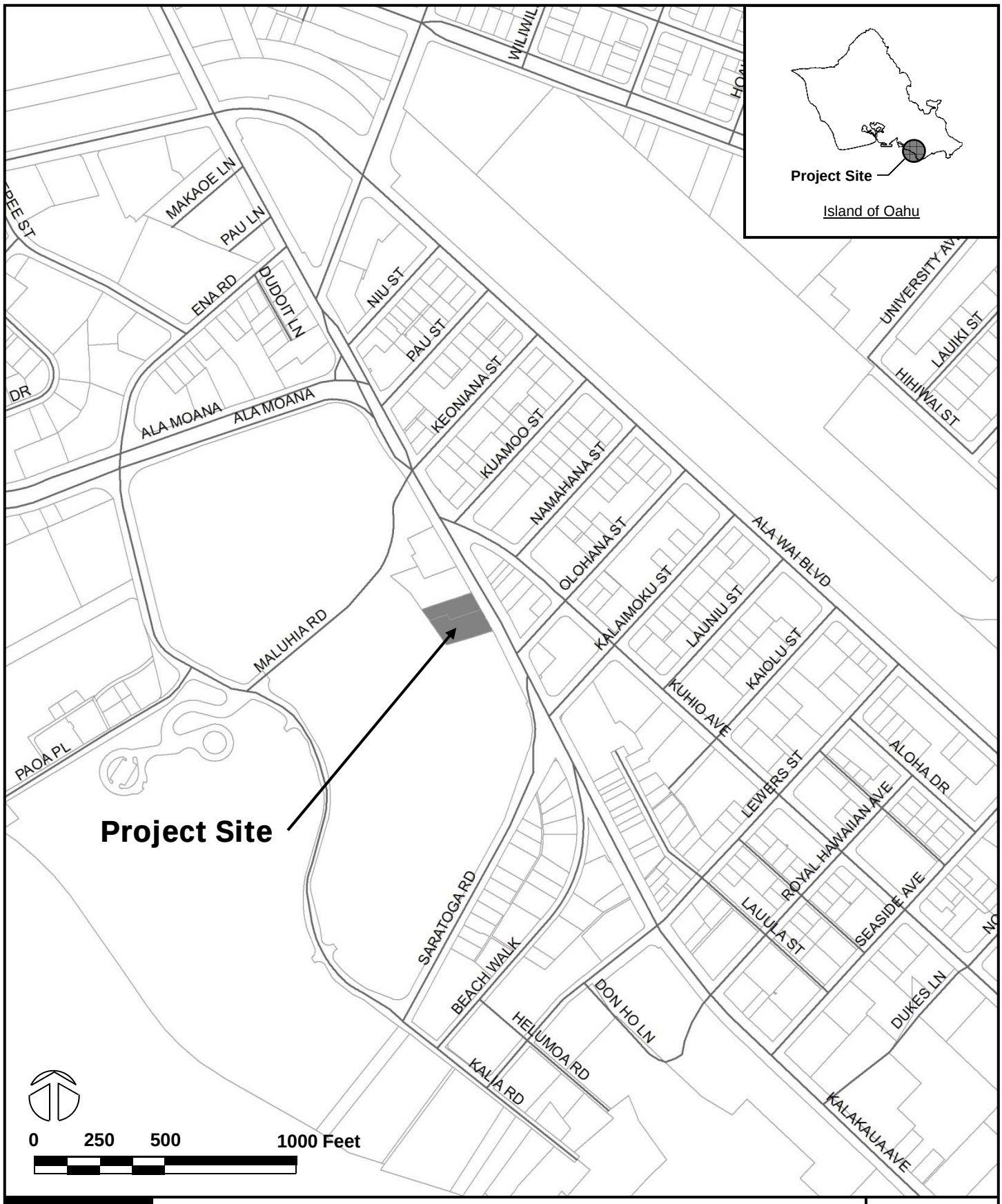
II. PROJECT DESCRIPTION

A. Location

The project site for the proposed condo-hotel development is located adjacent to Kalakaua Avenue in Waikiki on the island of Oahu (see Figure 1) and is bounded by the Luana Waikiki Hotel to the west and a park to the east. The project site is further identified as Tax Map Keys (TMKs): 2-6-006: por. 001, and 004. Access to the project site will be provided via a driveway off Kalakaua Avenue.

B. Project Characteristics

The project site for the proposed Park Kalia - Waikiki development entails the replacement of the former Kyo-ya restaurant building with a new condo-hotel development that is expected to include a maximum of 180 units with recreational



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PARK KALIA - WAIKIKI

LOCATION MAP AND VICINITY MAP

FIGURE 1

amenities and on-site parking. In addition, the development will include a wedding chapel with services expected to be held during off-peak periods. The proposed development is expected to be completed and occupied by the Year 2018 with primary access provided via a driveway off Kalakaua Avenue. Figure 2 shows the proposed project site plan.

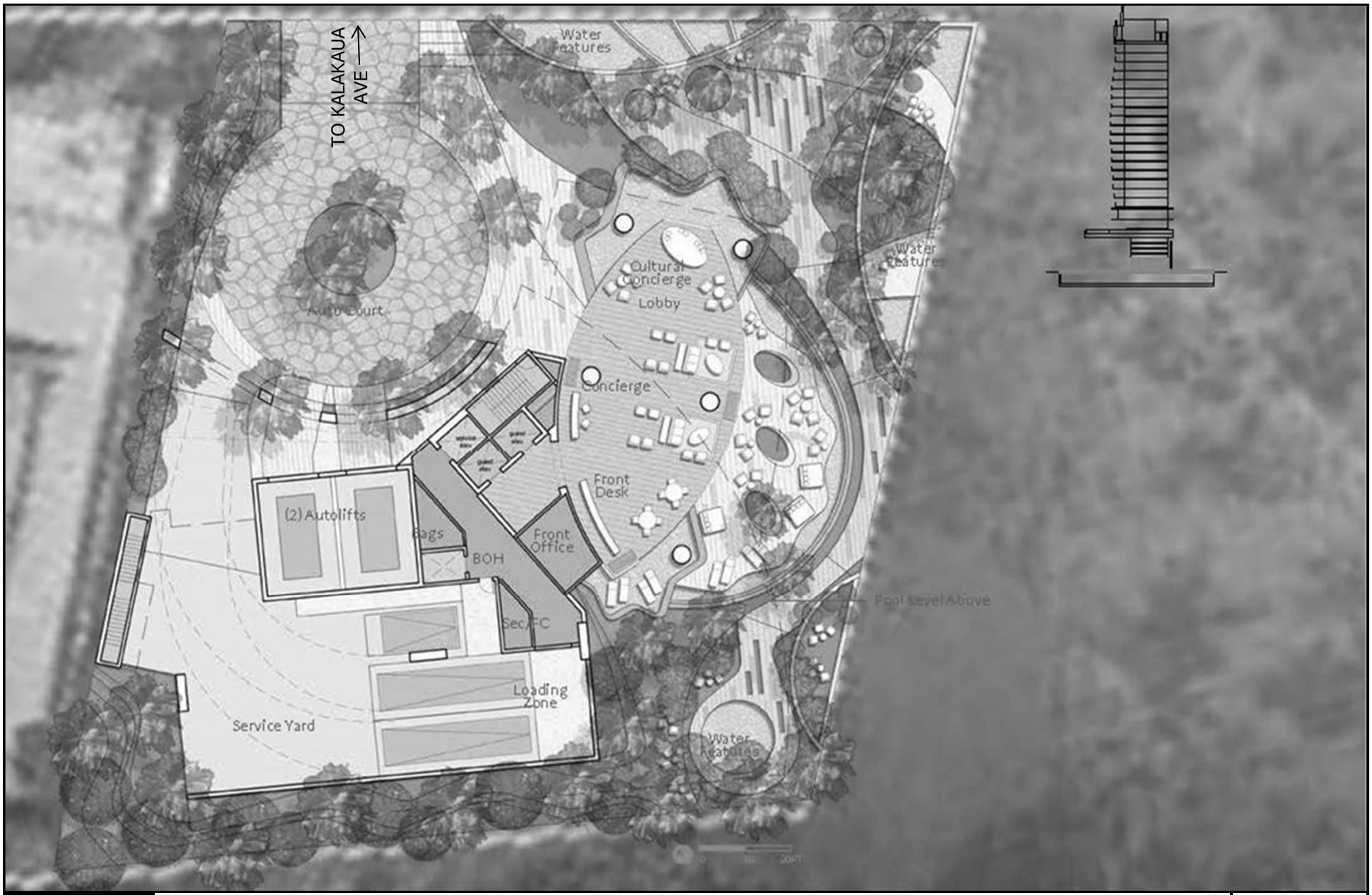
III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

Kalakaua Avenue is a one-way (eastbound) roadway that with Ala Wai Boulevard forms a couplet system providing east-west access through Waikiki. Southwest of the project site, Kalakaua Avenue intersects Olohana Street. At this signalized T-intersection, the eastbound approach of Kalakaua Avenue has four through lanes. Olohana Street is a two-lane, one-way (southbound) connector roadway between Ala Wai Boulevard and Kalakaua Avenue. At the intersection with Kalakaua Avenue, Olohana Street has two exclusive left-turn lanes.

East of the intersection with Olohana Street, Kalakaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalakaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way (northbound) connector roadway oriented in the north-south direction between Ala Wai Boulevard and Kalakaua Avenue while Saratoga Road is a predominately three-lane, two-way roadway also oriented in the north-south direction between Kalakaua Avenue and Kalia Road. At the intersection with Kalakaua Avenue, Saratoga Road has one northbound through lane and two exclusive right-turn lanes. It should be noted that there are posted signs at the intersection indicating northbound right-turn movements are prohibited on red.

North of the intersection with Kalakaua Avenue, Kalaimoku Street intersects Kuhio Avenue. At this signalized intersection, the northbound approach of Kalaimoku Street has two lanes that serve all traffic movements. Kuhio Avenue is a predominantly four-lane, two-way roadway that runs parallel to Kalakaua Avenue and Ala Wai Boulevard. At the intersection with Kalaimoku Street, the eastbound approach of Kuhio Avenue has a shared left-turn and through lane, and one through



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PROPOSED SITE PLAN

FIGURE 2

lane while the westbound approach has one through lane and a shared through and right-turn lane.

West of the intersection with Kalaimoku Street, Kuhio Avenue intersects Olohana Street. At this signalized intersection, the eastbound approach of Kuhio Avenue has one through lane and a shared through and right-turn lane while the westbound approach has an exclusive left-turn lane and one through lane. The Olohana Street approach of this intersection has two southbound lanes that serve all traffic movements.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted during January and August 2012 and consisted of manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Kalakaua Avenue and Olohana Street
- Kalakaua Avenue, Kalaimoku Street, and Saratoga Road
- Kuhio Avenue and Kalaimoku Street
- Kuhio Avenue and Olohana Street

Appendix A includes the baseline traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Synchro" software, developed by Trafficware. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak periods of traffic.

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

and LOS "F" unacceptable or potentially congested traffic operating conditions.

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

2. Baseline Peak Hour Traffic

a. General

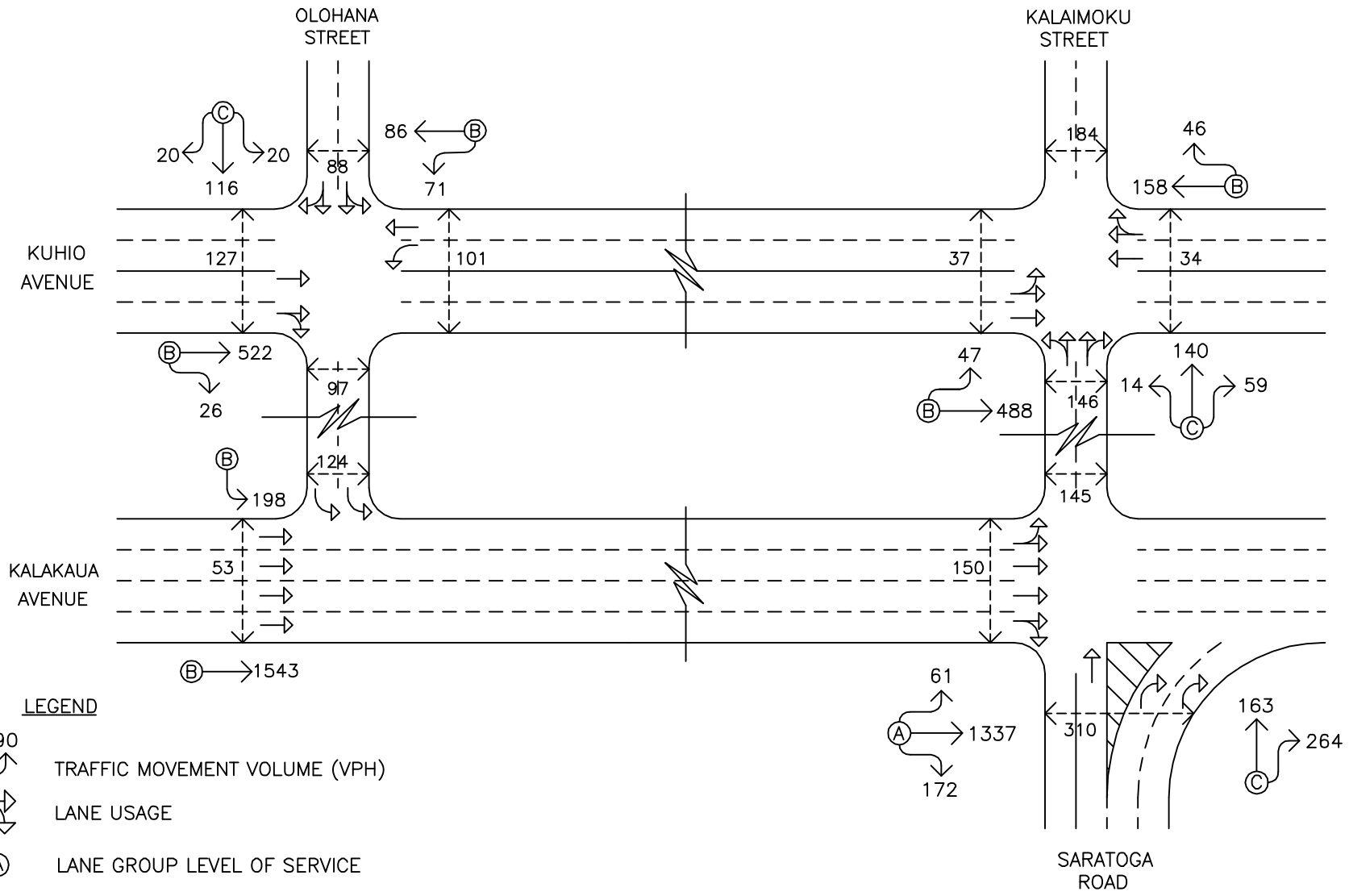
Figures 3 and 4 show the baseline AM and PM peak period traffic volumes and operating traffic conditions. The AM peak hour of traffic generally occurs between 8:00 AM and 9:00 AM, while the PM peak hour of traffic generally occurs between 3:45 PM and 4:45 PM. The analysis is based on these peak hour time periods to identify the traffic impacts resulting from the proposed project. The LOS calculations are included in Appendix C.

b. Kalakaua Avenue and Olohana Street

At the intersection with Olohana Street, Kalakaua Avenue carries 1,543 vehicles and 1,811 vehicles eastbound during the AM and PM peak periods, respectively. The Kalakaua Avenue approach operates at LOS "B" during both peak periods.

The Olohana Street approach of this intersection carries 198 vehicles and 251 vehicles southbound during the AM and PM peak periods, respectively. This approach operates at LOS "B" during both peak periods.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection, as well as, across Olohana Street on the north side of the intersection. During the AM peak period, 53 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 124 pedestrians were observed crossing Olohana



DATES OF COUNT: JANUARY & AUGUST 2012

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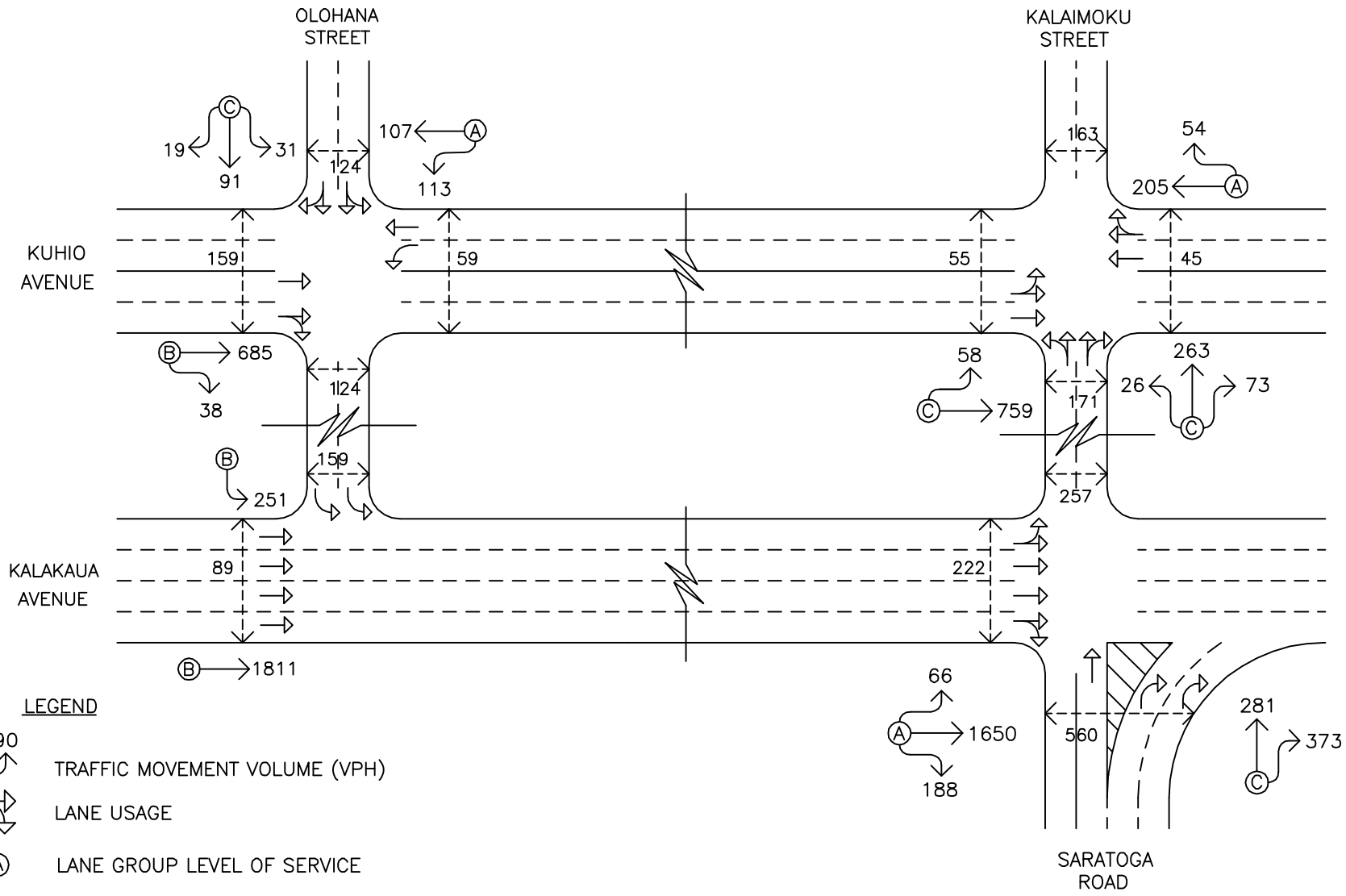
BASELINE AM PEAK HOUR OF TRAFFIC

FIGURE 3



DATES OF COUNT: JANUARY & AUGUST 2012

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BASELINE PM PEAK HOUR OF TRAFFIC

FIGURE 4

Street on the north side of the intersection. During the PM peak period, 89 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 159 pedestrians were observed crossing Olohana Street on the north side of the intersection.

c. Kalakaua Avenue, Saratoga Road, and Kalaimoku Street

At the intersection with Kalaimoku Street and Saratoga Road, Kalakaua Avenue carries 1,570 vehicles and 1,904 vehicles eastbound during the AM and PM peak periods of traffic, respectively. The Kalakaua Avenue approach operates at LOS "A" during both peak periods.

The northbound approach of Saratoga Road carries 427 vehicles and 654 vehicles northbound during the AM and PM peak periods, respectively. This approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection, as well as, across Kalaimoku Street and Saratoga Road on the north and south sides of the intersection. During the AM peak period, 150 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 145 pedestrians and 310 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively. During the PM peak period, 222 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 257 pedestrians and 560 pedestrians were observed crossing Kalaimoku Street and Saratoga Road, respectively.

d. Kuhio Avenue and Kalaimoku Street

At the intersection with Kalaimoku Street, Kuhio Avenue carries 535 vehicles eastbound and 204 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 817 vehicles traveling eastbound and 259 vehicles traveling westbound. The eastbound approach of Kuhio Avenue

operates at LOS "B" and LOS "C" during the AM and PM peak periods, respectively, while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

The northbound approach of Kalaimoku Street carries 213 vehicles and 362 vehicles northbound during the AM and PM peak periods, respectively. The Kalaimoku Street approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kuhio Avenue on the east and west sides of the intersection, as well as, across Kalaimoku Street on the north and south sides of the intersection. During the AM peak period, 34 pedestrians and 37 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 184 pedestrians and 146 pedestrians were observed crossing Kalaimoku Street on the north and south sides of the intersection, respectively. During the PM peak period, 45 pedestrians and 55 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 163 pedestrians and 171 pedestrians were observed crossing Kalaimoku Street on the north and south sides of the intersection, respectively.

e. Kuhio Avenue and Olohana Street

At the intersection with Olohana Street, Kuhio Avenue carries 548 vehicles eastbound and 157 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 723 vehicles traveling eastbound and 220 vehicles traveling westbound. The eastbound approach of Kuhio Avenue operates at LOS "B" during both peak periods while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

The Olohana Street approach of this intersection carries 156 vehicles and 141 vehicles southbound during the AM and PM peak

periods, respectively. The Olohana Street approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kuhio Avenue on the east and west sides of the intersection, as well as, across Olohana Street on the north and south sides of the intersection. During the AM peak period, 101 pedestrians and 127 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 88 pedestrians and 97 pedestrians were observed crossing Olohana Street on the north and south sides of the intersection, respectively. During the PM peak period, 59 pedestrians and 159 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 124 pedestrians were observed crossing on both sides of Olohana Street.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 9th Edition," 2012. The ITE trip generation rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per hotel room. It should be noted that all site-generated trips were assumed to be new trips in the project vicinity although the former Kyo-ya Restaurant site was being utilized for parking during the time of the field investigation. Table 1 summarizes the trip generation characteristics related to the proposed development of Park Kalia - Waikiki applied to the AM and PM peak hours of traffic.

Table 1: Peak Hour Trip Generation

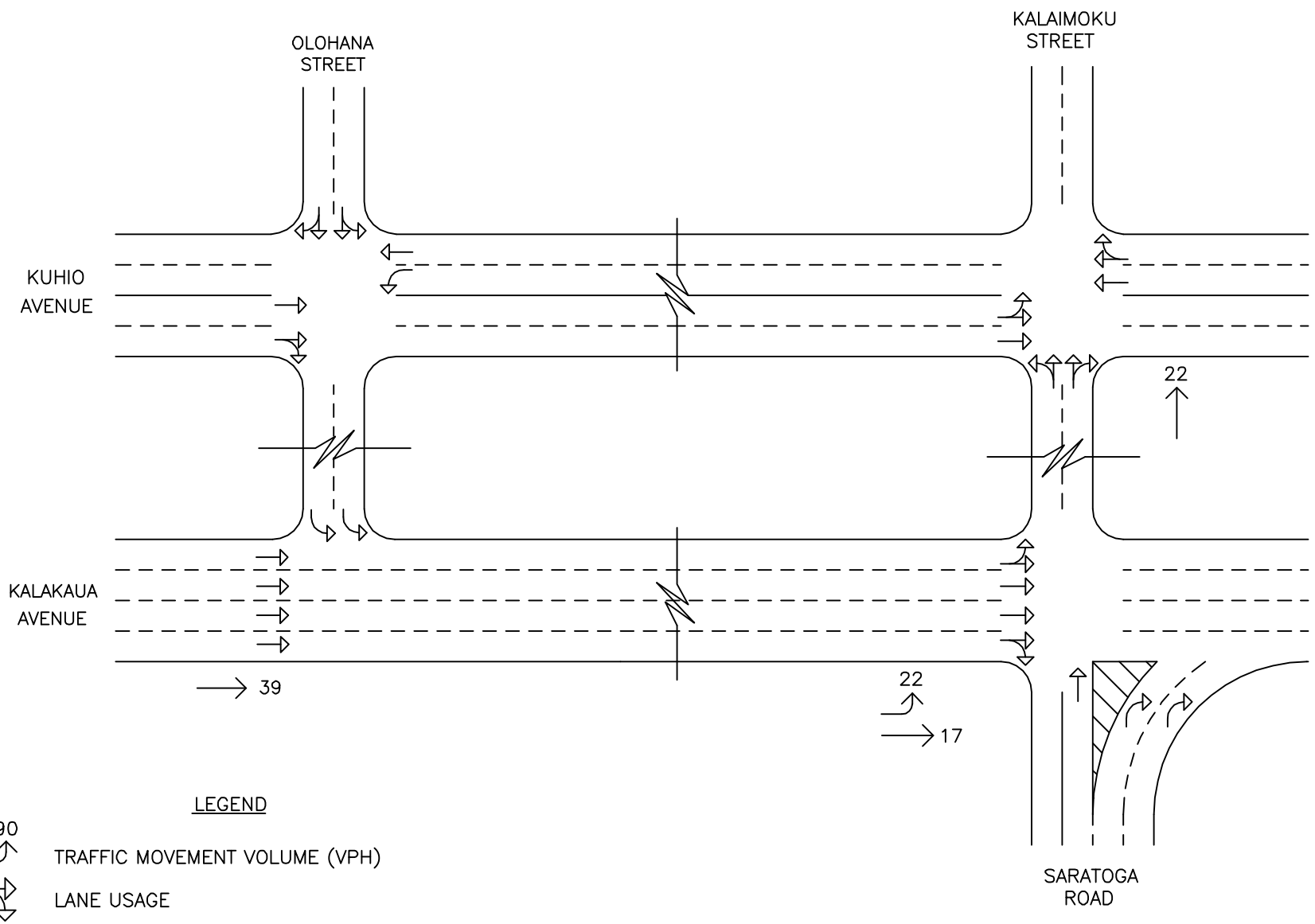
HOTEL INDEPENDENT VARIABLE: Rooms = 180		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	56
	EXIT	39
	TOTAL	95
PM PEAK	ENTER	55
	EXIT	53
	TOTAL	108

2. Trip Distribution

Figures 5 and 6 show the distribution of site-generated vehicular trips at the study intersections during AM and PM peak periods. Access for the proposed Park Kalia - Waikiki development will be provided via a driveway off Kalakaua Avenue. The directional distribution of all site-generated vehicles was based upon the relative distribution of traffic between Kalakaua Avenue and Ala Wai Boulevard. As such, 44.6% of site-generated vehicles were assumed to be headed eastbound and 55.4% were assumed to be headed westbound during the AM peak period. During the PM peak period, 45.8% were assumed to be headed eastbound and 54.2% were assumed to be headed westbound. All entering vehicles were assumed to utilize Kalakaua Avenue to access the driveway off that roadway. Exiting westbound vehicles were assumed to continue eastbound along Kalakaua Avenue while westbound exiting vehicles were assumed to use Kalaimoku Street to head westbound on Ala Wai Boulevard.

B. Through Traffic Forecasting Methodology

There are no State of Hawaii or City and County of Honolulu traffic count stations in the immediate vicinity of the project site with sufficient available historical data to obtain a historical trend for the growth of traffic in the project vicinity. However, for the purpose of this report, an average annual growth rate of 2.0% per year was conservatively assumed along Kalakaua Avenue and Kuhio Avenue to account for ambient growth in traffic. As such, using 2012 as the Base Year, a



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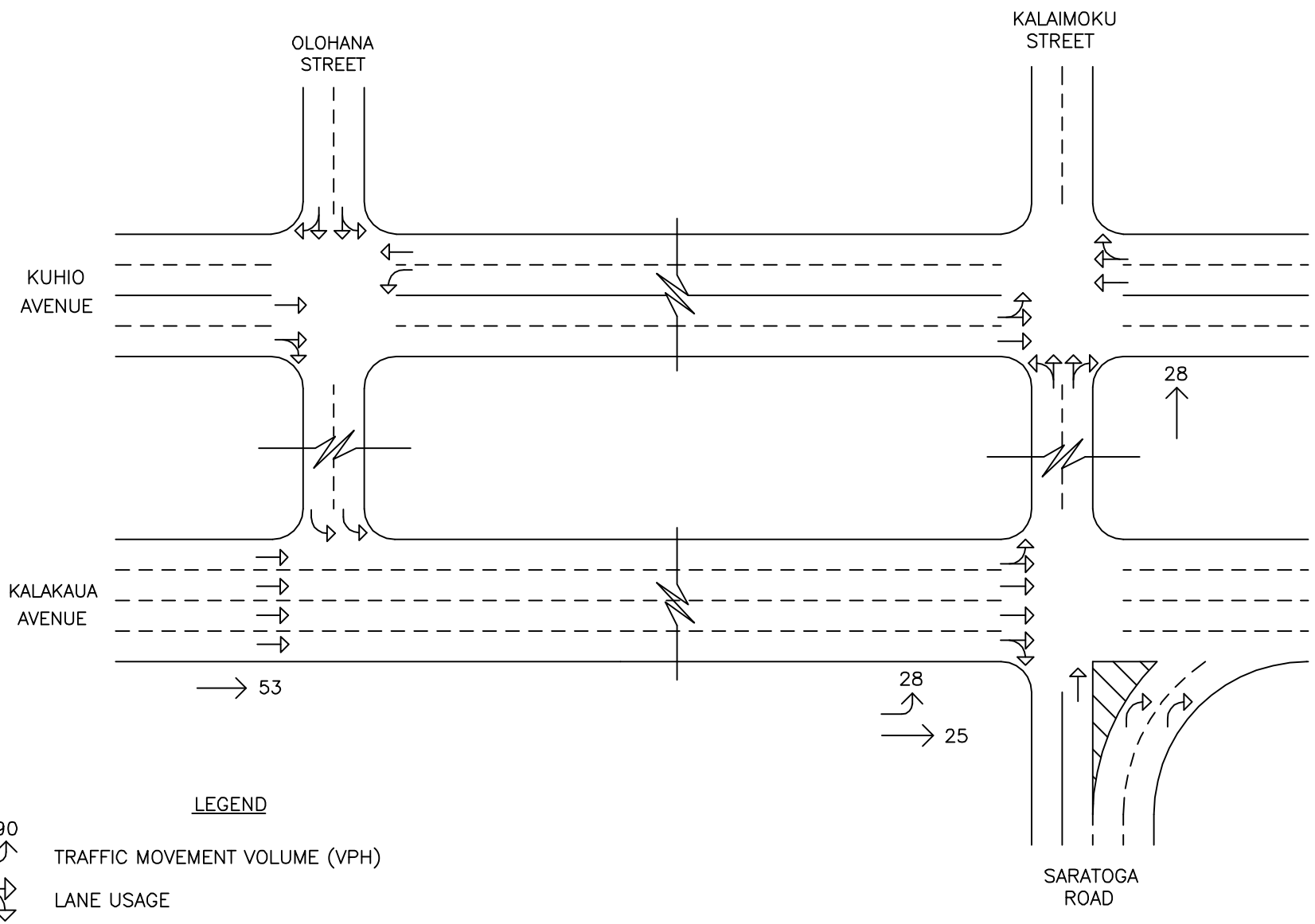
DISTRIBUTION OF SITE-GENERATED VEHICLES AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 5



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PARK KALIA - WAIKIKI

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

FIGURE 6

growth rate factor of 1.12 was applied to the baseline through traffic demands along those roadways to achieve the projected Year 2018 traffic demands.

C. Other Considerations

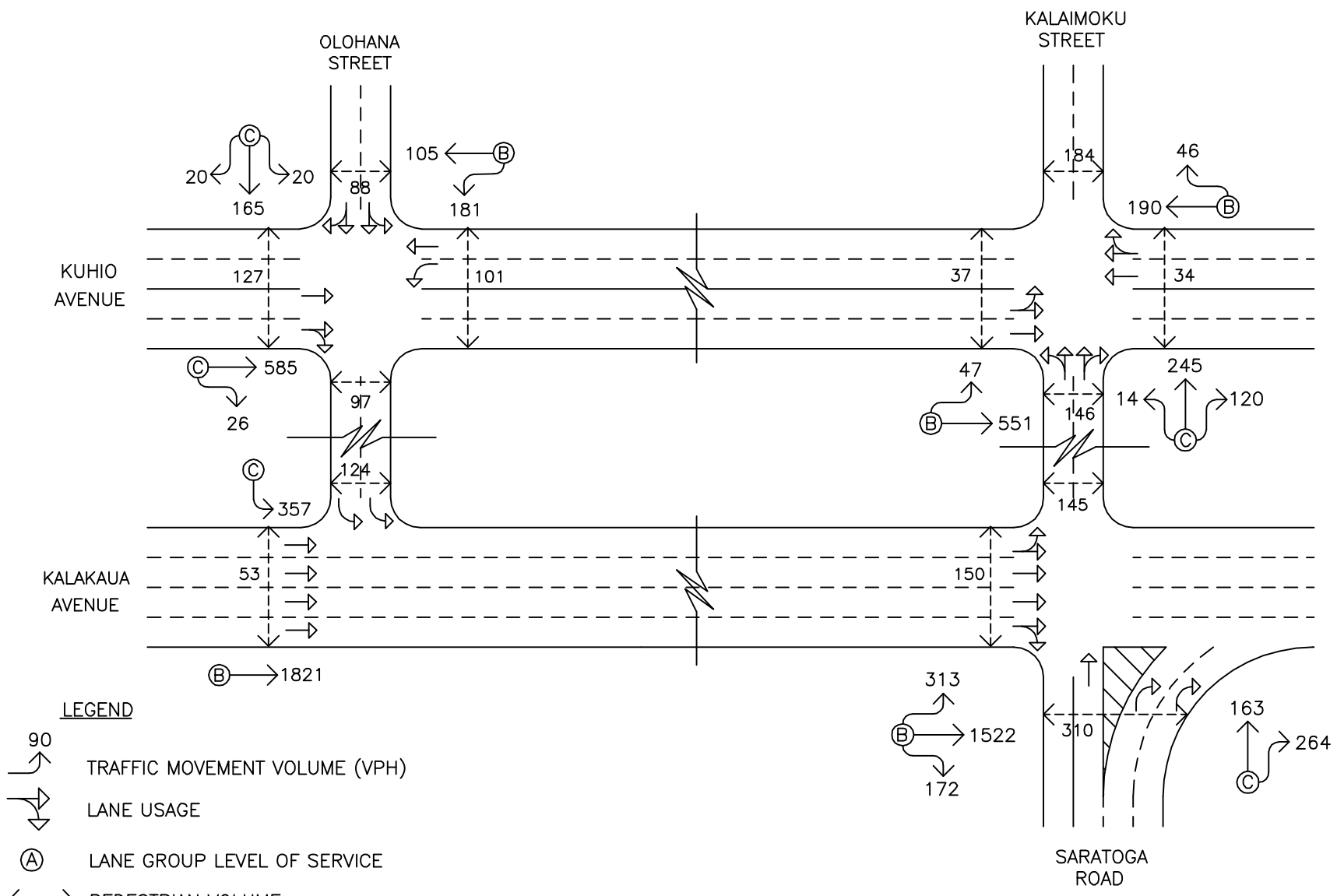
The Luxury Row Tower development will be located adjacent to Kalaimoku Street between Kalakaua Avenue and Kuhio Avenue. As detailed in the "Traffic Impact Report for the K3 Waikiki Development" and the "Traffic Impact Report for the Luxury Row Tower Phase 2," Phases 1 and 2 of the project are expected to include a total of 727 condo-hotel units and ~11,503 square feet of restaurant space. Both phases of the development are expected to be completed by the Year 2018 and, as such, are incorporated into Year 2018 without project conditions.

D. Total Traffic Volumes Without Project

The projected Year 2018 AM and PM peak period traffic volumes and operating conditions without the development of the proposed Park Kalia - Waikiki are shown in Figures 7 and 8, and summarized in Table 2. The baseline levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

Table 2: Baseline and Projected Year 2018 (Without Project) LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Base-line	Year 2018 w/out Proj	Base-line	Year 2018 w/out Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B
	Southbound	B	C	B	C
Kalakaua Avenue/ Saratoga Road/ Kalaimoku Street	Eastbound	A	B	A	B
	Northbound	C	C	C	C
Kuhio Avenue/ Kalaimoku Street	Eastbound	B	B	C	C
	Westbound	B	B	A	A
	Northbound	C	C	C	C
Kuhio Avenue/ Olohana Street	Eastbound	B	C	B	B
	Westbound	B	B	A	B
	Southbound	C	C	C	C



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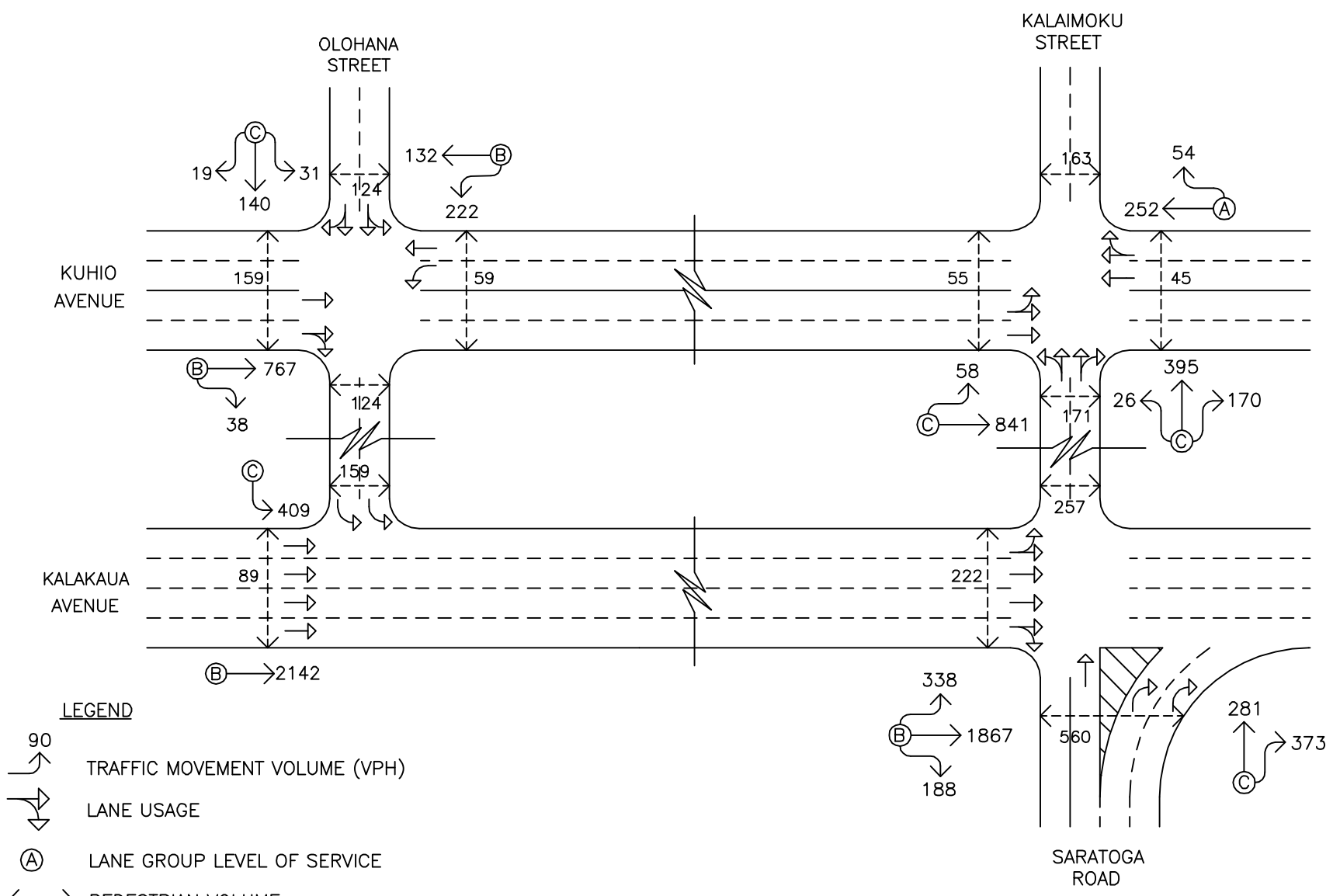
PARK KALIA - WAIKIKI

YEAR 2018 AM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 7



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PARK KALIA - WAIKIKI

YEAR 2018 PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 8

Under Year 2018 without project conditions, traffic operations are expected to deteriorate slightly from baseline conditions due to ambient growth in traffic and the development of other projects in the vicinity. Along Kalakaua Avenue, the southbound approach of the intersection with Olohana Street is expected to operate at LOS "C" during both peak periods while the eastbound approach of the intersection with Saratoga Road and Kalaimoku Street is expected to operate at LOS "B" during both peak periods. Along Kuhio Avenue, the eastbound approach of the intersection with Olohana Street is expected to operate at LOS "C" during the AM peak period while the westbound approach of that intersection is expected to operate at LOS "B" during the PM peak period. The remaining approaches of the study intersections are expected to continue operating at levels of service similar to baseline conditions during both peak periods.

E. Total Traffic Volumes With Project

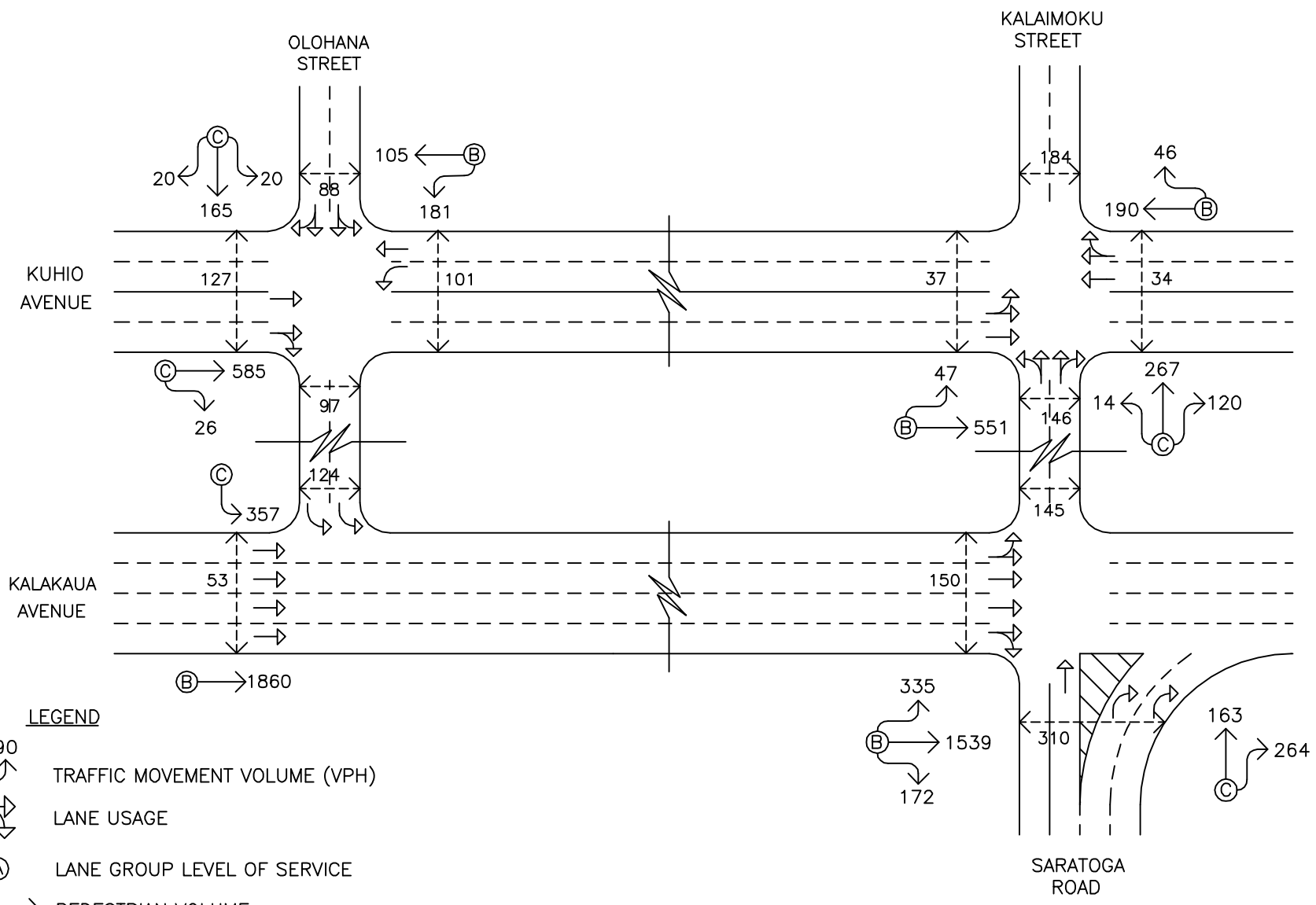
Figures 9 and 10 show the Year 2018 cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the proposed development of Park Kalia - Waikiki. The cumulative volumes consist of site-generated traffic superimposed over Year 2018 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2018 cumulative AM and PM peak hour traffic conditions with the development of the proposed Park Kalia - Waikiki are summarized in Table 3. The baseline and projected Year 2018 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

Table 3: Baseline and Projected Year 2018 (Without and With Project) LOS Traffic Operating Conditions

Intersection	Approach	AM			PM		
		Base-line	Year 2018		Base-line	Year 2018	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B	B	B
	Southbound	B	C	C	B	C	C



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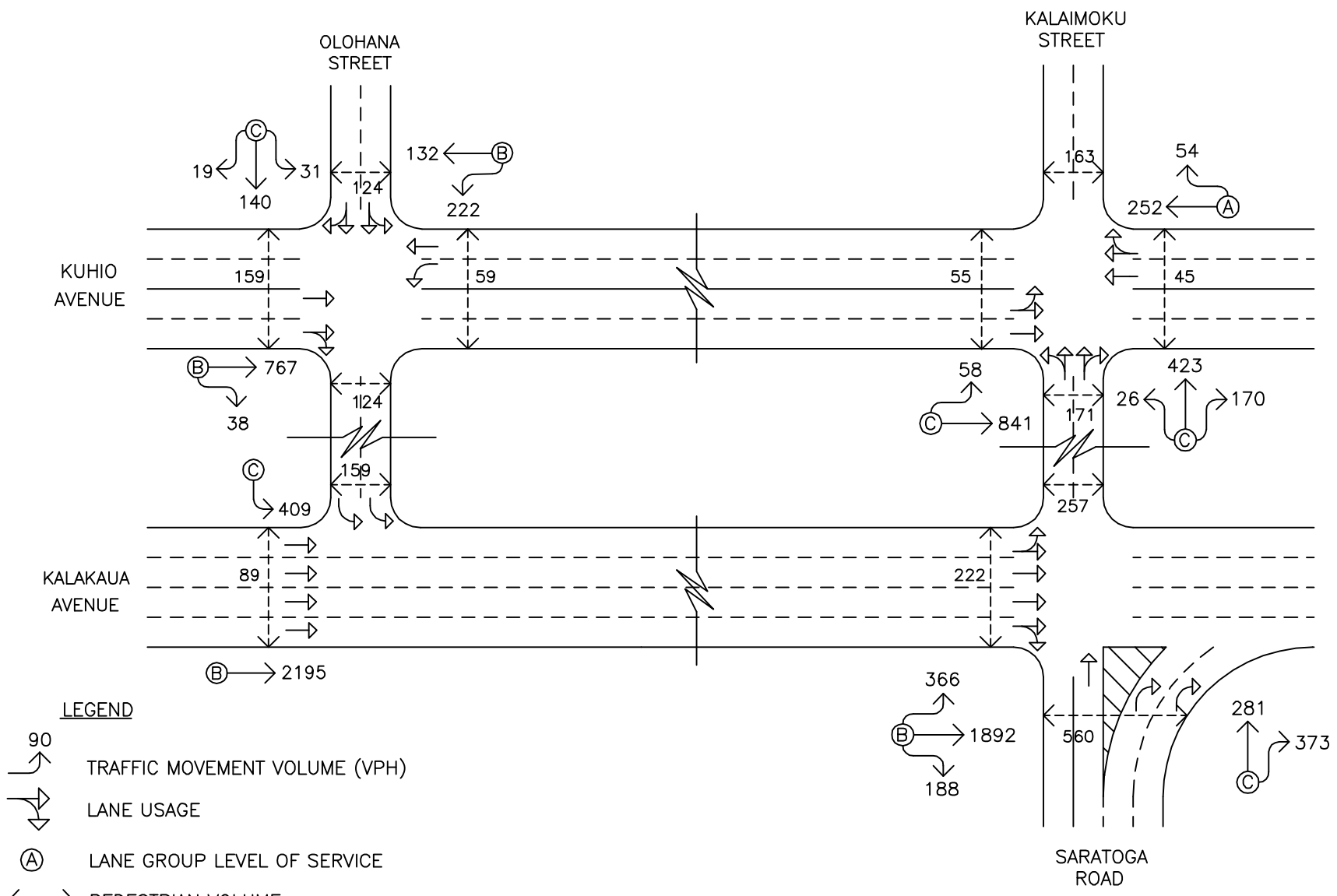
YEAR 2018 AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 9



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PARK KALIA - WAIKIKI

YEAR 2018 PM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 10

Table 3: Baseline and Projected Year 2018 (Without and With Project) LOS Traffic Operating Conditions (Cont'd)

Intersection	Approach	AM			PM		
		Base-line	Year 2018		Base-line	Year 2018	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B	B	B
	Southbound	B	C	C	B	C	C
Kalakaua Avenue/ Saratoga Road/ Kalaimoku Street	Eastbound	A	B	B	A	B	B
	Northbound	C	C	C	C	C	C
Kuhio Avenue/ Kalaimoku Street	Eastbound	B	B	B	C	C	C
	Westbound	B	B	B	A	A	A
	Northbound	C	C	C	C	C	C
Kuhio Avenue/ Olohana Street	Eastbound	B	C	C	B	B	B
	Westbound	B	B	B	A	B	B
	Southbound	C	C	C	C	C	C

Under Year 2018 with project conditions, traffic operations are expected to remain similar to without project conditions despite the addition of site-generated vehicles to the surrounding roadways. Along Kalakaua Avenue, the eastbound approaches of the intersection with Olohana Street and Saratoga Road/Kalaimoku Street are expected to continue operating at LOS "B" during both peak periods while the Olohana Street and Saratoga Road approaches of those intersections are expected to continue operating at LOS "B" during both peak periods. Along Kuhio Avenue, the eastbound approaches of the intersections with Kalaimoku Street and Olohana Street are expected to continue operating at LOS "C" or better during both peak periods while the westbound approaches are expected to continue operating at LOS "B' or better during both peak periods. The Kalaimoku Street and Olohana Street approaches of those intersections are expected to continue operating at LOS "C" during both peak periods.

VI. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design.

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.

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

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

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

VII. CONCLUSION

The proposed Park Kalia - Waikiki development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kalia - Waikiki development is not expected to have a significant impact on traffic operations in the vicinity.

APPENDIX A

BASELINE TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:D4-3890, TU-0649
Counted By:GC, RJ
Weather:Clear

File Name : KalKalSar AM
Site Code : 00000001
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Westboun d	Saratoga Road Northbound					Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	9	9	0	0	29	30	23	82	7	188	29	6	230	321
06:15 AM	0	0	0	8	8	0	0	24	31	26	81	11	218	38	9	276	365
06:30 AM	0	0	0	10	10	0	0	29	39	17	85	8	237	43	9	297	392
06:45 AM	0	0	0	15	15	0	0	25	49	36	110	10	264	51	21	346	471
Total	0	0	0	42	42	0	0	107	149	102	358	36	907	161	45	1149	1549
07:00 AM	0	0	0	13	13	0	0	25	49	36	110	11	223	39	13	286	409
07:15 AM	0	0	0	17	17	0	0	34	47	40	121	9	285	42	21	357	495
07:30 AM	0	0	0	19	19	0	0	24	43	73	140	16	309	51	17	393	552
07:45 AM	0	0	0	26	26	0	0	27	63	74	164	12	310	52	12	386	576
Total	0	0	0	75	75	0	0	110	202	223	535	48	1127	184	63	1422	2032
08:00 AM	0	0	0	23	23	0	0	31	69	68	168	13	279	44	24	360	551
08:15 AM	0	0	0	39	39	0	0	40	54	80	174	15	358	37	27	437	650
08:30 AM	0	0	0	32	32	0	0	45	72	83	200	14	342	43	51	450	682
08:45 AM	0	0	0	51	51	0	0	47	69	79	195	19	358	48	48	473	719
Total	0	0	0	145	145	0	0	163	264	310	737	61	1337	172	150	1720	2602
Grand Total	0	0	0	262	262	0	0	380	615	635	1630	145	3371	517	258	4291	6183
Apprch %	0	0	0	100			0	23.3	37.7	39		3.4	78.6	12	6		
Total %	0	0	0	4.2	4.2	0	0	6.1	9.9	10.3	26.4	2.3	54.5	8.4	4.2	69.4	

	Kalaimoku Street Southbound				Westbound	Saratoga Road Northbound				Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	0	0	0	0	0	0	31	69	100	13	279	44	336	436
08:15 AM	0	0	0	0	0	0	40	54	94	15	**358**	37	410	504
08:30 AM	0	0	0	0	0	0	45	**72**	**117**	14	342	43	399	516
08:45 AM	0	0	0	0	0	0	**47**	69	116	**19**	358	**48**	**425**	**541**
Total Volume	0	0	0	0	0	0	163	264	427	61	1337	172	1570	1997
% App. Total	0	0	0			0	38.2	61.8		3.9	85.2	11		
PHF	.000	.000	.000	.000	.000	.000	.867	.917	.912	.803	.934	.896	.924	.923

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counter:D4-3890, TU-0649
Counted By:GC, RJ
Weather:Clear

File Name : KalKalSar PM
Site Code : 00000001
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Westbound	Saratoga Road Northbound					Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	79	79	0	0	59	63	110	232	13	370	46	49	478	789
03:15 PM	0	0	0	72	72	0	0	65	84	123	272	9	401	53	50	513	857
03:30 PM	0	0	0	71	71	0	0	65	75	129	269	14	404	50	49	517	857
03:45 PM	0	0	0	81	81	0	0	64	87	162	313	15	431	48	54	548	942
Total	0	0	0	303	303	0	0	253	309	524	1086	51	1606	197	202	2056	3445
04:00 PM	0	0	0	67	67	0	0	85	97	127	309	11	410	44	58	523	899
04:15 PM	0	0	0	61	61	0	0	78	95	137	310	19	398	52	48	517	888
04:30 PM	0	0	0	48	48	0	0	54	94	134	282	21	411	44	62	538	868
04:45 PM	0	0	0	93	93	0	0	52	71	108	231	17	426	44	49	536	860
Total	0	0	0	269	269	0	0	269	357	506	1132	68	1645	184	217	2114	3515
05:00 PM	0	0	0	86	86	0	0	61	99	115	275	16	455	35	51	557	918
05:15 PM	0	0	0	69	69	0	0	56	90	154	300	14	446	40	52	552	921
05:30 PM	0	0	0	74	74	0	0	56	94	144	294	14	413	49	60	536	904
05:45 PM	0	0	0	71	71	0	0	49	84	156	289	10	394	36	64	504	864
Total	0	0	0	300	300	0	0	222	367	569	1158	54	1708	160	227	2149	3607
Grand Total	0	0	0	872	872	0	0	744	1033	1599	3376	173	4959	541	646	6319	10567
Apprch %	0	0	0	100			0	22	30.6	47.4		2.7	78.5	8.6	10.2		
Total %	0	0	0	8.3	8.3	0	0	7	9.8	15.1	31.9	1.6	46.9	5.1	6.1	59.8	

	Kalaimoku Street Southbound				Westbound	Saratoga Road Northbound				Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 03:45 PM														
03:45 PM	0	0	0	0	0	0	64	87	151	15	**431**	48	**494**	645
04:00 PM	0	0	0	0	0	0	**85**	**97**	**182**	11	410	44	465	**647**
04:15 PM	0	0	0	0	0	0	78	95	173	19	398	**52**	469	642
04:30 PM	0	0	0	0	0	0	54	94	148	**21**	411	44	476	624
Total Volume	0	0	0	0	0	0	281	373	654	66	1650	188	1904	2558
% App. Total	0	0	0			0	43	57		3.5	86.7	9.9		
PHF	.000	.000	.000	.000	.000	.000	.826	.961	.898	.786	.957	.904	.964	.988

Wilson Okamoto Corporation

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

Counter:TU-0651, TU-0652
Counted By:DY, CY
Weather:Clear

File Name : KuhKal AM
Site Code : 00000003
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Kuhio Avenue Westbound					Kalaimoku Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	4	4	0	21	8	0	29	1	22	10	2	35	2	55	0	0	57	125
06:15 AM	0	0	0	13	13	0	26	6	4	36	1	25	9	13	48	3	52	0	7	62	159
06:30 AM	0	0	0	11	11	0	30	5	3	38	2	29	7	9	47	11	74	0	2	87	183
06:45 AM	0	0	0	15	15	0	27	9	1	37	3	19	7	11	40	5	68	0	3	76	168
Total	0	0	0	43	43	0	104	28	8	140	7	95	33	35	170	21	249	0	12	282	635
07:00 AM	0	0	0	20	20	0	37	17	4	58	4	30	4	14	52	7	67	0	3	77	207
07:15 AM	0	0	0	14	14	0	32	8	3	43	5	30	8	10	53	18	88	0	11	117	227
07:30 AM	0	0	0	41	41	0	39	7	10	56	5	20	12	17	54	16	109	0	12	137	288
07:45 AM	0	0	0	120	120	0	45	16	3	64	3	20	11	22	56	6	142	0	4	152	392
Total	0	0	0	195	195	0	153	48	20	221	17	100	35	63	215	47	406	0	30	483	1114
08:00 AM	0	0	0	29	29	0	25	11	7	43	4	29	14	28	75	15	105	0	11	131	278
08:15 AM	0	0	0	38	38	0	36	11	11	58	4	34	11	28	77	12	112	0	11	135	308
08:30 AM	0	0	0	89	89	0	45	12	7	64	4	39	17	49	109	13	121	0	9	143	405
08:45 AM	0	0	0	28	28	0	52	12	9	73	2	38	17	41	98	7	150	0	6	163	362
Total	0	0	0	184	184	0	158	46	34	238	14	140	59	146	359	47	488	0	37	572	1353
Grand Total	0	0	0	422	422	0	415	122	62	599	38	335	127	244	744	115	1143	0	79	1337	3102
Apprch %	0	0	0	100		0	69.3	20.4	10.4		5.1	45	17.1	32.8		8.6	85.5	0	5.9		
Total %	0	0	0	13.6	13.6	0	13.4	3.9	2	19.3	1.2	10.8	4.1	7.9	24	3.7	36.8	0	2.5	43.1	

	Kalaimoku Street Southbound				Kuhio Avenue Westbound				Kalaimoku Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	25	11	36	4	29	14	47	**15**	105	0	120	203
08:15 AM	0	0	0	0	0	36	11	47	4	34	11	49	12	112	0	124	220
08:30 AM	0	0	0	0	0	45	**12**	57	4	**39**	**17**	**60**	13	121	0	134	251
08:45 AM	0	0	0	0	0	**52**	12	**64**	2	38	17	57	7	**150**	0	**157**	**278**
Total Volume	0	0	0	0	0	158	46	204	14	140	59	213	47	488	0	535	952
% App. Total	0	0	0		0	77.5	22.5		6.6	65.7	27.7		8.8	91.2	0		
PHF	.000	.000	.000	.000	.000	.760	.958	.797	.875	.897	.868	.888	.783	.813	.000	.852	.856

Wilson Okamoto Corporation

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

Counter:
Counted By:
Weather:

File Name : KuhKal PM
Site Code : 00000003
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound					Westbound					Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	54	54	0	60	9	9	78	9	43	16	42	110	14	167	0	8	189	431
03:15 PM	0	0	0	36	36	0	49	14	6	69	2	58	18	37	115	21	177	0	17	215	435
03:30 PM	0	0	0	38	38	0	46	12	15	73	5	57	10	31	103	7	188	0	8	203	417
03:45 PM	0	0	0	52	52	0	54	12	19	85	6	68	15	48	137	11	173	0	16	200	474
Total	0	0	0	180	180	0	209	47	49	305	22	226	59	158	465	53	705	0	49	807	1757
04:00 PM	0	0	0	28	28	0	60	14	4	78	9	68	17	36	130	16	200	0	18	234	470
04:15 PM	0	0	0	43	43	0	44	17	10	71	4	73	21	43	141	19	186	0	7	212	467
04:30 PM	0	0	0	40	40	0	47	11	12	70	7	54	20	44	125	12	200	0	14	226	461
04:45 PM	0	0	0	69	69	0	55	13	4	72	3	46	18	49	116	21	184	0	10	215	472
Total	0	0	0	180	180	0	206	55	30	291	23	241	76	172	512	68	770	0	49	887	1870
05:00 PM	0	0	0	50	50	0	46	12	16	74	4	70	12	43	129	19	234	0	17	270	523
05:15 PM	0	0	0	67	67	0	59	14	22	95	4	51	12	126	193	21	185	0	11	217	572
05:30 PM	0	0	0	92	92	0	44	13	10	67	8	39	15	53	115	14	205	0	11	230	504
05:45 PM	0	0	0	60	60	0	45	14	14	73	1	47	16	47	111	24	200	0	20	244	488
Total	0	0	0	269	269	0	194	53	62	309	17	207	55	269	548	78	824	0	59	961	2087
Grand Total	0	0	0	629	629	0	609	155	141	905	62	674	190	599	1525	199	2299	0	157	2655	5714
Apprch %	0	0	0	100		0	67.3	17.1	15.6		4.1	44.2	12.5	39.3		7.5	86.6	0	5.9		
Total %	0	0	0	11	11	0	10.7	2.7	2.5	15.8	1.1	11.8	3.3	10.5	26.7	3.5	40.2	0	2.7	46.5	

	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	44	**17**	61	4	**73**	**21**	**98**	19	186	0	205	364
04:30 PM	0	0	0	0	0	47	11	58	**7**	54	20	81	12	200	0	212	351
04:45 PM	0	0	0	0	0	**55**	13	**68**	3	46	18	67	**21**	184	0	205	340
05:00 PM	0	0	0	0	0	46	12	58	4	70	12	86	19	**234**	0	**253**	**397**
Total Volume	0	0	0	0	0	192	53	245	18	243	71	332	71	804	0	875	1452
% App. Total	0	0	0		0	78.4	21.6		5.4	73.2	21.4		8.1	91.9	0		
PHF	.000	.000	.000	.000	.000	.873	.779	.901	.643	.832	.845	.847	.845	.859	.000	.865	.914

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:D4-5671, D4-5672
Counter:TC, EV
Weather:Clear

File Name : KalOlo AM
Site Code : 00000003
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	18	0	0	10	28	0	0	0	189	0	8	197	225
06:15 AM	26	0	0	10	36	0	0	0	241	0	9	250	286
06:30 AM	27	0	0	9	36	0	0	0	279	0	5	284	320
06:45 AM	40	0	0	22	62	0	0	0	251	0	5	256	318
Total	111	0	0	51	162	0	0	0	960	0	27	987	1149
07:00 AM	33	0	0	24	57	0	0	0	268	0	17	285	342
07:15 AM	50	0	0	25	75	0	0	0	336	0	21	357	432
07:30 AM	62	0	0	32	94	0	0	0	388	0	29	417	511
07:45 AM	61	0	0	24	85	0	0	0	448	0	14	462	547
Total	206	0	0	105	311	0	0	0	1440	0	81	1521	1832
08:00 AM	58	0	0	22	80	0	0	0	337	0	19	356	436
08:15 AM	40	0	0	45	85	0	0	0	397	0	12	409	494
08:30 AM	43	0	0	26	69	0	0	0	400	0	4	404	473
08:45 AM	57	0	0	31	88	0	0	0	409	0	18	427	515
Total	198	0	0	124	322	0	0	0	1543	0	53	1596	1918
Grand Total	515	0	0	280	795	0	0	0	3943	0	161	4104	4899
Apprch %	64.8	0	0	35.2				0	96.1	0	3.9		
Total %	10.5	0	0	5.7	16.2	0	0	0	80.5	0	3.3	83.8	

	Olohana Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	**62**	0	0	**62**	0	0	0	388	0	388	450
07:45 AM	61	0	0	61	0	0	0	**448**	0	**448**	**509**
08:00 AM	58	0	0	58	0	0	0	337	0	337	395
08:15 AM	40	0	0	40	0	0	0	397	0	397	437
Total Volume	221	0	0	221	0	0	0	1570	0	1570	1791
% App. Total	100	0	0				0	100	0		
PHF	.891	.000	.000	.891	.000	.000	.000	.876	.000	.876	.880

Wilson Okamoto Corporation

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

Counted By:GC, RJ
Counter:D4-5671, D4-5672
Weather:Clear

File Name : KalOlo PM
Site Code : 00000003
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound							
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	66	0	0	43	66	0	0	0	390	0	23	390	66	456	522
03:15 PM	60	0	0	38	60	0	0	0	443	0	21	443	59	503	562
03:30 PM	59	0	0	41	59	0	0	0	475	0	31	475	72	534	606
03:45 PM	61	0	0	42	61	0	0	0	486	0	25	486	67	547	614
Total	246	0	0	164	246	0	0	0	1794	0	100	1794	264	2040	2304
04:00 PM	52	0	0	36	52	0	0	0	458	0	25	458	61	510	571
04:15 PM	72	0	0	54	72	0	0	0	439	0	28	439	82	511	593
04:30 PM	66	0	0	27	66	0	0	0	428	0	11	428	38	494	532
04:45 PM	62	0	0	37	62	0	0	0	422	0	34	422	71	484	555
Total	252	0	0	154	252	0	0	0	1747	0	98	1747	252	1999	2251
05:00 PM	52	0	0	33	52	0	0	0	448	0	35	448	68	500	568
05:15 PM	61	0	0	50	61	0	0	0	458	0	21	458	71	519	590
05:30 PM	43	0	0	59	43	0	0	0	405	0	21	405	80	448	528
05:45 PM	44	0	0	38	44	0	0	0	429	0	27	429	65	473	538
Total	200	0	0	180	200	0	0	0	1740	0	104	1740	284	1940	2224
Grand Total	698	0	0	498	698	0	0	0	5281	0	302	5281	800	5979	6779
Apprch %	100	0	0					0	100	0					
Total %	11.7	0	0		11.7	0	0	0	88.3	0		88.3	11.8	88.2	

	Olohana Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:30 PM											
03:30 PM	59	0	0	59	0	0	0	475	0	475	534
03:45 PM	61	0	0	61	0	0	0	486	0	486	547
04:00 PM	52	0	0	52	0	0	0	458	0	458	510
04:15 PM	72	0	0	72	0	0	0	439	0	439	511
Total Volume	244	0	0	244	0	0	0	1858	0	1858	2102
% App. Total	100	0	0				0	100	0		
PHF	.847	.000	.000	.847	.000	.000	.000	.956	.000	.956	.961

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GH
Counter:D4-3889
Weather:

File Name : KuhOlo AM
Site Code : 00000002
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	5	8	5	17	35	6	12	0	13	31	0	0	0	6	6	0	50	7	11	68	140
06:15 AM	2	7	4	11	24	15	16	0	8	39	0	0	0	5	5	0	70	5	6	81	149
06:30 AM	2	14	3	7	26	8	15	0	6	29	0	0	0	12	12	0	90	3	8	101	168
06:45 AM	6	17	2	4	29	11	15	0	7	33	0	0	0	5	5	0	65	3	3	71	138
Total	15	46	14	39	114	40	58	0	34	132	0	0	0	28	28	0	275	18	28	321	595
07:00 AM	13	23	6	17	59	11	13	0	17	41	0	0	0	21	21	0	97	3	23	123	244
07:15 AM	6	25	4	11	46	24	16	0	21	61	0	0	0	16	16	0	106	6	15	127	250
07:30 AM	9	34	6	22	71	15	17	0	29	61	0	0	0	25	25	0	135	5	32	172	329
07:45 AM	5	31	3	18	57	28	19	0	16	63	0	0	0	18	18	0	133	4	10	147	285
Total	33	113	19	68	233	78	65	0	83	226	0	0	0	80	80	0	471	18	80	569	1108
08:00 AM	5	28	6	26	65	22	21	0	33	76	0	0	0	33	33	0	112	8	40	160	334
08:15 AM	1	23	5	9	38	9	18	0	25	52	0	0	0	14	14	0	163	5	28	196	300
08:30 AM	4	18	3	38	63	15	21	0	17	53	0	0	0	22	22	0	120	5	23	148	286
08:45 AM	3	24	2	15	44	25	26	0	26	77	0	0	0	28	28	0	127	8	36	171	320
Total	13	93	16	88	210	71	86	0	101	258	0	0	0	97	97	0	522	26	127	675	1240
Grand Total	61	252	49	195	557	189	209	0	218	616	0	0	0	205	205	0	1268	62	235	1565	2943
Apprch %	11	45.2	8.8	35		30.7	33.9	0	35.4		0	0	0	100		0	81	4	15		
Total %	2.1	8.6	1.7	6.6	18.9	6.4	7.1	0	7.4	20.9	0	0	0	7	7	0	43.1	2.1	8	53.2	

	Olohana Street Southbound				Kuhio Avenue Westbound				Olohana Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**9**	**34**	**6**	**49**	15	17	0	32	0	0	0	0	0	135	5	140	221
07:45 AM	5	31	3	39	**28**	19	0	**47**	0	0	0	0	0	133	4	137	223
08:00 AM	5	28	6	39	22	**21**	0	43	0	0	0	0	0	112	**8**	120	202
08:15 AM	1	23	5	29	9	18	0	27	0	0	0	0	0	**163**	5	**168**	**224**
Total Volume	20	116	20	156	74	75	0	149	0	0	0	0	0	543	22	565	870
% App. Total	12.8	74.4	12.8		49.7	50.3	0		0	0	0		0	96.1	3.9		
PHF	.556	.853	.833	.796	.661	.893	.000	.793	.000	.000	.000	.000	.000	.833	.688	.841	.971

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:RD, GH
Counter:D4-3889, D4-3888
Weather:Clear

File Name : KuhOlo PM
Site Code : 00000002
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	4	28	3	36	71	26	28	0	9	63	0	0	0	10	10	0	148	9	46	203	347
03:15 PM	5	25	6	28	64	34	36	0	8	78	0	0	0	19	19	0	166	1	29	196	357
03:30 PM	5	31	7	28	71	25	35	0	17	77	0	0	0	6	6	0	169	4	30	203	357
03:45 PM	12	27	4	37	80	16	24	0	20	60	0	0	0	14	14	0	164	8	41	213	367
Total	26	111	20	129	286	101	123	0	54	278	0	0	0	49	49	0	647	22	146	815	1428
04:00 PM	9	23	11	37	80	24	27	0	18	69	0	0	0	38	38	0	168	7	35	210	397
04:15 PM	8	24	2	20	54	39	26	0	10	75	0	0	0	37	37	0	173	11	44	228	394
04:30 PM	2	17	2	30	51	34	30	0	11	75	0	0	0	35	35	0	180	12	39	231	392
04:45 PM	17	30	7	35	89	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
Total	36	94	22	122	274	126	104	0	42	272	0	0	0	138	138	0	710	38	143	891	1575
05:00 PM	6	18	3	38	65	34	28	0	15	77	0	0	0	23	23	0	169	5	51	225	390
05:15 PM	9	17	5	35	66	38	28	0	19	85	0	0	0	38	38	0	212	8	36	256	445
05:30 PM	12	15	6	24	57	23	25	0	14	62	0	0	0	20	20	0	181	3	31	215	354
05:45 PM	8	16	2	26	52	25	35	0	8	68	0	0	0	30	30	0	173	8	6	187	337
Total	35	66	16	123	240	120	116	0	56	292	0	0	0	111	111	0	735	24	124	883	1526
Grand Total	97	271	58	374	800	347	343	0	152	842	0	0	0	298	298	0	2092	84	413	2589	4529
Apprch %	12.1	33.9	7.2	46.8		41.2	40.7	0	18.1		0	0	0	100		0	80.8	3.2	16		
Total %	2.1	6	1.3	8.3	17.7	7.7	7.6	0	3.4	18.6	0	0	0	6.6	6.6	0	46.2	1.9	9.1	57.2	

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	17	2	30	51	34	**30**	0	11	75	0	0	0	35	35	0	180	**12**	39	231	392
04:45 PM	**17**	**30**	**7**	35	**89**	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
05:00 PM	6	18	3	**38**	65	34	28	0	15	77	0	0	0	23	23	0	169	5	**51**	225	390
05:15 PM	9	17	5	35	66	**38**	28	0	**19**	**85**	0	0	0	**38**	**38**	0	**212**	8	36	**256**	**445**
Total Volume	34	82	17	138	271	135	107	0	48	290	0	0	0	124	124	0	750	33	151	934	1619
% App. Total	12.5	30.3	6.3	50.9		46.6	36.9	0	16.6		0	0	0	100		0	80.3	3.5	16.2		
PHF	.500	.683	.607	.908	.761	.888	.892	.000	.632	.853	.000	.000	.000	.816	.816	.000	.884	.688	.740	.912	.910

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:TU-0650
Counted By:MM
Weather:Clear

File Name : AlaKal AM
Site Code : 00000002
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Boulevard Westbound					Kalaimoku Street Northbound					Eastbound	
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:00 AM	0	0	233	0	0	233	38	0	0	5	43	0	276
06:15 AM	0	0	275	0	3	278	40	0	0	3	43	0	321
06:30 AM	0	0	352	0	3	355	40	0	0	2	42	0	397
06:45 AM	0	0	403	0	2	405	35	0	0	2	37	0	442
Total	0	0	1263	0	8	1271	153	0	0	12	165	0	1436
07:00 AM	0	0	462	0	2	464	59	0	0	1	60	0	524
07:15 AM	0	0	619	0	4	623	49	0	0	3	52	0	675
07:30 AM	0	0	591	0	2	593	52	0	0	10	62	0	655
07:45 AM	0	0	554	0	2	556	49	0	0	13	62	0	618
Total	0	0	2226	0	10	2236	209	0	0	27	236	0	2472
08:00 AM	0	0	488	0	4	492	58	0	0	6	64	0	556
08:15 AM	0	2	506	0	2	510	50	0	0	9	59	0	569
08:30 AM	0	0	475	0	6	481	62	0	0	8	70	0	551
08:45 AM	0	0	444	0	2	446	66	0	0	6	72	0	518
Total	0	2	1913	0	14	1929	236	0	0	29	265	0	2194
Grand Total	0	2	5402	0	32	5436	598	0	0	68	666	0	6102
Apprch %		0	99.4	0	0.6		89.8	0	0	10.2			
Total %	0	0	88.5	0	0.5	89.1	9.8	0	0	1.1	10.9	0	

	Southbound	Ala Wai Boulevard Westbound				Kalaimoku Street Northbound				Eastbound	
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:15 AM											
07:15 AM	0	0	**619**	0	**619**	49	0	0	49	0	**668**
07:30 AM	0	0	591	0	591	52	0	0	52	0	643
07:45 AM	0	0	554	0	554	49	0	0	49	0	603
08:00 AM	0	0	488	0	488	**58**	0	0	**58**	0	546
Total Volume	0	0	2252	0	2252	208	0	0	208	0	2460
% App. Total		0	100	0		100	0	0			
PHF	.000	.000	.910	.000	.910	.897	.000	.000	.897	.000	.921

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:TU-0650
Counted By:MM
Weather:Clear

File Name : AlaKal PM
Site Code : 00000002
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Boulevard Westbound					Kalaimoku Street Northbound					Eastbound	
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	481	0	4	485	62	0	0	11	73	0	558
03:15 PM	0	0	526	0	3	529	87	0	0	2	89	0	618
03:30 PM	0	0	513	0	6	519	76	0	0	7	83	0	602
03:45 PM	0	0	461	0	3	464	92	0	0	10	102	0	566
Total	0	0	1981	0	16	1997	317	0	0	30	347	0	2344
04:00 PM	0	0	577	0	4	581	75	0	0	4	79	0	660
04:15 PM	0	0	582	0	0	582	114	0	0	5	119	0	701
04:30 PM	0	0	525	0	5	530	71	0	0	9	80	0	610
04:45 PM	0	0	465	0	2	467	79	0	0	3	82	0	549
Total	0	0	2149	0	11	2160	339	0	0	21	360	0	2520
05:00 PM	0	0	501	0	4	505	86	0	0	10	96	0	601
05:15 PM	0	0	530	0	7	537	80	0	0	13	93	0	630
05:30 PM	0	0	466	0	2	468	69	0	0	9	78	0	546
05:45 PM	0	0	462	0	3	465	80	0	0	3	83	0	548
Total	0	0	1959	0	16	1975	315	0	0	35	350	0	2325
Grand Total	0	0	6089	0	43	6132	971	0	0	86	1057	0	7189
Apprch %		0	99.3	0	0.7		91.9	0	0	8.1			
Total %	0	0	84.7	0	0.6	85.3	13.5	0	0	1.2	14.7	0	

	Southbound	Ala Wai Boulevard Westbound				Kalaimoku Street Northbound				Eastbound	
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:45 PM											
03:45 PM	0	0	461	0	461	92	0	0	92	0	553
04:00 PM	0	0	577	0	577	75	0	0	75	0	652
04:15 PM	0	0	**582**	0	**582**	**114**	0	0	**114**	0	**696**
04:30 PM	0	0	525	0	525	71	0	0	71	0	596
Total Volume	0	0	2145	0	2145	352	0	0	352	0	2497
% App. Total		0	100	0		100	0	0			
PHF	.000	.000	.921	.000	.921	.772	.000	.000	.772	.000	.897

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

Table 1: Level-of-Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec/veh)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group.

Level of Service A describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

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

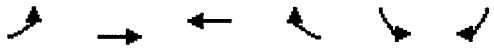
Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

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

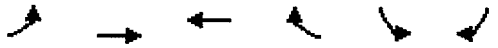
APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
BASELINE PEAK PERIOD TRAFFIC ANALYSIS



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1543	0	0	198	0
Future Volume (vph)	0	1543	0	0	198	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	1794	0	0	230	0
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	0	1794	0	0	211	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.28			c0.06	
v/s Ratio Perm						
v/c Ratio		0.50			0.20	
Uniform Delay, d1		10.6			20.1	
Progression Factor		1.00			0.90	
Incremental Delay, d2		0.5			0.4	
Delay (s)		11.1			18.4	
Level of Service		B			B	
Approach Delay (s)		11.1	0.0		18.4	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1811	0	0	251	0
Future Volume (vph)	0	1811	0	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1927	0	0	267	0
RTOR Reduction (vph)	0	0	0	0	6	0
Lane Group Flow (vph)	0	1927	0	0	261	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.30			c0.08	
v/s Ratio Perm						
v/c Ratio		0.60			0.20	
Uniform Delay, d1		16.1			18.2	
Progression Factor		1.00			0.86	
Incremental Delay, d2		0.8			0.3	
Delay (s)		16.9			15.9	
Level of Service		B			B	
Approach Delay (s)		16.9	0.0		15.9	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1337	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	61	1337	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.94						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5852						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5852						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1407	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1618	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3657						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.28										
v/c Ratio		0.44						0.37	0.40			
Uniform Delay, d1		7.8						24.8	25.0			
Progression Factor		1.06						1.00	1.00			
Incremental Delay, d2		0.4						2.3	1.7			
Delay (s)		8.6						27.0	26.7			
Level of Service		A						C	C			
Approach Delay (s)		8.6			0.0			26.8			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	1650	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	66	1650	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5912						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5912						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	67	1667	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1895	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3695						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.32							0.14			
v/c Ratio		0.51						0.61	0.54			
Uniform Delay, d1		8.3						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		0.5						5.9	3.0			
Delay (s)		8.8						32.4	29.0			
Level of Service		A						C	C			
Approach Delay (s)		8.8			0.0			30.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	488	0	0	158	46	14	140	59	0	0	0
Future Volume (vph)	47	488	0	0	158	46	14	140	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3477			3202			3311				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3166			3202			3311				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	561	0	0	182	53	16	161	68	0	0	0
RTOR Reduction (vph)	0	0	0	0	33	0	0	43	0	0	0	0
Lane Group Flow (vph)	0	615	0	0	202	0	0	203	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1602			1200			1241				
v/s Ratio Prot		c0.02			0.06							
v/s Ratio Perm		c0.17						0.06				
v/c Ratio		0.38			0.17			0.16				
Uniform Delay, d1		12.4			16.7			16.6				
Progression Factor		1.36			0.69			1.50				
Incremental Delay, d2		0.6			0.3			0.3				
Delay (s)		17.5			11.8			25.3				
Level of Service		B			B			C				
Approach Delay (s)		17.5			11.8			25.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	759	0	0	205	54	26	263	73	0	0	0
Future Volume (vph)	58	759	0	0	205	54	26	263	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.97				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3491			3229			3337				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3229			3337				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	807	0	0	218	57	28	280	78	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	869	0	0	249	0	0	361	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1614			926				
v/s Ratio Prot		c0.02			0.08							
v/s Ratio Perm		c0.25						0.11				
v/c Ratio		0.44			0.15			0.39				
Uniform Delay, d1		9.3			12.2			26.3				
Progression Factor		2.83			0.53			1.00				
Incremental Delay, d2 *		0.7			0.2			1.2				
Delay (s)		27.1			6.7			27.6				
Level of Service		C			A			C				
Approach Delay (s)		27.1			6.7			27.6			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	522	26	71	86	0	0	0	0	20	116	20
Future Volume (vph)	0	522	26	71	86	0	0	0	0	20	116	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.96	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3488		1749	1863						3234	
Flt Permitted		1.00		0.30	1.00						0.99	
Satd. Flow (perm)		3488		556	1863						3234	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	561	28	76	92	0	0	0	0	22	125	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	585	0	76	92	0	0	0	0	0	155	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1308		461	1047						1010	
v/s Ratio Prot		c0.17		c0.02	0.05							
v/s Ratio Perm				0.07							0.05	
v/c Ratio		0.45		0.16	0.09						0.15	
Uniform Delay, d1		18.8		8.8	8.1						19.9	
Progression Factor		1.00		1.48	1.48						1.00	
Incremental Delay, d2		1.1		0.8	0.2						0.3	
Delay (s)		19.9		13.7	12.1						20.2	
Level of Service		B		B	B						C	
Approach Delay (s)		19.9			12.8			0.0			20.2	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

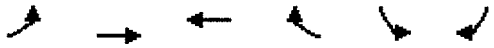
6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	685	38	113	107	0	0	0	0	31	91	19
Future Volume (vph)	0	685	38	113	107	0	0	0	0	31	91	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3511		1770	1863						3431	
Flt Permitted		1.00		0.28	1.00						0.99	
Satd. Flow (perm)		3511		520	1863						3431	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	699	39	115	109	0	0	0	0	32	93	19
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	734	0	115	109	0	0	0	0	0	131	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1755		485	1242						762	
v/s Ratio Prot		c0.21		c0.03	0.06							
v/s Ratio Perm				0.13							0.04	
v/c Ratio		0.42		0.24	0.09						0.17	
Uniform Delay, d1		14.2		6.4	5.3						28.3	
Progression Factor		1.00		0.99	0.97						1.00	
Incremental Delay, d2		0.7		1.1	0.1						0.5	
Delay (s)		15.0		7.4	5.3						28.8	
Level of Service		B		A	A						C	
Approach Delay (s)		15.0			6.4			0.0			28.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX D

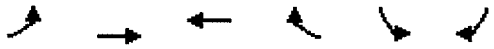
CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2018 PEAK PERIOD TRAFFIC
ANALYSIS WITHOUT PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1821	0	0	357	0
Future Volume (vph)	0	1821	0	0	357	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	2117	0	0	415	0
RTOR Reduction (vph)	0	0	0	0	8	0
Lane Group Flow (vph)	0	2117	0	0	407	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.33			c0.12	
v/s Ratio Perm						
v/c Ratio		0.59			0.38	
Uniform Delay, d1		11.4			21.4	
Progression Factor		1.00			1.04	
Incremental Delay, d2		0.7			1.0	
Delay (s)		12.1			23.3	
Level of Service		B			C	
Approach Delay (s)		12.1	0.0		23.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	2142	0	0	409	0
Future Volume (vph)	0	2142	0	0	409	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2279	0	0	435	0
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	2279	0	0	433	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.36			c0.13	
v/s Ratio Perm						
v/c Ratio		0.71			0.32	
Uniform Delay, d1		17.5			19.2	
Progression Factor		1.00			1.03	
Incremental Delay, d2		1.4			0.6	
Delay (s)		18.8			20.4	
Level of Service		B			C	
Approach Delay (s)		18.8	0.0		20.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	313	1522	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	313	1522	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.97						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5771						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5771						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	329	1602	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2052	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3606						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.36										
v/c Ratio		0.57						0.37	0.40			
Uniform Delay, d1		8.7						24.8	25.0			
Progression Factor		1.19						1.00	1.00			
Incremental Delay, d2		0.6						2.3	1.7			
Delay (s)		11.0						27.0	26.7			
Level of Service		B						C	C			
Approach Delay (s)		11.0			0.0			26.8			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	1867	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	338	1867	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.96						1.00	1.00			
Flpb, ped/bikes		0.96						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5761						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5761						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	341	1886	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	54	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2363	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3600						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.41							0.14			
v/c Ratio		0.66						0.61	0.54			
Uniform Delay, d1		9.5						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		0.9						5.9	3.0			
Delay (s)		10.5						32.4	29.0			
Level of Service		B						C	C			
Approach Delay (s)		10.5			0.0			30.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	551	0	0	190	46	14	245	120	0	0	0
Future Volume (vph)	47	551	0	0	190	46	14	245	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.95				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3485			3246			3292				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3246			3292				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	633	0	0	218	53	16	282	138	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	68	0	0	0	0
Lane Group Flow (vph)	0	687	0	0	245	0	0	368	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1606			1217			1234				
v/s Ratio Prot		c0.03			0.08							
v/s Ratio Perm		c0.19						0.11				
v/c Ratio		0.43			0.20			0.30				
Uniform Delay, d1		12.7			16.9			17.6				
Progression Factor		1.36			0.71			1.13				
Incremental Delay, d2		0.8			0.4			0.6				
Delay (s)		18.1			12.3			20.5				
Level of Service		B			B			C				
Approach Delay (s)		18.1			12.3			20.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	841	0	0	252	54	26	395	170	0	0	0
Future Volume (vph)	58	841	0	0	252	54	26	395	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.95			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3497			3276			3281				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3174			3276			3281				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	895	0	0	268	57	28	420	181	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	48	0	0	0	0
Lane Group Flow (vph)	0	957	0	0	305	0	0	581	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1638			911				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.27						0.18				
v/c Ratio		0.49			0.19			0.64				
Uniform Delay, d1		9.7			12.4			28.5				
Progression Factor		2.83			0.56			1.00				
Incremental Delay, d2		0.8			0.3			3.4				
Delay (s)		28.3			7.1			31.9				
Level of Service		C			A			C				
Approach Delay (s)		28.3			7.1			31.9			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Future Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						1.00	
Satd. Flow (prot)		3493		1755	1863						3304	
Flt Permitted		1.00		0.27	1.00						1.00	
Satd. Flow (perm)		3493		490	1863						3304	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	629	28	195	113	0	0	0	0	22	177	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	653	0	195	113	0	0	0	0	0	211	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1309		433	1047						1032	
v/s Ratio Prot		c0.19		c0.06	0.06							
v/s Ratio Perm				0.20							0.06	
v/c Ratio		0.50		0.45	0.11						0.20	
Uniform Delay, d1		19.2		9.8	8.2						20.2	
Progression Factor		1.00		1.52	1.45						1.00	
Incremental Delay, d2		1.4		3.3	0.2						0.4	
Delay (s)		20.6		18.3	12.0						20.6	
Level of Service		C		B	B						C	
Approach Delay (s)		20.6			16.0			0.0			20.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

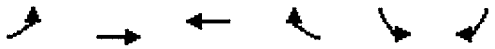
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Future Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3514		1770	1863						3459	
Flt Permitted		1.00		0.24	1.00						0.99	
Satd. Flow (perm)		3514		455	1863						3459	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	783	39	227	135	0	0	0	0	32	143	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	818	0	227	135	0	0	0	0	0	185	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1757		449	1242						768	
v/s Ratio Prot		0.23		c0.06	0.07							
v/s Ratio Perm				c0.28							0.05	
v/c Ratio		0.47		0.51	0.11						0.24	
Uniform Delay, d1		14.7		7.5	5.4						28.8	
Progression Factor		1.00		1.25	1.07						1.00	
Incremental Delay, d2		0.9		4.0	0.2						0.7	
Delay (s)		15.6		13.3	5.9						29.5	
Level of Service		B		B	A						C	
Approach Delay (s)		15.6			10.6			0.0			29.5	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

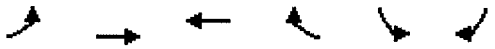
APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2018 PEAK PERIOD TRAFFIC
ANALYSIS WITH PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1860	0	0	357	0
Future Volume (vph)	0	1860	0	0	357	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	2163	0	0	415	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	2163	0	0	408	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.34			c0.12	
v/s Ratio Perm						
v/c Ratio		0.60			0.38	
Uniform Delay, d1		11.6			21.5	
Progression Factor		1.00			1.04	
Incremental Delay, d2		0.7			1.0	
Delay (s)		12.3			23.3	
Level of Service		B			C	
Approach Delay (s)		12.3	0.0		23.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	2195	0	0	409	0
Future Volume (vph)	0	2195	0	0	409	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2335	0	0	435	0
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	2335	0	0	433	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.36			c0.13	
v/s Ratio Perm						
v/c Ratio		0.73			0.32	
Uniform Delay, d1		17.7			19.2	
Progression Factor		1.00			1.03	
Incremental Delay, d2		1.5			0.6	
Delay (s)		19.2			20.4	
Level of Service		B			C	
Approach Delay (s)		19.2	0.0		20.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	1539	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	335	1539	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.96						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5765						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5765						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	353	1620	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2091	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3603						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.36										
v/c Ratio		0.58						0.37	0.40			
Uniform Delay, d1		8.8						24.8	25.0			
Progression Factor		1.24						1.00	1.00			
Incremental Delay, d2		0.6						2.3	1.7			
Delay (s)		11.5						27.0	26.7			
Level of Service		B						C	C			
Approach Delay (s)		11.5			0.0			26.8			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	366	1892	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	366	1892	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.96						1.00	1.00			
Flpb, ped/bikes		0.95						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5749						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5749						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	370	1911	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	56	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2415	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3593						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.42							0.14			
v/c Ratio		0.67						0.61	0.54			
Uniform Delay, d1		9.7						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		1.0						5.9	3.0			
Delay (s)		10.7						32.4	29.0			
Level of Service		B						C	C			
Approach Delay (s)		10.7			0.0			30.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	551	0	0	190	46	14	267	120	0	0	0
Future Volume (vph)	47	551	0	0	190	46	14	267	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3485			3246			3305				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3246			3305				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	633	0	0	218	53	16	307	138	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	59	0	0	0	0
Lane Group Flow (vph)	0	687	0	0	245	0	0	402	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1606			1217			1239				
v/s Ratio Prot		c0.03			0.08							
v/s Ratio Perm		c0.19						0.12				
v/c Ratio		0.43			0.20			0.32				
Uniform Delay, d1		12.7			16.9			17.8				
Progression Factor		1.36			0.71			1.10				
Incremental Delay, d2		0.8			0.4			0.7				
Delay (s)		18.1			12.3			20.3				
Level of Service		B			B			C				
Approach Delay (s)		18.1			12.3			20.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

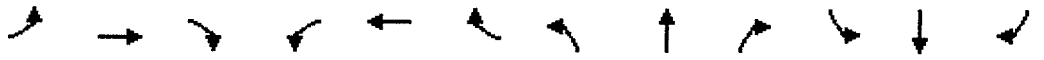
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	841	0	0	252	54	26	423	170	0	0	0
Future Volume (vph)	58	841	0	0	252	54	26	423	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.95			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3497			3276			3293				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3174			3276			3293				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	895	0	0	268	57	28	450	181	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	43	0	0	0	0
Lane Group Flow (vph)	0	957	0	0	305	0	0	616	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1638			914				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.27						0.19				
v/c Ratio		0.49			0.19			0.67				
Uniform Delay, d1		9.7			12.4			28.9				
Progression Factor		2.83			0.56			1.00				
Incremental Delay, d2		0.8			0.3			4.0				
Delay (s)		28.3			7.1			32.8				
Level of Service		C			A			C				
Approach Delay (s)		28.3			7.1			32.8			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Future Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						1.00	
Satd. Flow (prot)		3493		1755	1863						3304	
Flt Permitted		1.00		0.27	1.00						1.00	
Satd. Flow (perm)		3493		490	1863						3304	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	629	28	195	113	0	0	0	0	22	177	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	653	0	195	113	0	0	0	0	0	211	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1309		433	1047						1032	
v/s Ratio Prot		c0.19		c0.06	0.06							
v/s Ratio Perm				0.20							0.06	
v/c Ratio		0.50		0.45	0.11						0.20	
Uniform Delay, d1		19.2		9.8	8.2						20.2	
Progression Factor		1.00		1.51	1.44						1.00	
Incremental Delay, d2		1.4		3.3	0.2						0.4	
Delay (s)		20.6		18.2	11.9						20.6	
Level of Service		C		B	B						C	
Approach Delay (s)		20.6			15.9			0.0			20.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Future Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3514		1770	1863						3459	
Flt Permitted		1.00		0.24	1.00						0.99	
Satd. Flow (perm)		3514		455	1863						3459	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	783	39	227	135	0	0	0	0	32	143	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	818	0	227	135	0	0	0	0	0	185	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1757		449	1242						768	
v/s Ratio Prot		0.23		c0.06	0.07							
v/s Ratio Perm				c0.28							0.05	
v/c Ratio		0.47		0.51	0.11						0.24	
Uniform Delay, d1		14.7		7.5	5.4						28.8	
Progression Factor		1.00		1.25	1.07						1.00	
Incremental Delay, d2		0.9		4.0	0.2						0.7	
Delay (s)		15.6		13.3	5.9						29.5	
Level of Service		B		B	A						C	
Approach Delay (s)		15.6			10.6			0.0			29.5	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Traffic Impact Report

Park Kalia - Waikiki

Prepared for:
Tsukada Global Holdings, Inc.

Prepared by:
Wilson Okamoto Corporation

November 2015

TRAFFIC IMPACT REPORT

FOR

PARK KALIA - WAIKIKI

Prepared for:

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November 2015

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I. INTRODUCTION

A. Purpose of Study

The purpose of this study is to identify and assess the traffic impacts resulting from the development of Park Kalia - Waikiki in Honolulu on the island of Oahu. The project entails developing a new condo-hotel on the site of the former Kyo-ya restaurant adjacent to Kalakaua Avenue.

B. Scope of Study

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

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

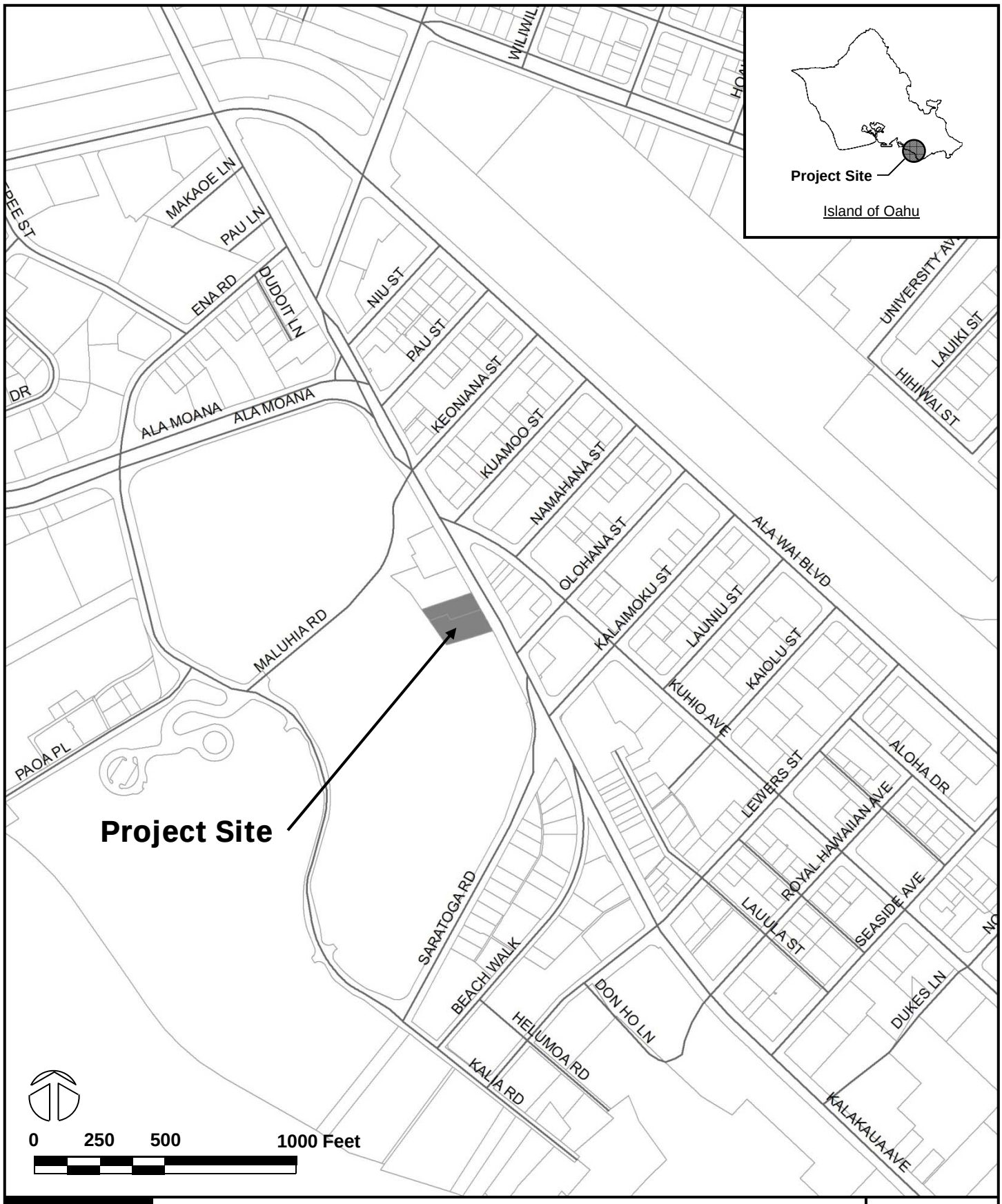
II. PROJECT DESCRIPTION

A. Location

The project site for the proposed condo-hotel development is located adjacent to Kalakaua Avenue in Waikiki on the island of Oahu (see Figure 1) and is bounded by the Luana Waikiki Hotel to the west and a park to the east. The project site is further identified as Tax Map Keys (TMKs): 2-6-006: por. 001, and 004. Access to the project site will be provided via a driveway off Kalakaua Avenue.

B. Project Characteristics

The project site for the proposed Park Kalia - Waikiki development entails the replacement of the former Kyo-ya restaurant building with a new condo-hotel development that is expected to include a maximum of 180 units with recreational



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PARK KALIA - WAIKIKI

LOCATION MAP AND VICINITY MAP

FIGURE 1

amenities and on-site parking. In addition, the development will include a wedding chapel with services expected to be held during off-peak periods. The proposed development is expected to be completed and occupied by the Year 2018 with primary access provided via a driveway off Kalakaua Avenue. Figure 2 shows the proposed project site plan.

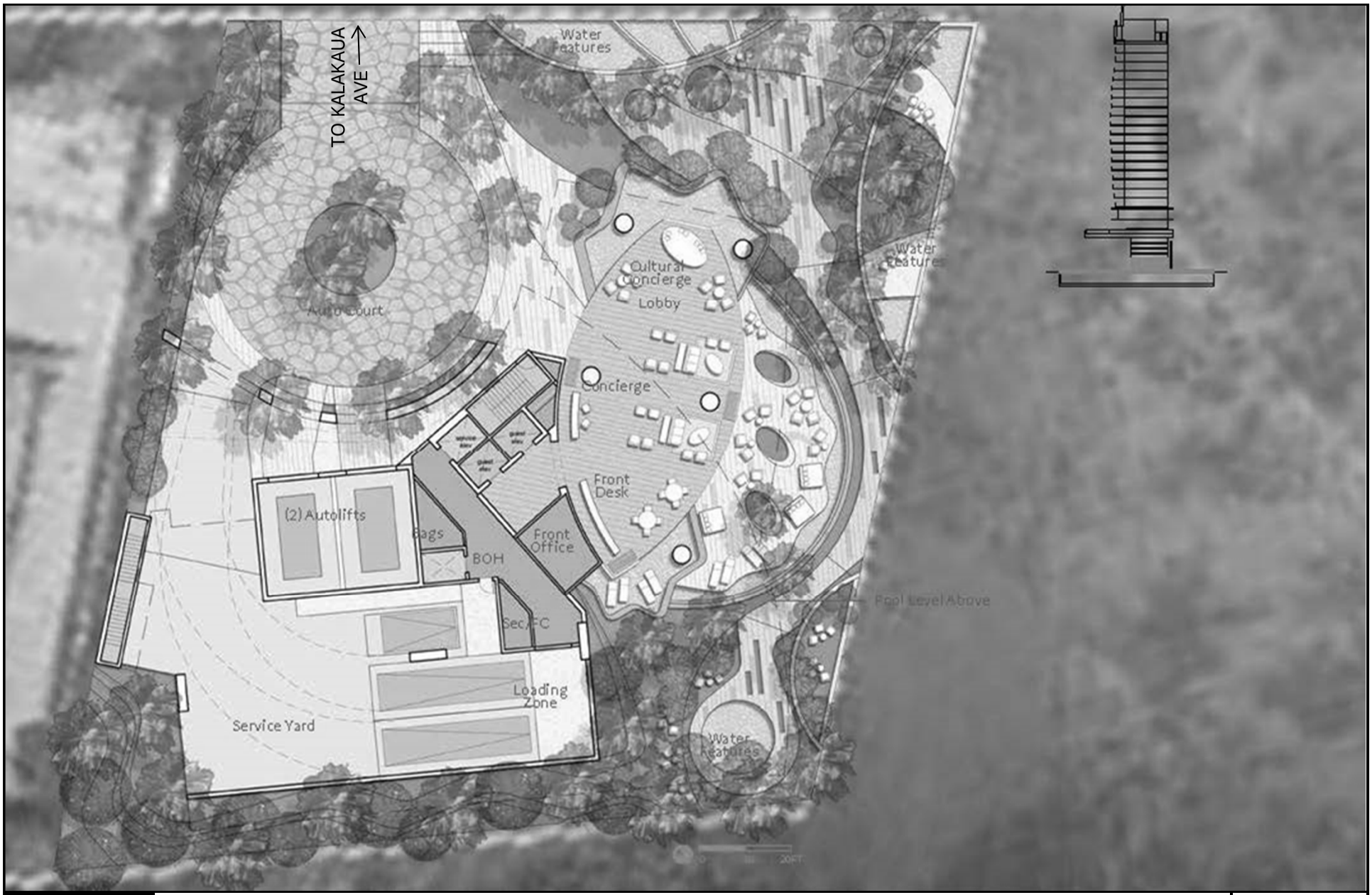
III. EXISTING TRAFFIC CONDITIONS

A. Area Roadway System

Kalakaua Avenue is a one-way (eastbound) roadway that with Ala Wai Boulevard forms a couplet system providing east-west access through Waikiki. Southwest of the project site, Kalakaua Avenue intersects Olohana Street. At this signalized T-intersection, the eastbound approach of Kalakaua Avenue has four through lanes. Olohana Street is a two-lane, one-way (southbound) connector roadway between Ala Wai Boulevard and Kalakaua Avenue. At the intersection with Kalakaua Avenue, Olohana Street has two exclusive left-turn lanes.

East of the intersection with Olohana Street, Kalakaua Avenue intersects Kalaimoku Street and Saratoga Road. At this signalized intersection, Kalakaua Avenue has four eastbound lanes that serve all traffic movements. Kalaimoku Street is a two-lane, one-way (northbound) connector roadway oriented in the north-south direction between Ala Wai Boulevard and Kalakaua Avenue while Saratoga Road is a predominately three-lane, two-way roadway also oriented in the north-south direction between Kalakaua Avenue and Kalia Road. At the intersection with Kalakaua Avenue, Saratoga Road has one northbound through lane and two exclusive right-turn lanes. It should be noted that there are posted signs at the intersection indicating northbound right-turn movements are prohibited on red.

North of the intersection with Kalakaua Avenue, Kalaimoku Street intersects Kuhio Avenue. At this signalized intersection, the northbound approach of Kalaimoku Street has two lanes that serve all traffic movements. Kuhio Avenue is a predominantly four-lane, two-way roadway that runs parallel to Kalakaua Avenue and Ala Wai Boulevard. At the intersection with Kalaimoku Street, the eastbound approach of Kuhio Avenue has a shared left-turn and through lane, and one through



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PARK KALIA - WAIKIKI

PROPOSED SITE PLAN

FIGURE 2

lane while the westbound approach has one through lane and a shared through and right-turn lane.

West of the intersection with Kalaimoku Street, Kuhio Avenue intersects Olohana Street. At this signalized intersection, the eastbound approach of Kuhio Avenue has one through lane and a shared through and right-turn lane while the westbound approach has an exclusive left-turn lane and one through lane. The Olohana Street approach of this intersection has two southbound lanes that serve all traffic movements.

B. Traffic Volumes and Conditions

1. General

a. Field Investigation

Field investigations were conducted during January and August 2012 and consisted of manual turning movement count surveys during the morning peak hours between 6:00 AM and 9:00 AM, and the afternoon peak hours between 3:00 PM and 6:00 PM at the following intersections:

- Kalakaua Avenue and Olohana Street
- Kalakaua Avenue, Kalaimoku Street, and Saratoga Road
- Kuhio Avenue and Kalaimoku Street
- Kuhio Avenue and Olohana Street

Appendix A includes the baseline traffic count data.

b. Capacity Analysis Methodology

The highway capacity analysis performed in this study is based upon procedures presented in the "Highway Capacity Manual", Transportation Research Board, 2000, and the "Synchro" software, developed by Trafficware. The analysis is based on the concept of Level of Service (LOS) to identify the traffic impacts associated with traffic demands during the peak periods of traffic.

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

and LOS "F" unacceptable or potentially congested traffic operating conditions.

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

2. Baseline Peak Hour Traffic

a. General

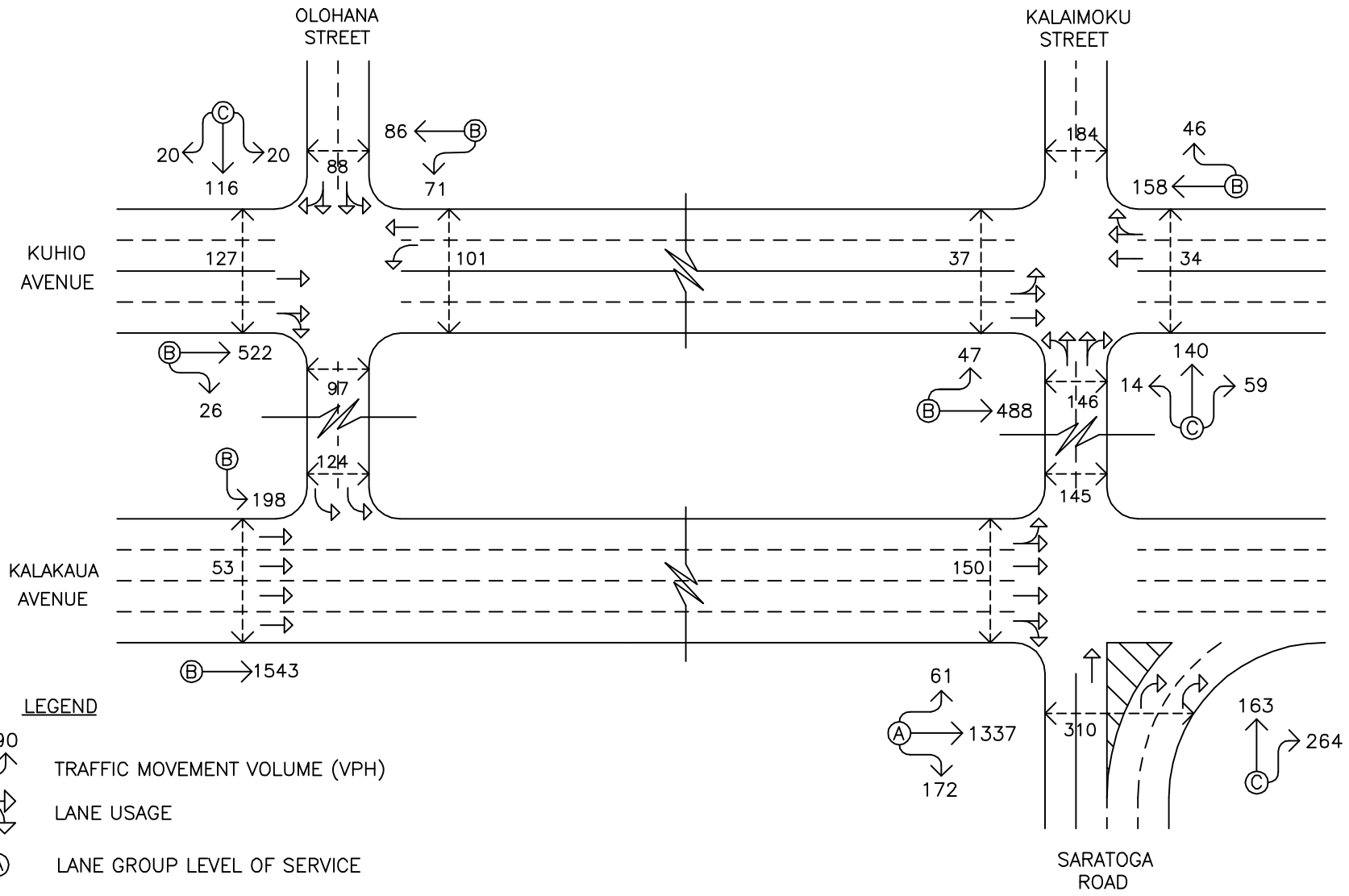
Figures 3 and 4 show the baseline AM and PM peak period traffic volumes and operating traffic conditions. The AM peak hour of traffic generally occurs between 8:00 AM and 9:00 AM, while the PM peak hour of traffic generally occurs between 3:45 PM and 4:45 PM. The analysis is based on these peak hour time periods to identify the traffic impacts resulting from the proposed project. The LOS calculations are included in Appendix C.

b. Kalakaua Avenue and Olohana Street

At the intersection with Olohana Street, Kalakaua Avenue carries 1,543 vehicles and 1,811 vehicles eastbound during the AM and PM peak periods, respectively. The Kalakaua Avenue approach operates at LOS "B" during both peak periods.

The Olohana Street approach of this intersection carries 198 vehicles and 251 vehicles southbound during the AM and PM peak periods, respectively. This approach operates at LOS "B" during both peak periods.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection, as well as, across Olohana Street on the north side of the intersection. During the AM peak period, 53 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 124 pedestrians were observed crossing Olohana



DATES OF COUNT: JANUARY & AUGUST 2012

WILSON OKAMOTO CORPORATION
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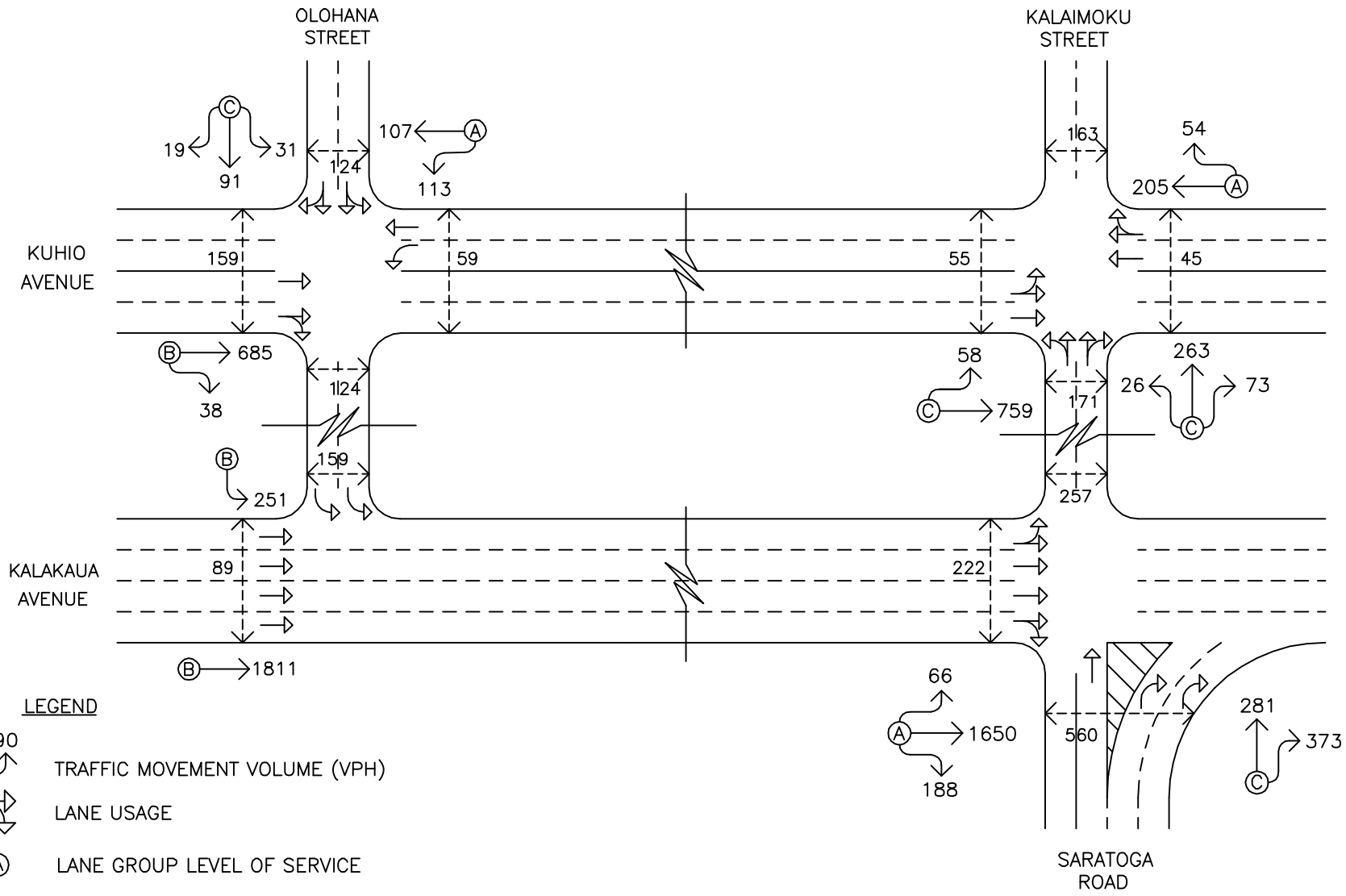
PARK KALIA - WAIKIKI

BASELINE AM PEAK HOUR OF TRAFFIC

FIGURE 3



DATES OF COUNT: JANUARY & AUGUST 2012

WILSON OKAMOTO CORPORATION
ENGINEERS · PLANNERS

PARK KALIA - WAIKIKI

BASELINE PM PEAK HOUR OF TRAFFIC

FIGURE 4

Street on the north side of the intersection. During the PM peak period, 89 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 159 pedestrians were observed crossing Olohana Street on the north side of the intersection.

c. Kalakaua Avenue, Saratoga Road, and Kalaimoku Street

At the intersection with Kalaimoku Street and Saratoga Road, Kalakaua Avenue carries 1,570 vehicles and 1,904 vehicles eastbound during the AM and PM peak periods of traffic, respectively. The Kalakaua Avenue approach operates at LOS "A" during both peak periods.

The northbound approach of Saratoga Road carries 427 vehicles and 654 vehicles northbound during the AM and PM peak periods, respectively. This approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kalakaua Avenue on the west side of the intersection, as well as, across Kalaimoku Street and Saratoga Road on the north and south sides of the intersection. During the AM peak period, 150 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 145 pedestrians and 310 pedestrians were observed crossing Kalaimoku Street and Saratoga Road on the north and south sides of the intersection, respectively. During the PM peak period, 222 pedestrians were observed crossing Kalakaua Avenue on the west side of the intersection, while 257 pedestrians and 560 pedestrians were observed crossing Kalaimoku Street and Saratoga Road, respectively.

d. Kuhio Avenue and Kalaimoku Street

At the intersection with Kalaimoku Street, Kuhio Avenue carries 535 vehicles eastbound and 204 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 817 vehicles traveling eastbound and 259 vehicles traveling westbound. The eastbound approach of Kuhio Avenue

operates at LOS "B" and LOS "C" during the AM and PM peak periods, respectively, while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

The northbound approach of Kalaimoku Street carries 213 vehicles and 362 vehicles northbound during the AM and PM peak periods, respectively. The Kalaimoku Street approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kuhio Avenue on the east and west sides of the intersection, as well as, across Kalaimoku Street on the north and south sides of the intersection. During the AM peak period, 34 pedestrians and 37 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 184 pedestrians and 146 pedestrians were observed crossing Kalaimoku Street on the north and south sides of the intersection, respectively. During the PM peak period, 45 pedestrians and 55 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 163 pedestrians and 171 pedestrians were observed crossing Kalaimoku Street on the north and south sides of the intersection, respectively.

e. Kuhio Avenue and Olohana Street

At the intersection with Olohana Street, Kuhio Avenue carries 548 vehicles eastbound and 157 vehicles westbound during the AM peak period. During the PM peak period, traffic volumes are higher with 723 vehicles traveling eastbound and 220 vehicles traveling westbound. The eastbound approach of Kuhio Avenue operates at LOS "B" during both peak periods while the westbound approach operates at LOS "B" and LOS "A" during the AM and PM peak periods, respectively.

The Olohana Street approach of this intersection carries 156 vehicles and 141 vehicles southbound during the AM and PM peak

periods, respectively. The Olohana Street approach operates at LOS "C" during both peak periods.

Crosswalks are provided across Kuhio Avenue on the east and west sides of the intersection, as well as, across Olohana Street on the north and south sides of the intersection. During the AM peak period, 101 pedestrians and 127 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 88 pedestrians and 97 pedestrians were observed crossing Olohana Street on the north and south sides of the intersection, respectively. During the PM peak period, 59 pedestrians and 159 pedestrians were observed crossing Kuhio Avenue on the east and west sides of the intersection, respectively, while 124 pedestrians were observed crossing on both sides of Olohana Street.

IV. PROJECTED TRAFFIC CONDITIONS

A. Site-Generated Traffic

1. Trip Generation Methodology

The trip generation methodology used in this study is based upon generally accepted techniques developed by the Institute of Transportation Engineers (ITE) and published in "Trip Generation, 9th Edition," 2012. The ITE trip generation rates are developed empirically by correlating vehicle trip generation data with various land use characteristics such as the number of vehicle trips generated per hotel room. It should be noted that all site-generated trips were assumed to be new trips in the project vicinity although the former Kyo-ya Restaurant site was being utilized for parking during the time of the field investigation. Table 1 summarizes the trip generation characteristics related to the proposed development of Park Kalia - Waikiki applied to the AM and PM peak hours of traffic.

Table 1: Peak Hour Trip Generation

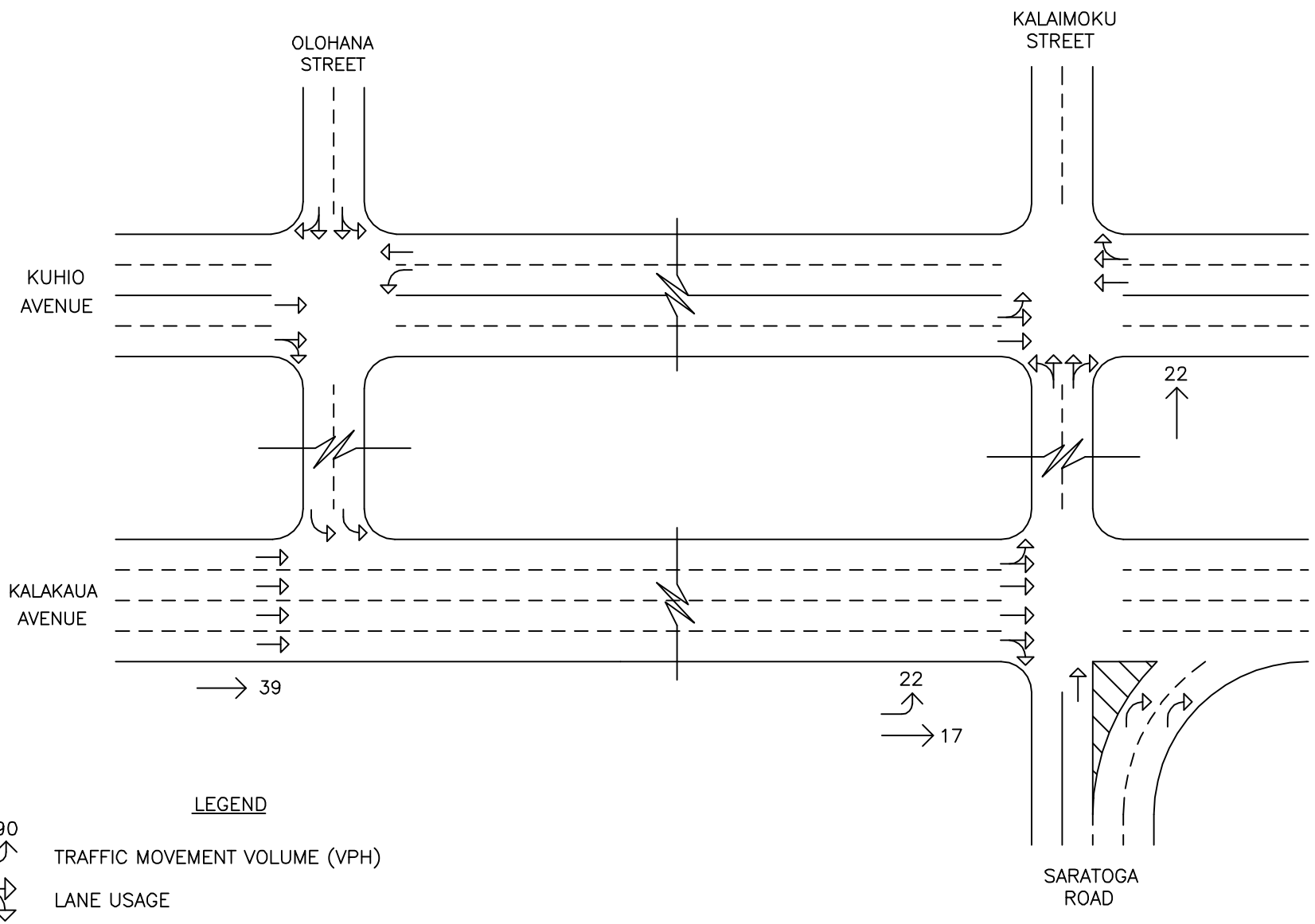
HOTEL INDEPENDENT VARIABLE: Rooms = 180		
		PROJECTED TRIP ENDS
AM PEAK	ENTER	56
	EXIT	39
	TOTAL	95
PM PEAK	ENTER	55
	EXIT	53
	TOTAL	108

2. Trip Distribution

Figures 5 and 6 show the distribution of site-generated vehicular trips at the study intersections during AM and PM peak periods. Access for the proposed Park Kalia - Waikiki development will be provided via a driveway off Kalakaua Avenue. The directional distribution of all site-generated vehicles was based upon the relative distribution of traffic between Kalakaua Avenue and Ala Wai Boulevard. As such, 44.6% of site-generated vehicles were assumed to be headed eastbound and 55.4% were assumed to be headed westbound during the AM peak period. During the PM peak period, 45.8% were assumed to be headed eastbound and 54.2% were assumed to be headed westbound. All entering vehicles were assumed to utilize Kalakaua Avenue to access the driveway off that roadway. Exiting westbound vehicles were assumed to continue eastbound along Kalakaua Avenue while westbound exiting vehicles were assumed to use Kalaimoku Street to head westbound on Ala Wai Boulevard.

B. Through Traffic Forecasting Methodology

There are no State of Hawaii or City and County of Honolulu traffic count stations in the immediate vicinity of the project site with sufficient available historical data to obtain a historical trend for the growth of traffic in the project vicinity. However, for the purpose of this report, an average annual growth rate of 2.0% per year was conservatively assumed along Kalakaua Avenue and Kuhio Avenue to account for ambient growth in traffic. As such, using 2012 as the Base Year, a



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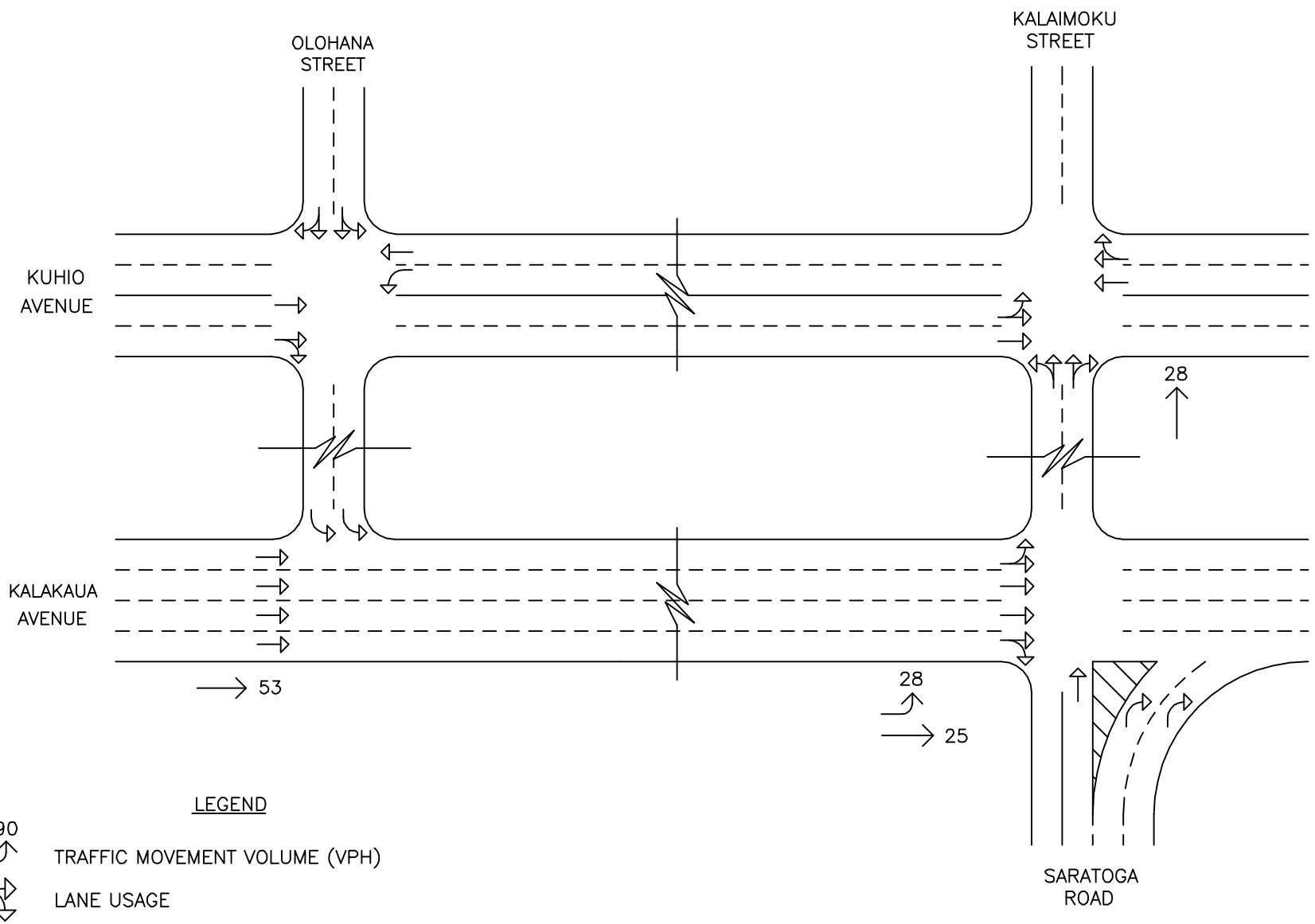
PARK KALIA - WAIKIKI

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

FIGURE 5



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PARK KALIA - WAIKIKI

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

FIGURE 6

growth rate factor of 1.12 was applied to the baseline through traffic demands along those roadways to achieve the projected Year 2018 traffic demands.

C. Other Considerations

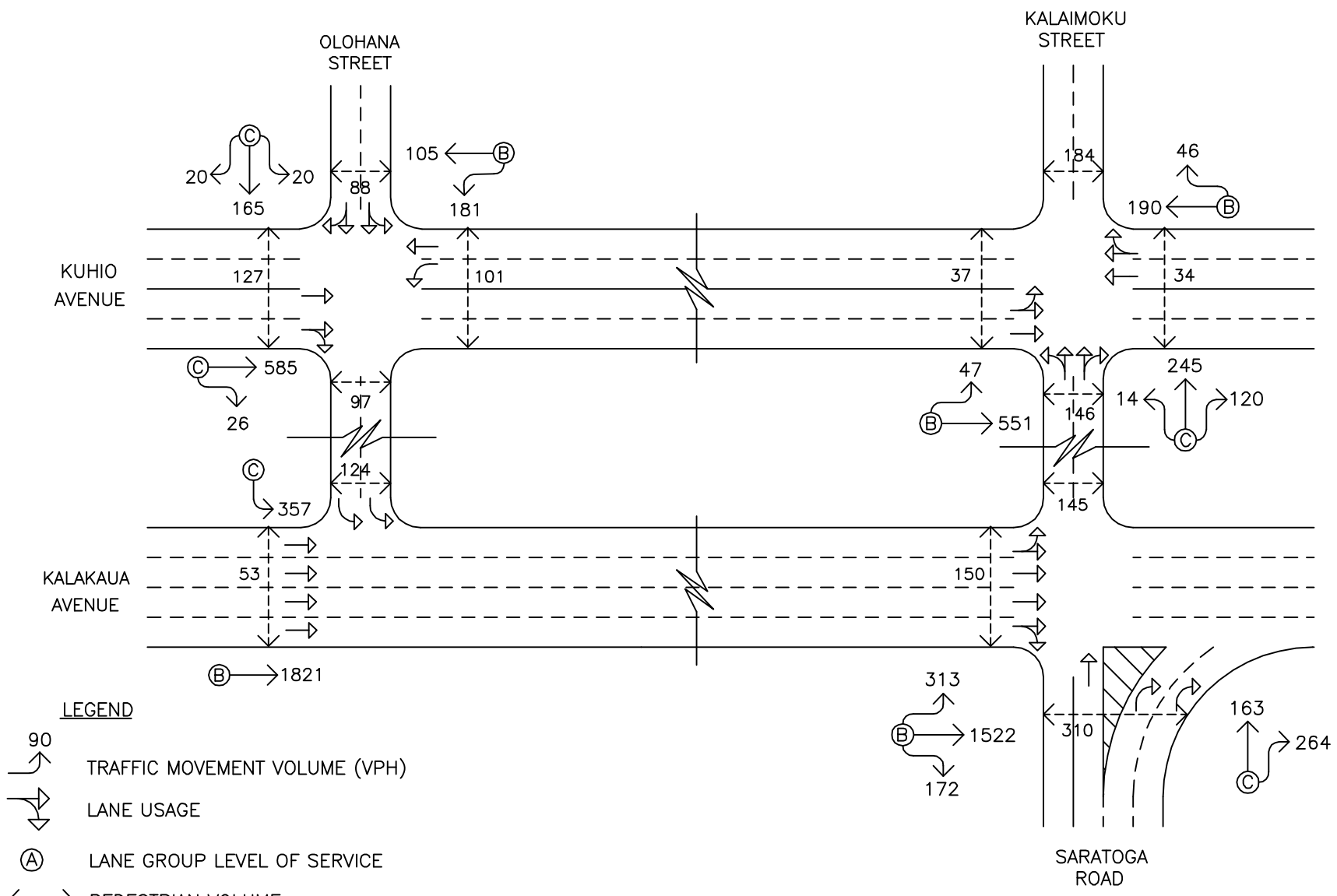
The Luxury Row Tower development will be located adjacent to Kalaimoku Street between Kalakaua Avenue and Kuhio Avenue. As detailed in the "Traffic Impact Report for the K3 Waikiki Development" and the "Traffic Impact Report for the Luxury Row Tower Phase 2," Phases 1 and 2 of the project are expected to include a total of 727 condo-hotel units and ~11,503 square feet of restaurant space. Both phases of the development are expected to be completed by the Year 2018 and, as such, are incorporated into Year 2018 without project conditions.

D. Total Traffic Volumes Without Project

The projected Year 2018 AM and PM peak period traffic volumes and operating conditions without the development of the proposed Park Kalia - Waikiki are shown in Figures 7 and 8, and summarized in Table 2. The baseline levels of service are provided for comparison purposes. LOS calculations are included in Appendix D.

Table 2: Baseline and Projected Year 2018 (Without Project) LOS Traffic Operating Conditions

Intersection	Approach	AM		PM	
		Base-line	Year 2018 w/out Proj	Base-line	Year 2018 w/out Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B
	Southbound	B	C	B	C
Kalakaua Avenue/ Saratoga Road/ Kalaimoku Street	Eastbound	A	B	A	B
	Northbound	C	C	C	C
Kuhio Avenue/ Kalaimoku Street	Eastbound	B	B	C	C
	Westbound	B	B	A	A
	Northbound	C	C	C	C
Kuhio Avenue/ Olohana Street	Eastbound	B	C	B	B
	Westbound	B	B	A	B
	Southbound	C	C	C	C



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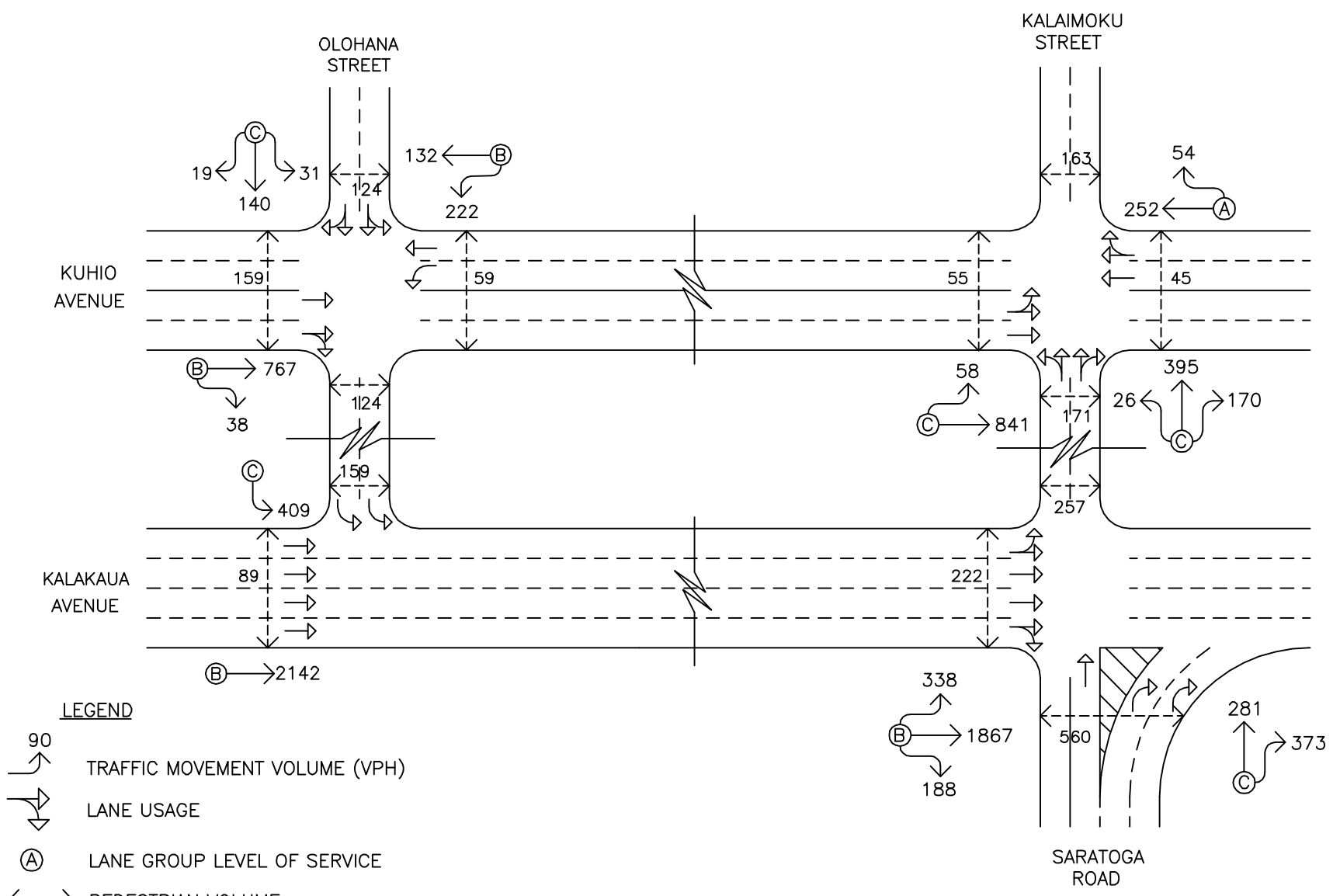
PARK KALIA - WAIKIKI

YEAR 2018 AM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 7



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PARK KALIA - WAIKIKI

YEAR 2018 PM PEAK HOUR OF TRAFFIC WITHOUT PROJECT

FIGURE 8

Under Year 2018 without project conditions, traffic operations are expected to deteriorate slightly from baseline conditions due to ambient growth in traffic and the development of other projects in the vicinity. Along Kalakaua Avenue, the southbound approach of the intersection with Olohana Street is expected to operate at LOS "C" during both peak periods while the eastbound approach of the intersection with Saratoga Road and Kalaimoku Street is expected to operate at LOS "B" during both peak periods. Along Kuhio Avenue, the eastbound approach of the intersection with Olohana Street is expected to operate at LOS "C" during the AM peak period while the westbound approach of that intersection is expected to operate at LOS "B" during the PM peak period. The remaining approaches of the study intersections are expected to continue operating at levels of service similar to baseline conditions during both peak periods.

E. Total Traffic Volumes With Project

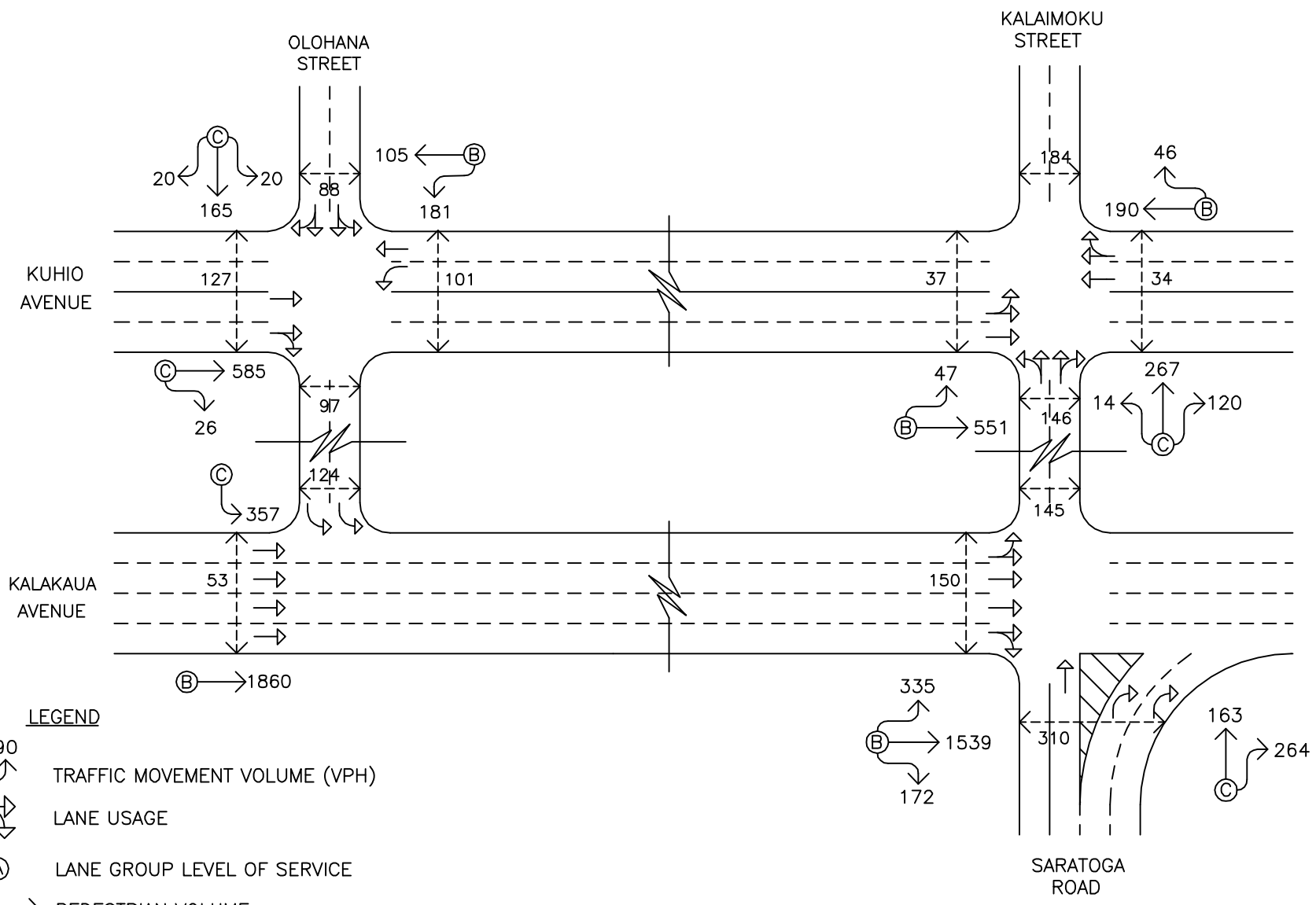
Figures 9 and 10 show the Year 2018 cumulative AM and PM peak hour traffic conditions resulting from the projected external traffic and the proposed development of Park Kalia - Waikiki. The cumulative volumes consist of site-generated traffic superimposed over Year 2018 projected traffic demands. The traffic impacts resulting from the proposed project are addressed in the following section.

V. TRAFFIC IMPACT ANALYSIS

The Year 2018 cumulative AM and PM peak hour traffic conditions with the development of the proposed Park Kalia - Waikiki are summarized in Table 3. The baseline and projected Year 2018 (Without Project) operating conditions are provided for comparison purposes. LOS calculations are included in Appendix E.

Table 3: Baseline and Projected Year 2018 (Without and With Project) LOS Traffic Operating Conditions

Intersection	Approach	AM			PM		
		Base-line	Year 2018		Base-line	Year 2018	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B	B	B
	Southbound	B	C	C	B	C	C



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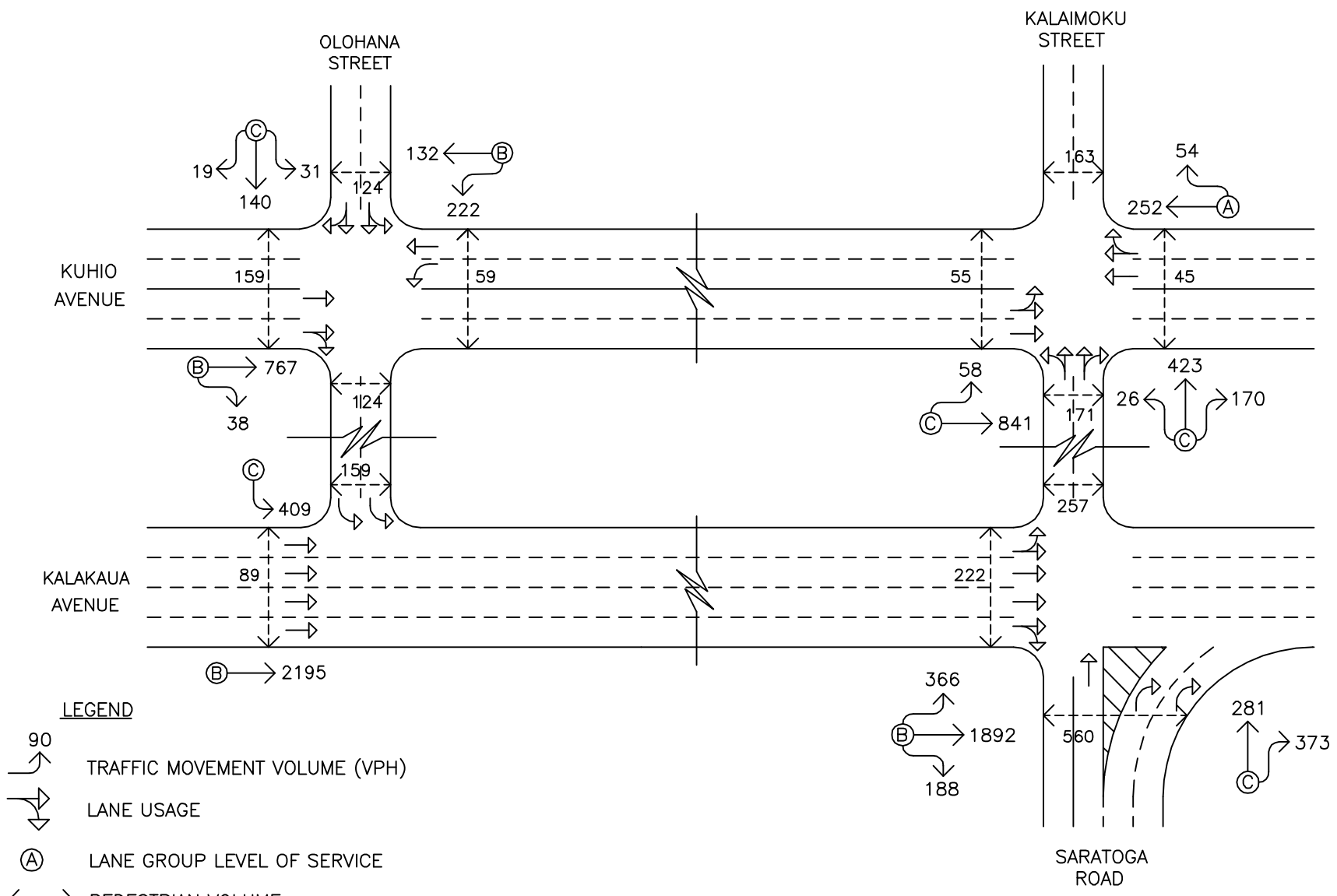
PARK KALIA - WAIKIKI

YEAR 2018 AM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 9



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PARK KALIA - WAIKIKI

YEAR 2018 PM PEAK HOUR OF TRAFFIC WITH PROJECT

FIGURE 10

Table 3: Baseline and Projected Year 2018 (Without and With Project) LOS Traffic Operating Conditions (Cont'd)

Intersection	Approach	AM			PM		
		Base-line	Year 2018		Base-line	Year 2018	
			w/out Proj	w/ Proj		w/out Proj	w/ Proj
Kalakaua Avenue/ Olohana Street	Eastbound	B	B	B	B	B	B
	Southbound	B	C	C	B	C	C
Kalakaua Avenue/ Saratoga Road/ Kalaimoku Street	Eastbound	A	B	B	A	B	B
	Northbound	C	C	C	C	C	C
Kuhio Avenue/ Kalaimoku Street	Eastbound	B	B	B	C	C	C
	Westbound	B	B	B	A	A	A
	Northbound	C	C	C	C	C	C
Kuhio Avenue/ Olohana Street	Eastbound	B	C	C	B	B	B
	Westbound	B	B	B	A	B	B
	Southbound	C	C	C	C	C	C

Under Year 2018 with project conditions, traffic operations are expected to remain similar to without project conditions despite the addition of site-generated vehicles to the surrounding roadways. Along Kalakaua Avenue, the eastbound approaches of the intersection with Olohana Street and Saratoga Road/Kalaimoku Street are expected to continue operating at LOS "B" during both peak periods while the Olohana Street and Saratoga Road approaches of those intersections are expected to continue operating at LOS "B" during both peak periods. Along Kuhio Avenue, the eastbound approaches of the intersections with Kalaimoku Street and Olohana Street are expected to continue operating at LOS "C" or better during both peak periods while the westbound approaches are expected to continue operating at LOS "B' or better during both peak periods. The Kalaimoku Street and Olohana Street approaches of those intersections are expected to continue operating at LOS "C" during both peak periods.

VI. RECOMMENDATIONS

Based on the analysis of the traffic data, the following are the recommendations of this study to be incorporated in the project design.

1. Maintain sufficient sight distance for motorists to safely enter and exit the project driveway.

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

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

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

VII. CONCLUSION

The proposed Park Kalia - Waikiki development entails the replacement of the former Kyo-Ya Restaurant site with a new condo-hotel. With the development of the proposed project, traffic operations in the vicinity are expected to remain similar to without project conditions despite the anticipated increases in traffic along the surrounding roadways. As such, with the implementation of the aforementioned recommendations, the proposed Park Kalia - Waikiki development is not expected to have a significant impact on traffic operations in the vicinity.

APPENDIX A

BASELINE TRAFFIC COUNT DATA

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:D4-3890, TU-0649
Counted By:GC, RJ
Weather:Clear

File Name : KalKalSar AM
Site Code : 00000001
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Westboun d	Saratoga Road Northbound					Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	0	0	0	9	9	0	0	29	30	23	82	7	188	29	6	230	321
06:15 AM	0	0	0	8	8	0	0	24	31	26	81	11	218	38	9	276	365
06:30 AM	0	0	0	10	10	0	0	29	39	17	85	8	237	43	9	297	392
06:45 AM	0	0	0	15	15	0	0	25	49	36	110	10	264	51	21	346	471
Total	0	0	0	42	42	0	0	107	149	102	358	36	907	161	45	1149	1549
07:00 AM	0	0	0	13	13	0	0	25	49	36	110	11	223	39	13	286	409
07:15 AM	0	0	0	17	17	0	0	34	47	40	121	9	285	42	21	357	495
07:30 AM	0	0	0	19	19	0	0	24	43	73	140	16	309	51	17	393	552
07:45 AM	0	0	0	26	26	0	0	27	63	74	164	12	310	52	12	386	576
Total	0	0	0	75	75	0	0	110	202	223	535	48	1127	184	63	1422	2032
08:00 AM	0	0	0	23	23	0	0	31	69	68	168	13	279	44	24	360	551
08:15 AM	0	0	0	39	39	0	0	40	54	80	174	15	358	37	27	437	650
08:30 AM	0	0	0	32	32	0	0	45	72	83	200	14	342	43	51	450	682
08:45 AM	0	0	0	51	51	0	0	47	69	79	195	19	358	48	48	473	719
Total	0	0	0	145	145	0	0	163	264	310	737	61	1337	172	150	1720	2602
Grand Total	0	0	0	262	262	0	0	380	615	635	1630	145	3371	517	258	4291	6183
Apprch %	0	0	0	100			0	23.3	37.7	39		3.4	78.6	12	6		
Total %	0	0	0	4.2	4.2	0	0	6.1	9.9	10.3	26.4	2.3	54.5	8.4	4.2	69.4	

	Kalaimoku Street Southbound				Westbound	Saratoga Road Northbound				Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 08:00 AM														
08:00 AM	0	0	0	0	0	0	31	69	100	13	279	44	336	436
08:15 AM	0	0	0	0	0	0	40	54	94	15	**358**	37	410	504
08:30 AM	0	0	0	0	0	0	45	**72**	**117**	14	342	43	399	516
08:45 AM	0	0	0	0	0	0	**47**	69	116	**19**	358	**48**	**425**	**541**
Total Volume	0	0	0	0	0	0	163	264	427	61	1337	172	1570	1997
% App. Total	0	0	0			0	38.2	61.8		3.9	85.2	11		
PHF	.000	.000	.000	.000	.000	.000	.867	.917	.912	.803	.934	.896	.924	.923

Wilson Okamoto Corporation
1907 S. Beretania Street, Suite 400
Honolulu, HI 96826

Counter:D4-3890, TU-0649
Counted By:GC, RJ
Weather:Clear

File Name : KalKalSar PM
Site Code : 00000001
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Westbound	Saratoga Road Northbound					Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	79	79	0	0	59	63	110	232	13	370	46	49	478	789
03:15 PM	0	0	0	72	72	0	0	65	84	123	272	9	401	53	50	513	857
03:30 PM	0	0	0	71	71	0	0	65	75	129	269	14	404	50	49	517	857
03:45 PM	0	0	0	81	81	0	0	64	87	162	313	15	431	48	54	548	942
Total	0	0	0	303	303	0	0	253	309	524	1086	51	1606	197	202	2056	3445
04:00 PM	0	0	0	67	67	0	0	85	97	127	309	11	410	44	58	523	899
04:15 PM	0	0	0	61	61	0	0	78	95	137	310	19	398	52	48	517	888
04:30 PM	0	0	0	48	48	0	0	54	94	134	282	21	411	44	62	538	868
04:45 PM	0	0	0	93	93	0	0	52	71	108	231	17	426	44	49	536	860
Total	0	0	0	269	269	0	0	269	357	506	1132	68	1645	184	217	2114	3515
05:00 PM	0	0	0	86	86	0	0	61	99	115	275	16	455	35	51	557	918
05:15 PM	0	0	0	69	69	0	0	56	90	154	300	14	446	40	52	552	921
05:30 PM	0	0	0	74	74	0	0	56	94	144	294	14	413	49	60	536	904
05:45 PM	0	0	0	71	71	0	0	49	84	156	289	10	394	36	64	504	864
Total	0	0	0	300	300	0	0	222	367	569	1158	54	1708	160	227	2149	3607
Grand Total	0	0	0	872	872	0	0	744	1033	1599	3376	173	4959	541	646	6319	10567
Apprch %	0	0	0	100			0	22	30.6	47.4		2.7	78.5	8.6	10.2		
Total %	0	0	0	8.3	8.3	0	0	7	9.8	15.1	31.9	1.6	46.9	5.1	6.1	59.8	

	Kalaimoku Street Southbound				Westbound	Saratoga Road Northbound				Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1														
Peak Hour for Entire Intersection Begins at 03:45 PM														
03:45 PM	0	0	0	0	0	0	64	87	151	15	**431**	48	**494**	645
04:00 PM	0	0	0	0	0	0	**85**	**97**	**182**	11	410	44	465	**647**
04:15 PM	0	0	0	0	0	0	78	95	173	19	398	**52**	469	642
04:30 PM	0	0	0	0	0	0	54	94	148	**21**	411	44	476	624
Total Volume	0	0	0	0	0	0	281	373	654	66	1650	188	1904	2558
% App. Total	0	0	0			0	43	57		3.5	86.7	9.9		
PHF	.000	.000	.000	.000	.000	.000	.826	.961	.898	.786	.957	.904	.964	.988

Wilson Okamoto Corporation

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

Counter:TU-0651, TU-0652
Counted By:DY, CY
Weather:Clear

File Name : KuhKal AM
Site Code : 00000003
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Kalaimoku Street Southbound					Kuhio Avenue Westbound					Kalaimoku Street Northbound					Kuhio Avenue Eastbound					
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06:00 AM	0	0	0	4	4	0	21	8	0	29	1	22	10	2	35	2	55	0	0	57	125
06:15 AM	0	0	0	13	13	0	26	6	4	36	1	25	9	13	48	3	52	0	7	62	159
06:30 AM	0	0	0	11	11	0	30	5	3	38	2	29	7	9	47	11	74	0	2	87	183
06:45 AM	0	0	0	15	15	0	27	9	1	37	3	19	7	11	40	5	68	0	3	76	168
Total	0	0	0	43	43	0	104	28	8	140	7	95	33	35	170	21	249	0	12	282	635
07:00 AM	0	0	0	20	20	0	37	17	4	58	4	30	4	14	52	7	67	0	3	77	207
07:15 AM	0	0	0	14	14	0	32	8	3	43	5	30	8	10	53	18	88	0	11	117	227
07:30 AM	0	0	0	41	41	0	39	7	10	56	5	20	12	17	54	16	109	0	12	137	288
07:45 AM	0	0	0	120	120	0	45	16	3	64	3	20	11	22	56	6	142	0	4	152	392
Total	0	0	0	195	195	0	153	48	20	221	17	100	35	63	215	47	406	0	30	483	1114
08:00 AM	0	0	0	29	29	0	25	11	7	43	4	29	14	28	75	15	105	0	11	131	278
08:15 AM	0	0	0	38	38	0	36	11	11	58	4	34	11	28	77	12	112	0	11	135	308
08:30 AM	0	0	0	89	89	0	45	12	7	64	4	39	17	49	109	13	121	0	9	143	405
08:45 AM	0	0	0	28	28	0	52	12	9	73	2	38	17	41	98	7	150	0	6	163	362
Total	0	0	0	184	184	0	158	46	34	238	14	140	59	146	359	47	488	0	37	572	1353
Grand Total	0	0	0	422	422	0	415	122	62	599	38	335	127	244	744	115	1143	0	79	1337	3102
Apprch %	0	0	0	100		0	69.3	20.4	10.4		5.1	45	17.1	32.8		8.6	85.5	0	5.9		
Total %	0	0	0	13.6	13.6	0	13.4	3.9	2	19.3	1.2	10.8	4.1	7.9	24	3.7	36.8	0	2.5	43.1	

	Kalaimoku Street Southbound				Kuhio Avenue Westbound				Kalaimoku Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	0	0	0	25	11	36	4	29	14	47	**15**	105	0	120	203
08:15 AM	0	0	0	0	0	36	11	47	4	34	11	49	12	112	0	124	220
08:30 AM	0	0	0	0	0	45	**12**	57	4	**39**	**17**	**60**	13	121	0	134	251
08:45 AM	0	0	0	0	0	**52**	12	**64**	2	38	17	57	7	**150**	0	**157**	**278**
Total Volume	0	0	0	0	0	158	46	204	14	140	59	213	47	488	0	535	952
% App. Total	0	0	0		0	77.5	22.5		6.6	65.7	27.7		8.8	91.2	0		
PHF	.000	.000	.000	.000	.000	.760	.958	.797	.875	.897	.868	.888	.783	.813	.000	.852	.856

Wilson Okamoto Corporation

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

Counter:
Counted By:
Weather:

File Name : KuhKal PM
Site Code : 00000003
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound					Westbound					Northbound					Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	0	0	0	54	54	0	60	9	9	78	9	43	16	42	110	14	167	0	8	189	431
03:15 PM	0	0	0	36	36	0	49	14	6	69	2	58	18	37	115	21	177	0	17	215	435
03:30 PM	0	0	0	38	38	0	46	12	15	73	5	57	10	31	103	7	188	0	8	203	417
03:45 PM	0	0	0	52	52	0	54	12	19	85	6	68	15	48	137	11	173	0	16	200	474
Total	0	0	0	180	180	0	209	47	49	305	22	226	59	158	465	53	705	0	49	807	1757
04:00 PM	0	0	0	28	28	0	60	14	4	78	9	68	17	36	130	16	200	0	18	234	470
04:15 PM	0	0	0	43	43	0	44	17	10	71	4	73	21	43	141	19	186	0	7	212	467
04:30 PM	0	0	0	40	40	0	47	11	12	70	7	54	20	44	125	12	200	0	14	226	461
04:45 PM	0	0	0	69	69	0	55	13	4	72	3	46	18	49	116	21	184	0	10	215	472
Total	0	0	0	180	180	0	206	55	30	291	23	241	76	172	512	68	770	0	49	887	1870
05:00 PM	0	0	0	50	50	0	46	12	16	74	4	70	12	43	129	19	234	0	17	270	523
05:15 PM	0	0	0	67	67	0	59	14	22	95	4	51	12	126	193	21	185	0	11	217	572
05:30 PM	0	0	0	92	92	0	44	13	10	67	8	39	15	53	115	14	205	0	11	230	504
05:45 PM	0	0	0	60	60	0	45	14	14	73	1	47	16	47	111	24	200	0	20	244	488
Total	0	0	0	269	269	0	194	53	62	309	17	207	55	269	548	78	824	0	59	961	2087
Grand Total	0	0	0	629	629	0	609	155	141	905	62	674	190	599	1525	199	2299	0	157	2655	5714
Apprch %	0	0	0	100		0	67.3	17.1	15.6		4.1	44.2	12.5	39.3		7.5	86.6	0	5.9		
Total %	0	0	0	11	11	0	10.7	2.7	2.5	15.8	1.1	11.8	3.3	10.5	26.7	3.5	40.2	0	2.7	46.5	

	Southbound				Westbound				Northbound				Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	0	0	0	0	0	44	**17**	61	4	**73**	**21**	**98**	19	186	0	205	364
04:30 PM	0	0	0	0	0	47	11	58	**7**	54	20	81	12	200	0	212	351
04:45 PM	0	0	0	0	0	**55**	13	**68**	3	46	18	67	**21**	184	0	205	340
05:00 PM	0	0	0	0	0	46	12	58	4	70	12	86	19	**234**	0	**253**	**397**
Total Volume	0	0	0	0	0	192	53	245	18	243	71	332	71	804	0	875	1452
% App. Total	0	0	0		0	78.4	21.6		5.4	73.2	21.4		8.1	91.9	0		
PHF	.000	.000	.000	.000	.000	.873	.779	.901	.643	.832	.845	.847	.845	.859	.000	.865	.914

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:D4-5671, D4-5672
Counter:TC, EV
Weather:Clear

File Name : KalOlo AM
Site Code : 00000003
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	18	0	0	10	28	0	0	0	189	0	8	197	225
06:15 AM	26	0	0	10	36	0	0	0	241	0	9	250	286
06:30 AM	27	0	0	9	36	0	0	0	279	0	5	284	320
06:45 AM	40	0	0	22	62	0	0	0	251	0	5	256	318
Total	111	0	0	51	162	0	0	0	960	0	27	987	1149
07:00 AM	33	0	0	24	57	0	0	0	268	0	17	285	342
07:15 AM	50	0	0	25	75	0	0	0	336	0	21	357	432
07:30 AM	62	0	0	32	94	0	0	0	388	0	29	417	511
07:45 AM	61	0	0	24	85	0	0	0	448	0	14	462	547
Total	206	0	0	105	311	0	0	0	1440	0	81	1521	1832
08:00 AM	58	0	0	22	80	0	0	0	337	0	19	356	436
08:15 AM	40	0	0	45	85	0	0	0	397	0	12	409	494
08:30 AM	43	0	0	26	69	0	0	0	400	0	4	404	473
08:45 AM	57	0	0	31	88	0	0	0	409	0	18	427	515
Total	198	0	0	124	322	0	0	0	1543	0	53	1596	1918
Grand Total	515	0	0	280	795	0	0	0	3943	0	161	4104	4899
Apprch %	64.8	0	0	35.2				0	96.1	0	3.9		
Total %	10.5	0	0	5.7	16.2	0	0	0	80.5	0	3.3	83.8	

	Olohana Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	**62**	0	0	**62**	0	0	0	388	0	388	450
07:45 AM	61	0	0	61	0	0	0	**448**	0	**448**	**509**
08:00 AM	58	0	0	58	0	0	0	337	0	337	395
08:15 AM	40	0	0	40	0	0	0	397	0	397	437
Total Volume	221	0	0	221	0	0	0	1570	0	1570	1791
% App. Total	100	0	0				0	100	0		
PHF	.891	.000	.000	.891	.000	.000	.000	.876	.000	.876	.880

Wilson Okamoto Corporation

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

Counted By:GC, RJ
Counter:D4-5671, D4-5672
Weather:Clear

File Name : KalOlo PM
Site Code : 00000003
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Westbound	Northbound	Kalakaua Avenue Eastbound							
Start Time	Left	Thru	Right	Peds	App. Total	App. Total	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	66	0	0	43	66	0	0	0	390	0	23	390	66	456	522
03:15 PM	60	0	0	38	60	0	0	0	443	0	21	443	59	503	562
03:30 PM	59	0	0	41	59	0	0	0	475	0	31	475	72	534	606
03:45 PM	61	0	0	42	61	0	0	0	486	0	25	486	67	547	614
Total	246	0	0	164	246	0	0	0	1794	0	100	1794	264	2040	2304
04:00 PM	52	0	0	36	52	0	0	0	458	0	25	458	61	510	571
04:15 PM	72	0	0	54	72	0	0	0	439	0	28	439	82	511	593
04:30 PM	66	0	0	27	66	0	0	0	428	0	11	428	38	494	532
04:45 PM	62	0	0	37	62	0	0	0	422	0	34	422	71	484	555
Total	252	0	0	154	252	0	0	0	1747	0	98	1747	252	1999	2251
05:00 PM	52	0	0	33	52	0	0	0	448	0	35	448	68	500	568
05:15 PM	61	0	0	50	61	0	0	0	458	0	21	458	71	519	590
05:30 PM	43	0	0	59	43	0	0	0	405	0	21	405	80	448	528
05:45 PM	44	0	0	38	44	0	0	0	429	0	27	429	65	473	538
Total	200	0	0	180	200	0	0	0	1740	0	104	1740	284	1940	2224
Grand Total	698	0	0	498	698	0	0	0	5281	0	302	5281	800	5979	6779
Apprch %	100	0	0					0	100	0					
Total %	11.7	0	0		11.7	0	0	0	88.3	0		88.3	11.8	88.2	

	Olohana Street Southbound				Westbound	Northbound	Kalakaua Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	App. Total	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:30 PM											
03:30 PM	59	0	0	59	0	0	0	475	0	475	534
03:45 PM	61	0	0	61	0	0	0	486	0	486	547
04:00 PM	52	0	0	52	0	0	0	458	0	458	510
04:15 PM	72	0	0	72	0	0	0	439	0	439	511
Total Volume	244	0	0	244	0	0	0	1858	0	1858	2102
% App. Total	100	0	0				0	100	0		
PHF	.847	.000	.000	.847	.000	.000	.000	.956	.000	.956	.961

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:GH
Counter:D4-3889
Weather:

File Name : KuhOlo AM
Site Code : 00000002
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
06:00 AM	5	8	5	17	35	6	12	0	13	31	0	0	0	6	6	0	50	7	11	68	140
06:15 AM	2	7	4	11	24	15	16	0	8	39	0	0	0	5	5	0	70	5	6	81	149
06:30 AM	2	14	3	7	26	8	15	0	6	29	0	0	0	12	12	0	90	3	8	101	168
06:45 AM	6	17	2	4	29	11	15	0	7	33	0	0	0	5	5	0	65	3	3	71	138
Total	15	46	14	39	114	40	58	0	34	132	0	0	0	28	28	0	275	18	28	321	595
07:00 AM	13	23	6	17	59	11	13	0	17	41	0	0	0	21	21	0	97	3	23	123	244
07:15 AM	6	25	4	11	46	24	16	0	21	61	0	0	0	16	16	0	106	6	15	127	250
07:30 AM	9	34	6	22	71	15	17	0	29	61	0	0	0	25	25	0	135	5	32	172	329
07:45 AM	5	31	3	18	57	28	19	0	16	63	0	0	0	18	18	0	133	4	10	147	285
Total	33	113	19	68	233	78	65	0	83	226	0	0	0	80	80	0	471	18	80	569	1108
08:00 AM	5	28	6	26	65	22	21	0	33	76	0	0	0	33	33	0	112	8	40	160	334
08:15 AM	1	23	5	9	38	9	18	0	25	52	0	0	0	14	14	0	163	5	28	196	300
08:30 AM	4	18	3	38	63	15	21	0	17	53	0	0	0	22	22	0	120	5	23	148	286
08:45 AM	3	24	2	15	44	25	26	0	26	77	0	0	0	28	28	0	127	8	36	171	320
Total	13	93	16	88	210	71	86	0	101	258	0	0	0	97	97	0	522	26	127	675	1240
Grand Total	61	252	49	195	557	189	209	0	218	616	0	0	0	205	205	0	1268	62	235	1565	2943
Apprch %	11	45.2	8.8	35		30.7	33.9	0	35.4		0	0	0	100		0	81	4	15		
Total %	2.1	8.6	1.7	6.6	18.9	6.4	7.1	0	7.4	20.9	0	0	0	7	7	0	43.1	2.1	8	53.2	

	Olohana Street Southbound				Kuhio Avenue Westbound				Olohana Street Northbound				Kuhio Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	**9**	**34**	**6**	**49**	15	17	0	32	0	0	0	0	0	135	5	140	221
07:45 AM	5	31	3	39	**28**	19	0	**47**	0	0	0	0	0	133	4	137	223
08:00 AM	5	28	6	39	22	**21**	0	43	0	0	0	0	0	112	**8**	120	202
08:15 AM	1	23	5	29	9	18	0	27	0	0	0	0	0	**163**	5	**168**	**224**
Total Volume	20	116	20	156	74	75	0	149	0	0	0	0	0	543	22	565	870
% App. Total	12.8	74.4	12.8		49.7	50.3	0		0	0	0		0	96.1	3.9		
PHF	.556	.853	.833	.796	.661	.893	.000	.793	.000	.000	.000	.000	.000	.833	.688	.841	.971

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counted By:RD, GH
Counter:D4-3889, D4-3888
Weather:Clear

File Name : KuhOlo PM
Site Code : 00000002
Start Date : 8/27/2012
Page No : 1

Groups Printed- Unshifted

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
03:00 PM	4	28	3	36	71	26	28	0	9	63	0	0	0	10	10	0	148	9	46	203	347
03:15 PM	5	25	6	28	64	34	36	0	8	78	0	0	0	19	19	0	166	1	29	196	357
03:30 PM	5	31	7	28	71	25	35	0	17	77	0	0	0	6	6	0	169	4	30	203	357
03:45 PM	12	27	4	37	80	16	24	0	20	60	0	0	0	14	14	0	164	8	41	213	367
Total	26	111	20	129	286	101	123	0	54	278	0	0	0	49	49	0	647	22	146	815	1428
04:00 PM	9	23	11	37	80	24	27	0	18	69	0	0	0	38	38	0	168	7	35	210	397
04:15 PM	8	24	2	20	54	39	26	0	10	75	0	0	0	37	37	0	173	11	44	228	394
04:30 PM	2	17	2	30	51	34	30	0	11	75	0	0	0	35	35	0	180	12	39	231	392
04:45 PM	17	30	7	35	89	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
Total	36	94	22	122	274	126	104	0	42	272	0	0	0	138	138	0	710	38	143	891	1575
05:00 PM	6	18	3	38	65	34	28	0	15	77	0	0	0	23	23	0	169	5	51	225	390
05:15 PM	9	17	5	35	66	38	28	0	19	85	0	0	0	38	38	0	212	8	36	256	445
05:30 PM	12	15	6	24	57	23	25	0	14	62	0	0	0	20	20	0	181	3	31	215	354
05:45 PM	8	16	2	26	52	25	35	0	8	68	0	0	0	30	30	0	173	8	6	187	337
Total	35	66	16	123	240	120	116	0	56	292	0	0	0	111	111	0	735	24	124	883	1526
Grand Total	97	271	58	374	800	347	343	0	152	842	0	0	0	298	298	0	2092	84	413	2589	4529
Apprch %	12.1	33.9	7.2	46.8		41.2	40.7	0	18.1		0	0	0	100		0	80.8	3.2	16		
Total %	2.1	6	1.3	8.3	17.7	7.7	7.6	0	3.4	18.6	0	0	0	6.6	6.6	0	46.2	1.9	9.1	57.2	

	Olohana Street Southbound					Kuhio Avenue Westbound					Olohana Street Northbound					Kuhio Avenue Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	2	17	2	30	51	34	**30**	0	11	75	0	0	0	35	35	0	180	**12**	39	231	392
04:45 PM	**17**	**30**	**7**	35	**89**	29	21	0	3	53	0	0	0	28	28	0	189	8	25	222	392
05:00 PM	6	18	3	**38**	65	34	28	0	15	77	0	0	0	23	23	0	169	5	**51**	225	390
05:15 PM	9	17	5	35	66	**38**	28	0	**19**	**85**	0	0	0	**38**	**38**	0	**212**	8	36	**256**	**445**
Total Volume	34	82	17	138	271	135	107	0	48	290	0	0	0	124	124	0	750	33	151	934	1619
% App. Total	12.5	30.3	6.3	50.9		46.6	36.9	0	16.6		0	0	0	100		0	80.3	3.5	16.2		
PHF	.500	.683	.607	.908	.761	.888	.892	.000	.632	.853	.000	.000	.000	.816	.816	.000	.884	.688	.740	.912	.910

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:TU-0650
Counted By:MM
Weather:Clear

File Name : AlaKal AM
Site Code : 00000002
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Boulevard Westbound					Kalaimoku Street Northbound					Eastbound	
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
06:00 AM	0	0	233	0	0	233	38	0	0	5	43	0	276
06:15 AM	0	0	275	0	3	278	40	0	0	3	43	0	321
06:30 AM	0	0	352	0	3	355	40	0	0	2	42	0	397
06:45 AM	0	0	403	0	2	405	35	0	0	2	37	0	442
Total	0	0	1263	0	8	1271	153	0	0	12	165	0	1436
07:00 AM	0	0	462	0	2	464	59	0	0	1	60	0	524
07:15 AM	0	0	619	0	4	623	49	0	0	3	52	0	675
07:30 AM	0	0	591	0	2	593	52	0	0	10	62	0	655
07:45 AM	0	0	554	0	2	556	49	0	0	13	62	0	618
Total	0	0	2226	0	10	2236	209	0	0	27	236	0	2472
08:00 AM	0	0	488	0	4	492	58	0	0	6	64	0	556
08:15 AM	0	2	506	0	2	510	50	0	0	9	59	0	569
08:30 AM	0	0	475	0	6	481	62	0	0	8	70	0	551
08:45 AM	0	0	444	0	2	446	66	0	0	6	72	0	518
Total	0	2	1913	0	14	1929	236	0	0	29	265	0	2194
Grand Total	0	2	5402	0	32	5436	598	0	0	68	666	0	6102
Apprch %		0	99.4	0	0.6		89.8	0	0	10.2			
Total %	0	0	88.5	0	0.5	89.1	9.8	0	0	1.1	10.9	0	

	Southbound	Ala Wai Boulevard Westbound				Kalaimoku Street Northbound				Eastbound	
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 08:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:15 AM											
07:15 AM	0	0	**619**	0	**619**	49	0	0	49	0	**668**
07:30 AM	0	0	591	0	591	52	0	0	52	0	643
07:45 AM	0	0	554	0	554	49	0	0	49	0	603
08:00 AM	0	0	488	0	488	**58**	0	0	**58**	0	546
Total Volume	0	0	2252	0	2252	208	0	0	208	0	2460
% App. Total		0	100	0		100	0	0			
PHF	.000	.000	.910	.000	.910	.897	.000	.000	.897	.000	.921

Wilson Okamoto Corporation

1907 S. Beretania Street, Suite 400
Honolulu, Hawaii

Counter:TU-0650
Counted By:MM
Weather:Clear

File Name : AlaKal PM
Site Code : 00000002
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

	Southbound	Ala Wai Boulevard Westbound					Kalaimoku Street Northbound					Eastbound	
Start Time	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	App. Total	Int. Total
03:00 PM	0	0	481	0	4	485	62	0	0	11	73	0	558
03:15 PM	0	0	526	0	3	529	87	0	0	2	89	0	618
03:30 PM	0	0	513	0	6	519	76	0	0	7	83	0	602
03:45 PM	0	0	461	0	3	464	92	0	0	10	102	0	566
Total	0	0	1981	0	16	1997	317	0	0	30	347	0	2344
04:00 PM	0	0	577	0	4	581	75	0	0	4	79	0	660
04:15 PM	0	0	582	0	0	582	114	0	0	5	119	0	701
04:30 PM	0	0	525	0	5	530	71	0	0	9	80	0	610
04:45 PM	0	0	465	0	2	467	79	0	0	3	82	0	549
Total	0	0	2149	0	11	2160	339	0	0	21	360	0	2520
05:00 PM	0	0	501	0	4	505	86	0	0	10	96	0	601
05:15 PM	0	0	530	0	7	537	80	0	0	13	93	0	630
05:30 PM	0	0	466	0	2	468	69	0	0	9	78	0	546
05:45 PM	0	0	462	0	3	465	80	0	0	3	83	0	548
Total	0	0	1959	0	16	1975	315	0	0	35	350	0	2325
Grand Total	0	0	6089	0	43	6132	971	0	0	86	1057	0	7189
Apprch %		0	99.3	0	0.7		91.9	0	0	8.1			
Total %	0	0	84.7	0	0.6	85.3	13.5	0	0	1.2	14.7	0	

	Southbound	Ala Wai Boulevard Westbound				Kalaimoku Street Northbound				Eastbound	
Start Time	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 03:45 PM											
03:45 PM	0	0	461	0	461	92	0	0	92	0	553
04:00 PM	0	0	577	0	577	75	0	0	75	0	652
04:15 PM	0	0	**582**	0	**582**	**114**	0	0	**114**	0	**696**
04:30 PM	0	0	525	0	525	71	0	0	71	0	596
Total Volume	0	0	2145	0	2145	352	0	0	352	0	2497
% App. Total		0	100	0		100	0	0			
PHF	.000	.000	.921	.000	.921	.772	.000	.000	.772	.000	.897

APPENDIX B

LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE DEFINITIONS

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level of Service (LOS) for signalized intersections is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. Specifically, level-of-service (LOS) criteria are stated in terms of the average control delay per vehicle, typically a 15-min analysis period. The criteria are given in the following table.

Table 1: Level-of-Service Criteria for Signalized Intersections

Level of Service	Control Delay per Vehicle (sec/veh)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group.

Level of Service A describes operations with low control delay, up to 10 sec per vehicle. This level of service occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.

Level of Service B describes operations with control delay greater than 10 and up to 20 sec per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.

Level of Service C describes operations with control delay greater than 20 and up to 35 sec per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.

Level of Service D describes operations with control delay greater than 35 and up to 55 sec per vehicle. At level of service D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.

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

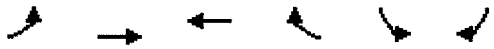
Level of Service E describes operation with control delay greater than 55 and up to 80 sec per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent.

Level of Service F describes operations with control delay in excess of 80 sec per vehicle. This level, considered to be unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity lane groups. It may also occur at high v/c ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.

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

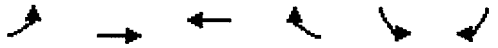
APPENDIX C

CAPACITY ANALYSIS CALCULATIONS
BASELINE PEAK PERIOD TRAFFIC ANALYSIS



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1543	0	0	198	0
Future Volume (vph)	0	1543	0	0	198	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	1794	0	0	230	0
RTOR Reduction (vph)	0	0	0	0	19	0
Lane Group Flow (vph)	0	1794	0	0	211	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.28			c0.06	
v/s Ratio Perm						
v/c Ratio		0.50			0.20	
Uniform Delay, d1		10.6			20.1	
Progression Factor		1.00			0.90	
Incremental Delay, d2		0.5			0.4	
Delay (s)		11.1			18.4	
Level of Service		B			B	
Approach Delay (s)		11.1	0.0		18.4	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	36.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1811	0	0	251	0
Future Volume (vph)	0	1811	0	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	1927	0	0	267	0
RTOR Reduction (vph)	0	0	0	0	6	0
Lane Group Flow (vph)	0	1927	0	0	261	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.30			c0.08	
v/s Ratio Perm						
v/c Ratio		0.60			0.20	
Uniform Delay, d1		16.1			18.2	
Progression Factor		1.00			0.86	
Incremental Delay, d2		0.8			0.3	
Delay (s)		16.9			15.9	
Level of Service		B			B	
Approach Delay (s)		16.9	0.0		15.9	
Approach LOS		B	A		B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	1337	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	61	1337	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.94						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.98						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5852						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5852						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	64	1407	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1618	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3657						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.28										
v/c Ratio		0.44						0.37	0.40			
Uniform Delay, d1		7.8						24.8	25.0			
Progression Factor		1.06						1.00	1.00			
Incremental Delay, d2		0.4						2.3	1.7			
Delay (s)		8.6						27.0	26.7			
Level of Service		A						C	C			
Approach Delay (s)		8.6			0.0			26.8			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	1650	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	66	1650	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5912						1863	2787			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5912						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	67	1667	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1895	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3695						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.32							0.14			
v/c Ratio		0.51						0.61	0.54			
Uniform Delay, d1		8.3						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		0.5						5.9	3.0			
Delay (s)		8.8						32.4	29.0			
Level of Service		A						C	C			
Approach Delay (s)		8.8			0.0			30.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	488	0	0	158	46	14	140	59	0	0	0
Future Volume (vph)	47	488	0	0	158	46	14	140	59	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3477			3202			3311				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3166			3202			3311				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	561	0	0	182	53	16	161	68	0	0	0
RTOR Reduction (vph)	0	0	0	0	33	0	0	43	0	0	0	0
Lane Group Flow (vph)	0	615	0	0	202	0	0	203	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1602			1200			1241				
v/s Ratio Prot		c0.02			0.06							
v/s Ratio Perm		c0.17						0.06				
v/c Ratio		0.38			0.17			0.16				
Uniform Delay, d1		12.4			16.7			16.6				
Progression Factor		1.36			0.69			1.50				
Incremental Delay, d2		0.6			0.3			0.3				
Delay (s)		17.5			11.8			25.3				
Level of Service		B			B			C				
Approach Delay (s)		17.5			11.8			25.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	759	0	0	205	54	26	263	73	0	0	0
Future Volume (vph)	58	759	0	0	205	54	26	263	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			0.99				
Frt		1.00			0.97			0.97				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3491			3229			3337				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3229			3337				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	807	0	0	218	57	28	280	78	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	869	0	0	249	0	0	361	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1614			926				
v/s Ratio Prot		c0.02			0.08							
v/s Ratio Perm		c0.25						0.11				
v/c Ratio		0.44			0.15			0.39				
Uniform Delay, d1		9.3			12.2			26.3				
Progression Factor		2.83			0.53			1.00				
Incremental Delay, d2 *		0.7			0.2			1.2				
Delay (s)		27.1			6.7			27.6				
Level of Service		C			A			C				
Approach Delay (s)		27.1			6.7			27.6			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	522	26	71	86	0	0	0	0	20	116	20
Future Volume (vph)	0	522	26	71	86	0	0	0	0	20	116	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.96	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3488		1749	1863						3234	
Flt Permitted		1.00		0.30	1.00						0.99	
Satd. Flow (perm)		3488		556	1863						3234	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	561	28	76	92	0	0	0	0	22	125	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	585	0	76	92	0	0	0	0	0	155	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1308		461	1047						1010	
v/s Ratio Prot		c0.17		c0.02	0.05							
v/s Ratio Perm				0.07							0.05	
v/c Ratio		0.45		0.16	0.09						0.15	
Uniform Delay, d1		18.8		8.8	8.1						19.9	
Progression Factor		1.00		1.48	1.48						1.00	
Incremental Delay, d2		1.1		0.8	0.2						0.3	
Delay (s)		19.9		13.7	12.1						20.2	
Level of Service		B		B	B						C	
Approach Delay (s)		19.9			12.8			0.0			20.2	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

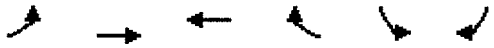
6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	685	38	113	107	0	0	0	0	31	91	19
Future Volume (vph)	0	685	38	113	107	0	0	0	0	31	91	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3511		1770	1863						3431	
Flt Permitted		1.00		0.28	1.00						0.99	
Satd. Flow (perm)		3511		520	1863						3431	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	699	39	115	109	0	0	0	0	32	93	19
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	734	0	115	109	0	0	0	0	0	131	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1755		485	1242						762	
v/s Ratio Prot		c0.21		c0.03	0.06							
v/s Ratio Perm				0.13							0.04	
v/c Ratio		0.42		0.24	0.09						0.17	
Uniform Delay, d1		14.2		6.4	5.3						28.3	
Progression Factor		1.00		0.99	0.97						1.00	
Incremental Delay, d2		0.7		1.1	0.1						0.5	
Delay (s)		15.0		7.4	5.3						28.8	
Level of Service		B		A	A						C	
Approach Delay (s)		15.0			6.4			0.0			28.8	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX D

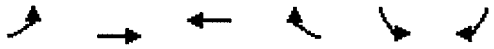
CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2018 PEAK PERIOD TRAFFIC
ANALYSIS WITHOUT PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1821	0	0	357	0
Future Volume (vph)	0	1821	0	0	357	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	2117	0	0	415	0
RTOR Reduction (vph)	0	0	0	0	8	0
Lane Group Flow (vph)	0	2117	0	0	407	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.33			c0.12	
v/s Ratio Perm						
v/c Ratio		0.59			0.38	
Uniform Delay, d1		11.4			21.4	
Progression Factor		1.00			1.04	
Incremental Delay, d2		0.7			1.0	
Delay (s)		12.1			23.3	
Level of Service		B			C	
Approach Delay (s)		12.1	0.0		23.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	2142	0	0	409	0
Future Volume (vph)	0	2142	0	0	409	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2279	0	0	435	0
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	2279	0	0	433	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.36			c0.13	
v/s Ratio Perm						
v/c Ratio		0.71			0.32	
Uniform Delay, d1		17.5			19.2	
Progression Factor		1.00			1.03	
Incremental Delay, d2		1.4			0.6	
Delay (s)		18.8			20.4	
Level of Service		B			C	
Approach Delay (s)		18.8	0.0		20.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	313	1522	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	313	1522	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.97						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5771						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5771						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	329	1602	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2052	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3606						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.36										
v/c Ratio		0.57						0.37	0.40			
Uniform Delay, d1		8.7						24.8	25.0			
Progression Factor		1.19						1.00	1.00			
Incremental Delay, d2		0.6						2.3	1.7			
Delay (s)		11.0						27.0	26.7			
Level of Service		B						C	C			
Approach Delay (s)		11.0			0.0			26.8			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	338	1867	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	338	1867	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.96						1.00	1.00			
Flpb, ped/bikes		0.96						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5761						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5761						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	341	1886	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	54	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2363	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3600						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.41							0.14			
v/c Ratio		0.66						0.61	0.54			
Uniform Delay, d1		9.5						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		0.9						5.9	3.0			
Delay (s)		10.5						32.4	29.0			
Level of Service		B						C	C			
Approach Delay (s)		10.5			0.0			30.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	551	0	0	190	46	14	245	120	0	0	0
Future Volume (vph)	47	551	0	0	190	46	14	245	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.95				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3485			3246			3292				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3246			3292				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	633	0	0	218	53	16	282	138	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	68	0	0	0	0
Lane Group Flow (vph)	0	687	0	0	245	0	0	368	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1606			1217			1234				
v/s Ratio Prot		c0.03			0.08							
v/s Ratio Perm		c0.19						0.11				
v/c Ratio		0.43			0.20			0.30				
Uniform Delay, d1		12.7			16.9			17.6				
Progression Factor		1.36			0.71			1.13				
Incremental Delay, d2		0.8			0.4			0.6				
Delay (s)		18.1			12.3			20.5				
Level of Service		B			B			C				
Approach Delay (s)		18.1			12.3			20.5			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	841	0	0	252	54	26	395	170	0	0	0
Future Volume (vph)	58	841	0	0	252	54	26	395	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.95			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3497			3276			3281				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3174			3276			3281				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	895	0	0	268	57	28	420	181	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	48	0	0	0	0
Lane Group Flow (vph)	0	957	0	0	305	0	0	581	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1638			911				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.27						0.18				
v/c Ratio		0.49			0.19			0.64				
Uniform Delay, d1		9.7			12.4			28.5				
Progression Factor		2.83			0.56			1.00				
Incremental Delay, d2		0.8			0.3			3.4				
Delay (s)		28.3			7.1			31.9				
Level of Service		C			A			C				
Approach Delay (s)		28.3			7.1			31.9			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Future Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						1.00	
Satd. Flow (prot)		3493		1755	1863						3304	
Flt Permitted		1.00		0.27	1.00						1.00	
Satd. Flow (perm)		3493		490	1863						3304	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	629	28	195	113	0	0	0	0	22	177	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	653	0	195	113	0	0	0	0	0	211	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1309		433	1047						1032	
v/s Ratio Prot		c0.19		c0.06	0.06							
v/s Ratio Perm				0.20							0.06	
v/c Ratio		0.50		0.45	0.11						0.20	
Uniform Delay, d1		19.2		9.8	8.2						20.2	
Progression Factor		1.00		1.52	1.45						1.00	
Incremental Delay, d2		1.4		3.3	0.2						0.4	
Delay (s)		20.6		18.3	12.0						20.6	
Level of Service		C		B	B						C	
Approach Delay (s)		20.6			16.0			0.0			20.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

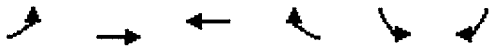
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Future Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3514		1770	1863						3459	
Flt Permitted		1.00		0.24	1.00						0.99	
Satd. Flow (perm)		3514		455	1863						3459	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	783	39	227	135	0	0	0	0	32	143	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	818	0	227	135	0	0	0	0	0	185	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1757		449	1242						768	
v/s Ratio Prot		0.23		c0.06	0.07							
v/s Ratio Perm				c0.28							0.05	
v/c Ratio		0.47		0.51	0.11						0.24	
Uniform Delay, d1		14.7		7.5	5.4						28.8	
Progression Factor		1.00		1.25	1.07						1.00	
Incremental Delay, d2		0.9		4.0	0.2						0.7	
Delay (s)		15.6		13.3	5.9						29.5	
Level of Service		B		B	A						C	
Approach Delay (s)		15.6			10.6			0.0			29.5	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

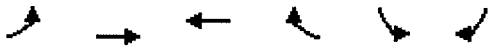
APPENDIX E

CAPACITY ANALYSIS CALCULATIONS
PROJECTED YEAR 2018 PEAK PERIOD TRAFFIC
ANALYSIS WITH PROJECT



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	1860	0	0	357	0
Future Volume (vph)	0	1860	0	0	357	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	2163	0	0	415	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	2163	0	0	408	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			25.0	
Effective Green, g (s)		45.0			25.0	
Actuated g/C Ratio		0.56			0.31	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3604			1072	
v/s Ratio Prot		c0.34			c0.12	
v/s Ratio Perm						
v/c Ratio		0.60			0.38	
Uniform Delay, d1		11.6			21.5	
Progression Factor		1.00			1.04	
Incremental Delay, d2		0.7			1.0	
Delay (s)		12.3			23.3	
Level of Service		B			C	
Approach Delay (s)		12.3	0.0		23.3	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑			↰↰	
Traffic Volume (vph)	0	2195	0	0	409	0
Future Volume (vph)	0	2195	0	0	409	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0	
Lane Util. Factor		0.86			0.97	
Frt		1.00			1.00	
Flt Protected		1.00			0.95	
Satd. Flow (prot)		6408			3433	
Flt Permitted		1.00			0.95	
Satd. Flow (perm)		6408			3433	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	2335	0	0	435	0
RTOR Reduction (vph)	0	0	0	0	2	0
Lane Group Flow (vph)	0	2335	0	0	433	0
Turn Type		NA			Prot	
Protected Phases		4			6	
Permitted Phases						
Actuated Green, G (s)		45.0			35.0	
Effective Green, g (s)		45.0			35.0	
Actuated g/C Ratio		0.50			0.39	
Clearance Time (s)		5.0			5.0	
Lane Grp Cap (vph)		3204			1335	
v/s Ratio Prot		c0.36			c0.13	
v/s Ratio Perm						
v/c Ratio		0.73			0.32	
Uniform Delay, d1		17.7			19.2	
Progression Factor		1.00			1.03	
Incremental Delay, d2		1.5			0.6	
Delay (s)		19.2			20.4	
Level of Service		B			C	
Approach Delay (s)		19.2	0.0		20.4	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	1539	172	0	0	0	0	163	264	0	0	0
Future Volume (vph)	335	1539	172	0	0	0	0	163	264	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.95						1.00	1.00			
Flpb, ped/bikes		0.96						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5765						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5765						1863	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	353	1620	181	0	0	0	0	172	278	0	0	0
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2091	0	0	0	0	0	172	278	0	0	0
Confl. Peds. (#/hr)	145		310									
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						4	4			
Permitted Phases	6											
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3603						465	696			
v/s Ratio Prot								0.09	c0.10			
v/s Ratio Perm		0.36										
v/c Ratio		0.58						0.37	0.40			
Uniform Delay, d1		8.8						24.8	25.0			
Progression Factor		1.24						1.00	1.00			
Incremental Delay, d2		0.6						2.3	1.7			
Delay (s)		11.5						27.0	26.7			
Level of Service		B						C	C			
Approach Delay (s)		11.5			0.0			26.8			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
3: Saratoga Rd./Saratoga St. & Kalakaua Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	366	1892	188	0	0	0	0	281	373	0	0	0
Future Volume (vph)	366	1892	188	0	0	0	0	281	373	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0	5.0			
Lane Util. Factor		0.86						1.00	0.88			
Frpb, ped/bikes		0.96						1.00	1.00			
Flpb, ped/bikes		0.95						1.00	1.00			
Frt		0.99						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		5749						1863	2787			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		5749						1863	2787			
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	370	1911	190	0	0	0	0	284	377	0	0	0
RTOR Reduction (vph)	0	56	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2415	0	0	0	0	0	284	377	0	0	0
Confl. Peds. (#/hr)	257		222									
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						4				
Permitted Phases	6								4			
Actuated Green, G (s)		50.0						20.0	20.0			
Effective Green, g (s)		50.0						20.0	20.0			
Actuated g/C Ratio		0.62						0.25	0.25			
Clearance Time (s)		5.0						5.0	5.0			
Lane Grp Cap (vph)		3593						465	696			
v/s Ratio Prot								c0.15				
v/s Ratio Perm		0.42							0.14			
v/c Ratio		0.67						0.61	0.54			
Uniform Delay, d1		9.7						26.6	26.0			
Progression Factor		1.00						1.00	1.00			
Incremental Delay, d2		1.0						5.9	3.0			
Delay (s)		10.7						32.4	29.0			
Level of Service		B						C	C			
Approach Delay (s)		10.7			0.0			30.5			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	551	0	0	190	46	14	267	120	0	0	0
Future Volume (vph)	47	551	0	0	190	46	14	267	120	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.94			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3485			3246			3305				
Flt Permitted		0.91			1.00			1.00				
Satd. Flow (perm)		3174			3246			3305				
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	54	633	0	0	218	53	16	307	138	0	0	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	59	0	0	0	0
Lane Group Flow (vph)	0	687	0	0	245	0	0	402	0	0	0	0
Confl. Peds. (#/hr)	184					184	37		34			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		40.0			30.0			30.0				
Effective Green, g (s)		40.0			30.0			30.0				
Actuated g/C Ratio		0.50			0.38			0.38				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1606			1217			1239				
v/s Ratio Prot		c0.03			0.08							
v/s Ratio Perm		c0.19						0.12				
v/c Ratio		0.43			0.20			0.32				
Uniform Delay, d1		12.7			16.9			17.8				
Progression Factor		1.36			0.71			1.10				
Incremental Delay, d2		0.8			0.4			0.7				
Delay (s)		18.1			12.3			20.3				
Level of Service		B			B			C				
Approach Delay (s)		18.1			12.3			20.3			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Saratoga St./Kalaimoku St. & Kuhio Ave.

6/26/2015

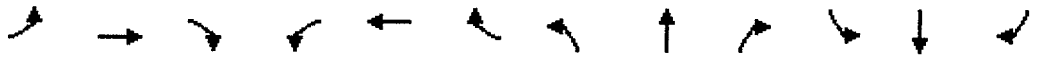
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	841	0	0	252	54	26	423	170	0	0	0
Future Volume (vph)	58	841	0	0	252	54	26	423	170	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.95				
Frpb, ped/bikes		1.00			0.95			0.98				
Flpb, ped/bikes		0.99			1.00			1.00				
Frt		1.00			0.97			0.96				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		3497			3276			3293				
Flt Permitted		0.90			1.00			1.00				
Satd. Flow (perm)		3174			3276			3293				
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	62	895	0	0	268	57	28	450	181	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	43	0	0	0	0
Lane Group Flow (vph)	0	957	0	0	305	0	0	616	0	0	0	0
Confl. Peds. (#/hr)	163					163	55		45			
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	1	6			2			4				
Permitted Phases	6						4					
Actuated Green, G (s)		55.0			45.0			25.0				
Effective Green, g (s)		55.0			45.0			25.0				
Actuated g/C Ratio		0.61			0.50			0.28				
Clearance Time (s)		5.0			5.0			5.0				
Lane Grp Cap (vph)		1957			1638			914				
v/s Ratio Prot		c0.03			0.09							
v/s Ratio Perm		c0.27						0.19				
v/c Ratio		0.49			0.19			0.67				
Uniform Delay, d1		9.7			12.4			28.9				
Progression Factor		2.83			0.56			1.00				
Incremental Delay, d2		0.8			0.3			4.0				
Delay (s)		28.3			7.1			32.8				
Level of Service		C			A			C				
Approach Delay (s)		28.3			7.1			32.8			0.0	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Future Volume (vph)	0	585	26	181	105	0	0	0	0	20	165	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frpb, ped/bikes		0.99		1.00	1.00						0.97	
Flpb, ped/bikes		1.00		0.99	1.00						0.98	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						1.00	
Satd. Flow (prot)		3493		1755	1863						3304	
Flt Permitted		1.00		0.27	1.00						1.00	
Satd. Flow (perm)		3493		490	1863						3304	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	0	629	28	195	113	0	0	0	0	22	177	22
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	653	0	195	113	0	0	0	0	0	211	0
Confl. Peds. (#/hr)			97	97						101		127
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		30.0		45.0	45.0						25.0	
Effective Green, g (s)		30.0		45.0	45.0						25.0	
Actuated g/C Ratio		0.38		0.56	0.56						0.31	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1309		433	1047						1032	
v/s Ratio Prot		c0.19		c0.06	0.06							
v/s Ratio Perm				0.20							0.06	
v/c Ratio		0.50		0.45	0.11						0.20	
Uniform Delay, d1		19.2		9.8	8.2						20.2	
Progression Factor		1.00		1.51	1.44						1.00	
Incremental Delay, d2		1.4		3.3	0.2						0.4	
Delay (s)		20.6		18.2	11.9						20.6	
Level of Service		C		B	B						C	
Approach Delay (s)		20.6			15.9			0.0			20.6	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
23: Olohana & Kuhio Ave.

6/26/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Future Volume (vph)	0	767	38	222	132	0	0	0	0	31	140	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0	5.0						5.0	
Lane Util. Factor		0.95		1.00	1.00						0.95	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3514		1770	1863						3459	
Flt Permitted		1.00		0.24	1.00						0.99	
Satd. Flow (perm)		3514		455	1863						3459	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	783	39	227	135	0	0	0	0	32	143	19
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	818	0	227	135	0	0	0	0	0	185	0
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		4		3	8						6	
Permitted Phases				8						6		
Actuated Green, G (s)		45.0		60.0	60.0						20.0	
Effective Green, g (s)		45.0		60.0	60.0						20.0	
Actuated g/C Ratio		0.50		0.67	0.67						0.22	
Clearance Time (s)		5.0		5.0	5.0						5.0	
Lane Grp Cap (vph)		1757		449	1242						768	
v/s Ratio Prot		0.23		c0.06	0.07							
v/s Ratio Perm				c0.28							0.05	
v/c Ratio		0.47		0.51	0.11						0.24	
Uniform Delay, d1		14.7		7.5	5.4						28.8	
Progression Factor		1.00		1.25	1.07						1.00	
Incremental Delay, d2		0.9		4.0	0.2						0.7	
Delay (s)		15.6		13.3	5.9						29.5	
Level of Service		B		B	A						C	
Approach Delay (s)		15.6			10.6			0.0			29.5	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

AIS Initial Report for ONE Waikīkī, the Former Kyo-Ya Restaurant Property, Waikīkī, Honolulu (Kona), Oʻahu TMKs: [1] 2-6-006:001 and 004

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Section 1 Introduction

1.1 Background

At the request of Rider Levett Bucknall and TGH, Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this archaeological report of an archaeological test trench at the proposed ONE Waikiki (former Kyo-Ya Restaurant property), Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu, TMKs: [1] 2-6-006:001 and 004 as a due diligence study . The property evaluated here consists of two adjacent parcels, the southeastern parcel 001 of 17,257 square feet at 2045 Kalākaua Avenue and the northwestern parcel 004 of 11,504 square feet at 2051 Kalākaua Avenue for a total area of 28,761 square feet (0.66 acres or 0.27 ha or 2672.0 square meters). The project area is depicted on a portion of the 1998 U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), tax map plat (Figure 2), and a 2013 aerial photograph showing the general location of the test excavation (Figure 3). The project area is located on the northwest end of central Waikīkī adjacent to the west (*makai*) side of Kalākaua Avenue The project area is bounded to the west by Kalākaua Avenue, to the south and east by federal Fort DeRussy lands, and to the north by the grounds and the buildings of the Luana Waikiki Condominium/Hotel (TMK: [1] 2-6-006:002). This is an initial report to discuss the excavation of Test Excavation 1 (T1), designed to test for the presence of cultural material, to better understand the stratigraphy within the project area, and to better inform a prognosis for the probability of finds during possible re-development demolition and construction on the property.

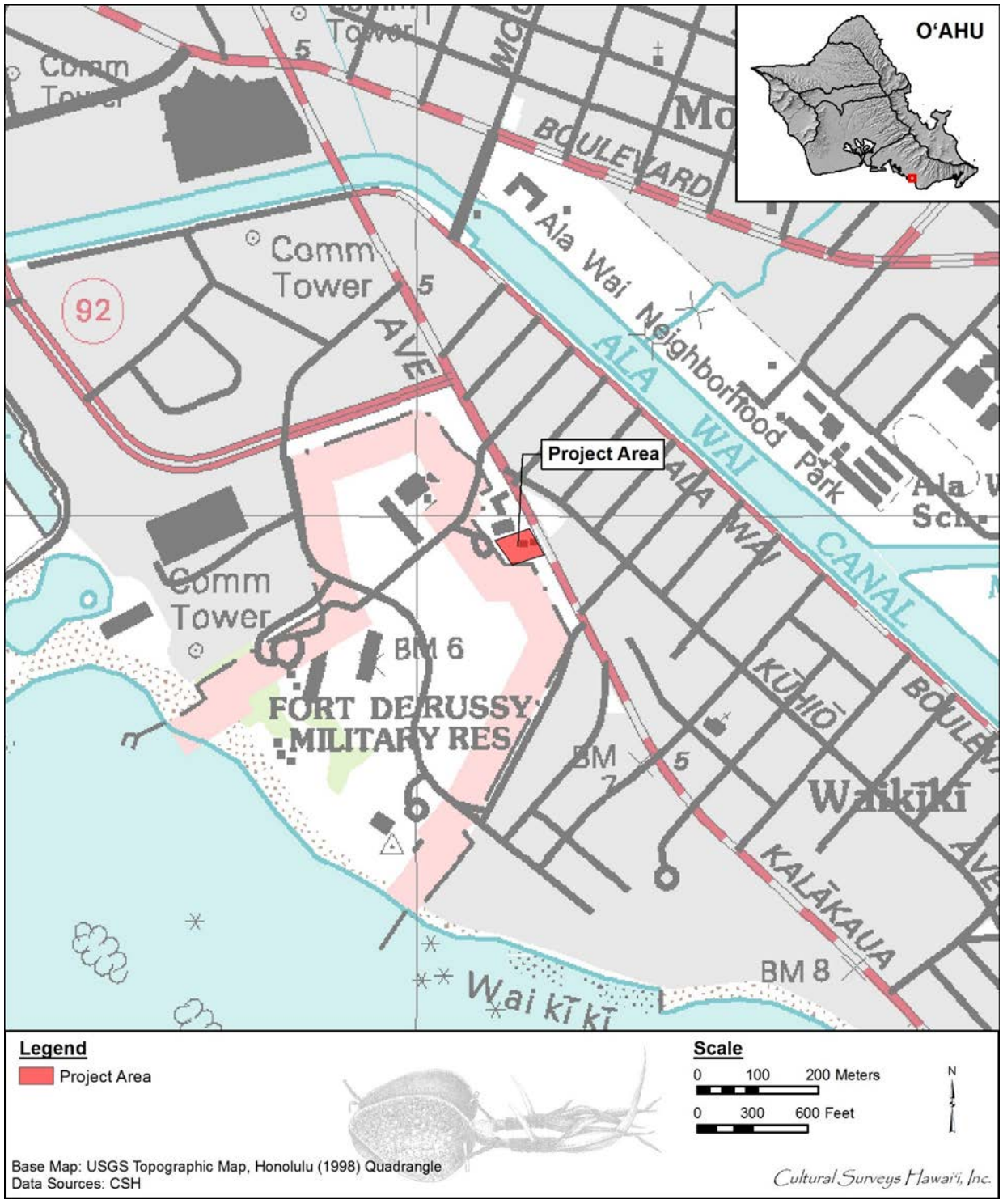


Figure 1. Portion of the 1998 USGS 7.5-minute topographic quadrangle showing the location of the project area

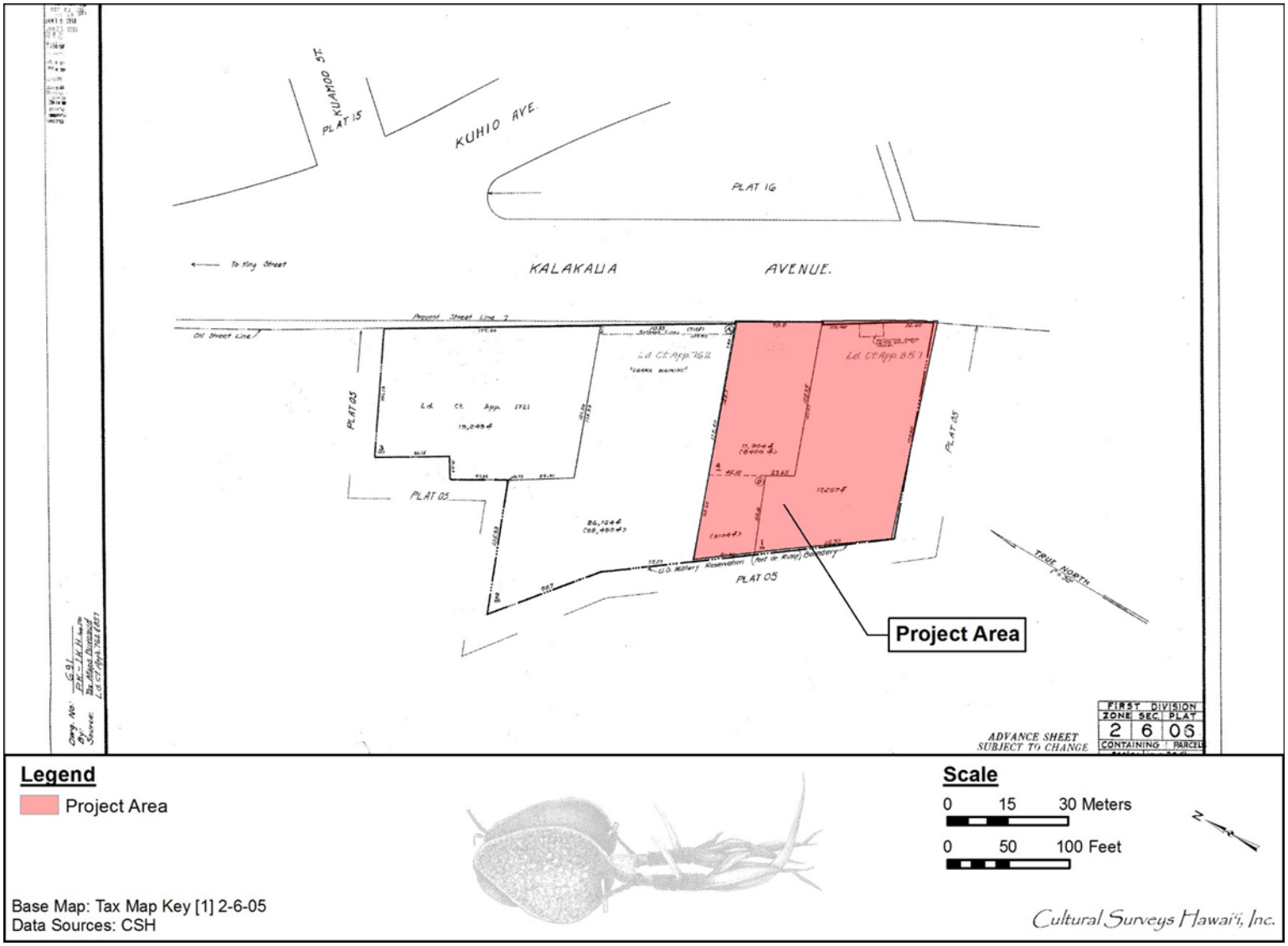


Figure 2. Tax Map Key Plat [1] 2-6-006 showing the subject parcels 001 and 004

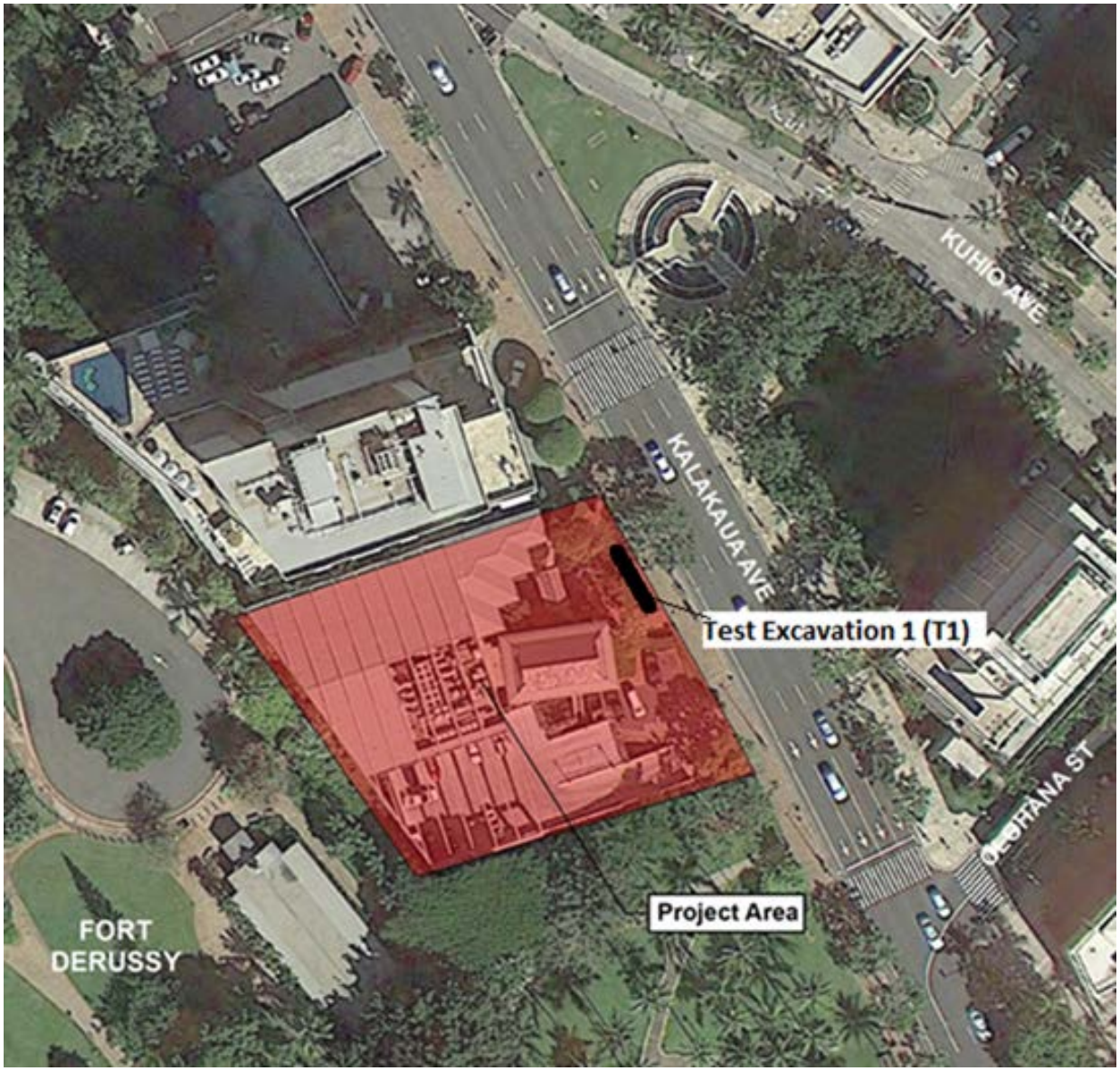


Figure 3. Aerial photograph of the project area showing the location of the test excavation

Results of Fieldwork

Initial excavation of T1 (Figure 4 through Figure 7 and Table 1), designed to test for the presence of cultural material and to better understand the stratigraphy within the project area, consisted of a 6.0 m (20 feet) long by 0.6 m (2 feet) wide excavation on the east central portion of the project area, in the lawn fronting the seaward sidewalk adjacent to Kalākaua Avenue. This excavation was abbreviated by 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive sidewall collapse due to buried unstable concrete rubble fill overlying sand. The loss of this portion of the trench was inconsequential as CSH archaeologists were able to observe the stratigraphy in the rest of the test excavation for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches). Upon completion of excavation and documentation, T1 was backfilled and the surrounding area cleaned (see Figure 9). Representative photographs of the stratigraphy are provided in Figure 4 through Figure 7, a drawn profile is presented in Figure 8 and a stratigraphic sequence is presented in Table 1.

The excavation provided views of stratigraphy to the water table and a sample of historic artifacts for analysis. No human bones nor other Native Hawaiian artifacts nor other significant historic properties were observed. Generally speaking, CSH archaeologists documented several discrete episodes of fill deposits overlying a layer of disturbed natural loamy sediments, overlying natural sand. One archaeological feature (Feature 1), consistent with a possible fence post hole circa 1900, was recorded in T1 in the east wall profile. All observed artifacts were recovered from back-dirt representing Stratum Ia through Ic (0 to 50 cmbs).

In the stratigraphic profile of T1, Stratum Ia (0 to 10 cmbs) is a dark reddish brown (5YR 2.5/2) modern “O” horizon clay loam landscaping fill.

Stratum Ib (10 to 25 cmbs) is a gray (10YR 5/1), gravelly, sandy loam fill associated with grading/compaction for development.

Stratum Ic (25 to 50 cmbs) is a dark reddish brown (2.5YR 3/3) cinder layer associated with utility boxes immediately north of excavation. Stratum Ic is only found in the northern portion of T1. Fragments of a Chinese ceramic vessel (Acc. #1) and the handle portion of a knife (Acc. #2) were recovered in backfill associated with Stratums Ia through Ic 0 to 50 cmbs.

Stratum IIa (30 to 85 cmbs) is a very dark grayish brown (10YR 3/2) sandy loam, reworked natural “A” horizon, disturbed and redistributed. That is, Stratum IIa appears to be a mechanically altered reworked portion of a former local A horizon. A sand lens with charcoal present (10YR 5/2 grayish brown) is found in Stratum IIa directly above Feature 1, likely representing the excavated contents of Stratums IIb and III into which it extends.

Stratum IIb (80-180) is a pale brown (10YR 6/3); slightly organic sand of marine origin; representing a slightly disturbed, through truncation and mechanical redistribution, A horizon. Feature 1 originates from Stratum IIb and extends to just above the water table in Stratum III. Feature 1 is a pit, excavated with steep sidewalls consistent with a feature dug with a steel shovel. That is, the sand lens in Stratum IIa represents a portion of the contents of Feature 1 which was shoveled when the ground surface was at or near the top of Stratum IIb. No artifacts were observed in Stratum IIb, however the interpretation of the tool type utilized to excavate Feature 1 indicates

that the top of Stratum IIb is post European contact, or after 1778 and more likely late 1800s or early 1900s.

Stratum III (95 to 165 cmbs) is a pale yellow (2.5Y 7/3) sand of marine origin, representing an in situ natural Jaucus sand deposit. Feature 1 extends into Stratum III, terminating at approximately 155 cmbs, just above the water table. No artifacts were observed in Stratum III. At the end of the excavation the water table was at 160 cmbs (5 feet 3 inches).

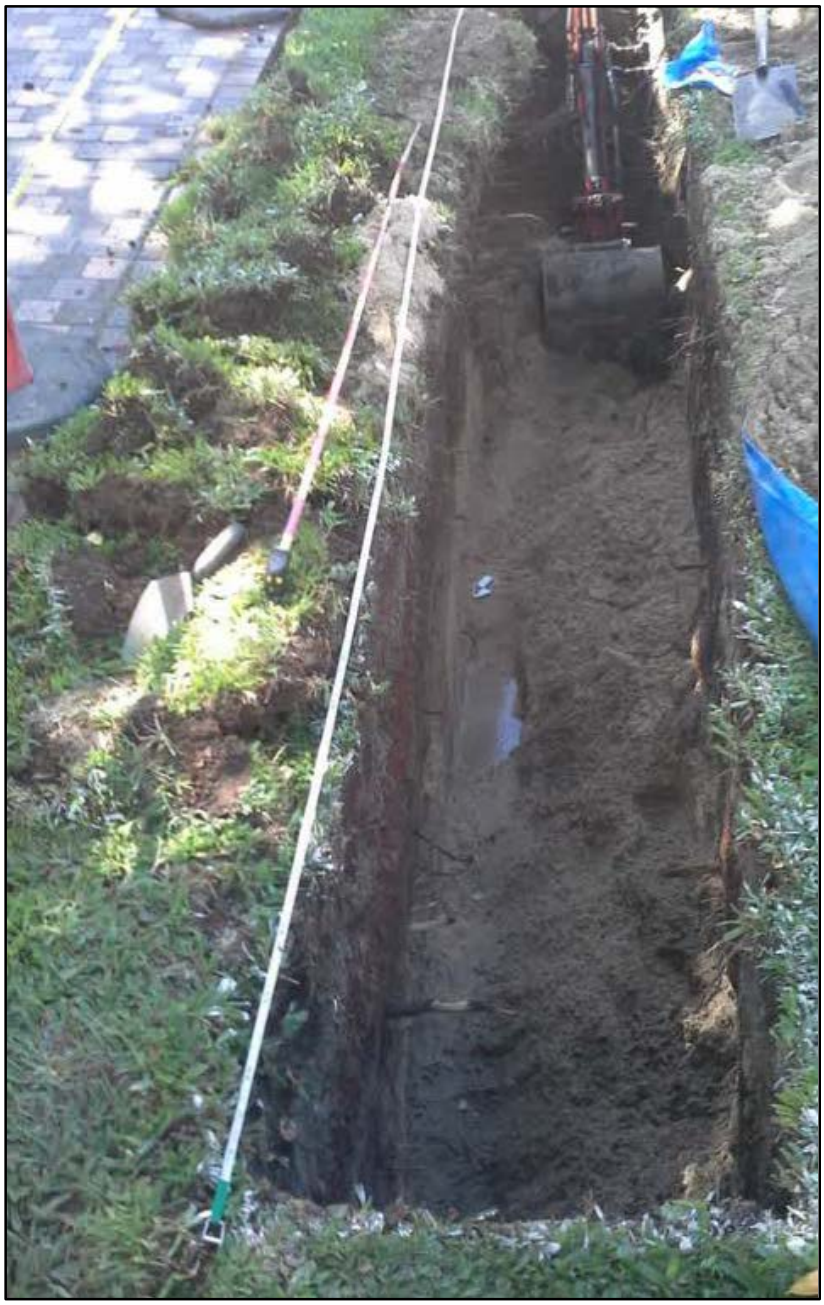


Figure 4. General view of the test excavation (The seaward sidewalk of Kalākaua Avenue is at left)

Figure 5. T1, east wall, stadia base at base of excavation probe to the water table

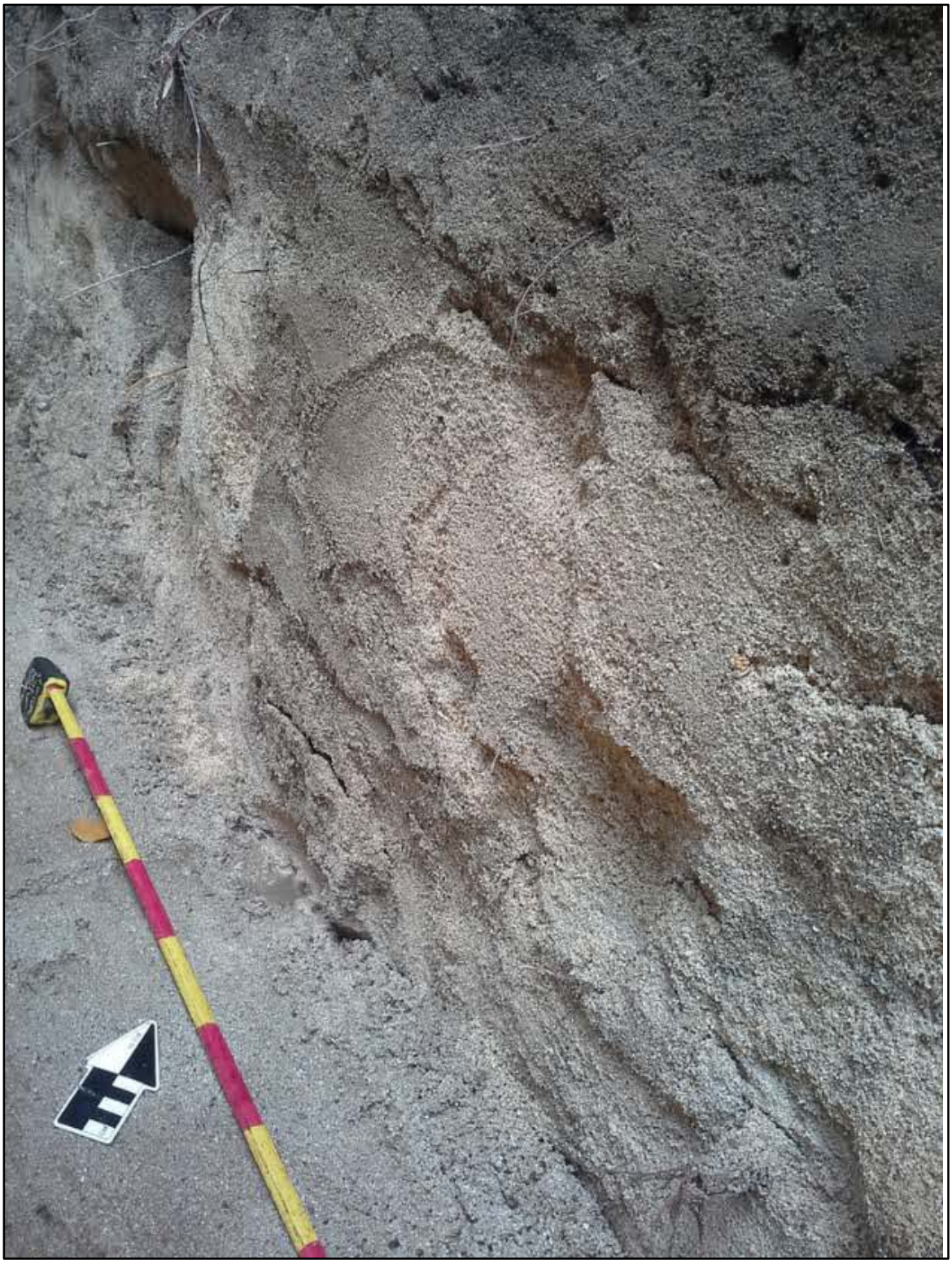


Figure 6. T1, east wall profile, view to the north noting Feature 1 consistent with a posthole circa 1900.

Figure 7. T1 east wall profile, view to the east with stadia base at the water table at 165 cmbs.

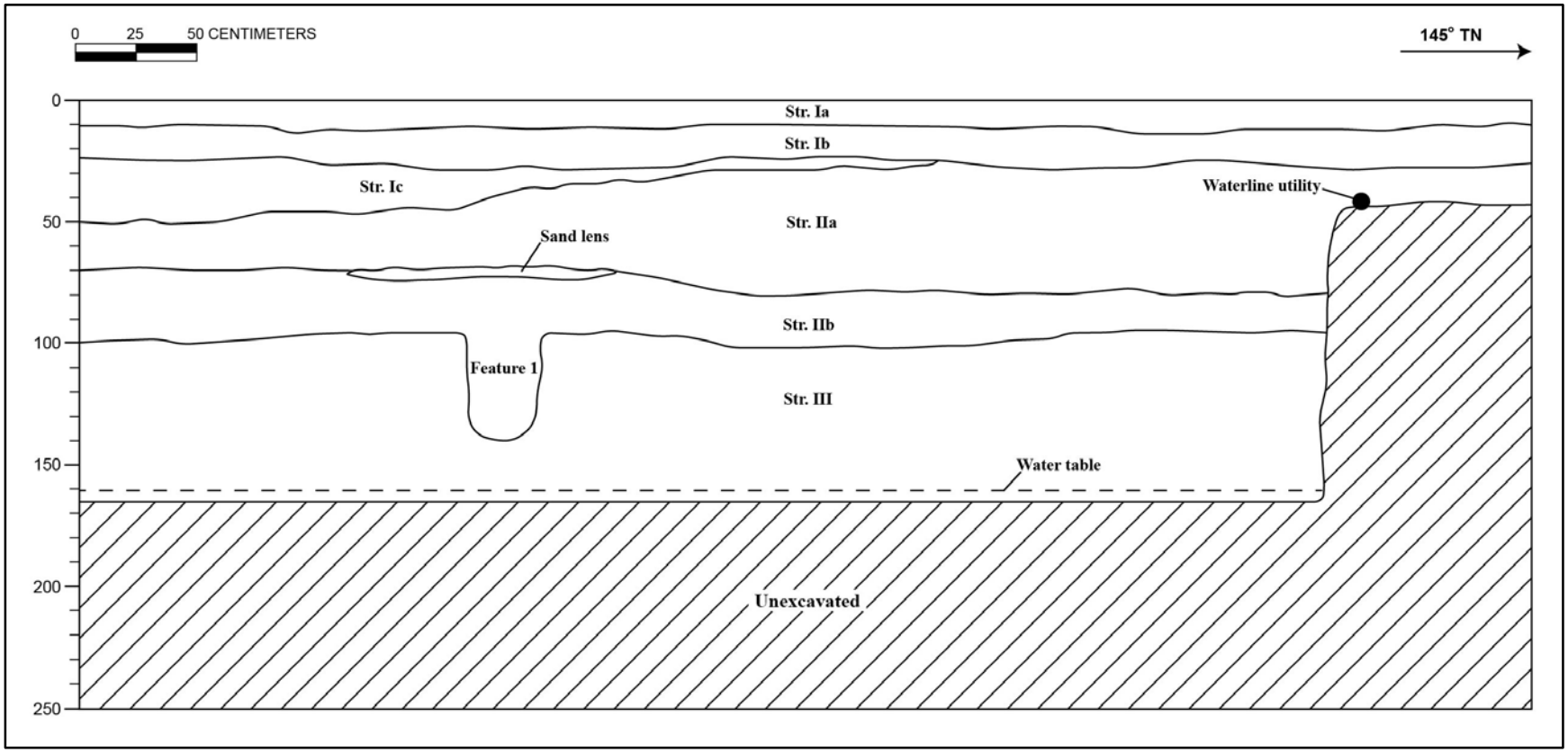


Figure 8. Illustrated profile of T1 east sidewall

Table 1. T1 Stratigraphic Description

Stratum	Depth (cmbs)	Description of Sediment
Ia	0-10	Fill; 5YR 2.5/2, dark reddish brown; clay loam; moist firm consistence; no cementation, structureless; plastic; terrigenous origin; abrupt, smooth lower boundary; few, fine roots; Modern “O” horizon, landscaping fill.
Ib	10-25	Fill; 10YR 5/1, gray; gravelly, sandy loam; moist, friable consistence; structureless; slightly plastic; terrigenous origin; abrupt, smooth lower boundary; few fine roots; fill associated with grading/compaction for development.
Ic	25-50	Fill; 2.5YR 3/3; dark reddish brown; cinder, moist friable consistence; structureless; non-plastic; terrigenous origin; abrupt, discontinuous lower boundary; no roots; fill associated with utility boxes immediately north of excavation
IIa	30-85	Natural; 10YR 3/2, very dark grayish brown; sandy loam; moist, loose consistence; no cementation; weak, fine, blocky structure; non-plastic; terrigenous origin; abrupt, smooth lower boundary; few, medium roots; sand lens with charcoal present (10YR 5/2 grayish brown) directly above Feature 1; reworked natural “A” horizon, mechanically disturbed and redistributed.
IIb	80-102	Natural; 10YR 6/3, pale brown; sand; moist, loose consistence, no cementation; weak, medium, granular structure; non-plastic; marine origin; abrupt, smooth lower boundary; few, fine roots; A horizon, slightly disturbed by Feature 1. Feature 1 originates from this layer.
IIb Feature 1	80-140	The vertical sides of this feature are consistent with a posthole originating from the Strata IIa/ Strata IIb interface
III	95-165 (BOE)	Natural; 2.5Y 7/3, pale yellow; sand; moist, loose consistence; no cementation; weak, medium, granular structure; non-plastic; marine origin; lower boundary not observed; no roots; Natural Jaucus sand deposit. Feature 1 extends into this layer.

Figure 9. Location of T1 post-restoration after excavation, backfilling and clean-up

Artifact Analysis

Artifacts recovered from T1 include sixteen fragments of an ornamental or storage stoneware pot (Acc. #1) and a bone handled steel knife base (Acc. #2). The fragments were recovered from the back-dirt pile and are associated with fill deposits at an excavation depth of 0 to 50 cmbs. No artifacts were found in situ. All of the artifacts found are historic and none is deemed traditional Hawaiian. A narrow manufacturing date range for this artifact cannot be determined. Chinese stoneware pots such as this artifact could have been exported to Hawai‘i during the early 1800s to the present day.

The ornamental ceramic pot fragments (Figure 10 through Figure 14) have a common thickness of 0.8 cm with sherd sizes ranging from 3.0 cm by 2.0 cm to 11.0 cm by 7.0 cm. Eight Acc. 1 fragments have a tan slip glaze applied to their concave surface while nine of the Acc. #1 fragments have a similar tan glaze applied to their convex surface. While none of the fragments appear to re-fit, they are assumed to be related to one common artifact. One fragment with the tan slip glaze on the concave surface has an imprint on the opposite surface including a stamped star and Chinese characters (Figure 14). The central character on this fragment is the character *Fuku* or *Fú* (福), representing “fortune” or “good luck.” This ideograph is frequently used to represent the male star god *Fú*. Three points of the stamped star are present in this fragment and one of these is decipherable as *shin*, 新, used to represent “new.”

> When displayed as a Chinese ideograph *Fú* is almost universally displayed upside-down on diagonal red squares. The reasoning is based on a wordplay: in nearly all varieties of Chinese, the words for "upside-down" (倒, Pinyin: dào) and "to arrive" (到, Pinyin: dào) are homophonous. Therefore, the phrase an "upside-down *Fú*" sounds nearly identical to the phrase "Good luck arrives". Paste the character upside-down on a door or doorpost thus translates into a wish for prosperity to descend upon a dwelling. [Wikipedia 2015]

A South China ceramic design is presented for comparison (Figure 15).

The bone knife handle (Acc. #2) is 9.0 cm long by 1.9 cm wide, by 2.0 cm thick at the base, tapering to 1.0 cm thick (Figure 16). The steel blade of the knife is not present, however its steel base remains sandwiched between two nearly identical bone shanks, with bevels terminating where the blade would have extended. Three steel nails penetrate the shaped bone shanks to hold the three piece composite together.

Table 2. Summary of Artifacts Recovered from T2

Acc. No.	Trench	Str.	Depth (cmbs)	Artifact Type	Portion	Size (cm)	Description
1	T1	Ia-Ic	0-50	Ceramic pot	16 fragments	3.0 cm by 2.0 cm to 11.0 cm by 7.0 cm by 0.8 cm thick	Chinese ceramic pot fragments
2	T1	Ia-Ic	0-50	Knife handle	Base (handle)	9.0 cm long by 1.9 cm wide, by 2.0 cm thick at the base, tapering to 1.0 cm thick	bone knife handle

Figure 10. Tan slip glazed surfaces of Acc. #1 fragments

Figure 11. Acc. #1 fragment, slightly convex surface with tan slip glaze

Figure 12. Acc. #1 fragment, slightly concave surface

Figure 13. Acc. #1 fragment, slightly concave surface with tan slip glaze

Figure 14.Acc. #1 fragment, slightly concave surface with a stamped star and Chinese characters. The central character on this fragment is the character *Fú* (福), representing “fortune” or “good luck” and a peripheral character, *shin*, 新, used to represent “new.”

Figure 15. South Chinese ceramic, Sekwan (Shiwan), mid to late twentieth century for comparison with Acc. #1 (Nilsson 2015)..

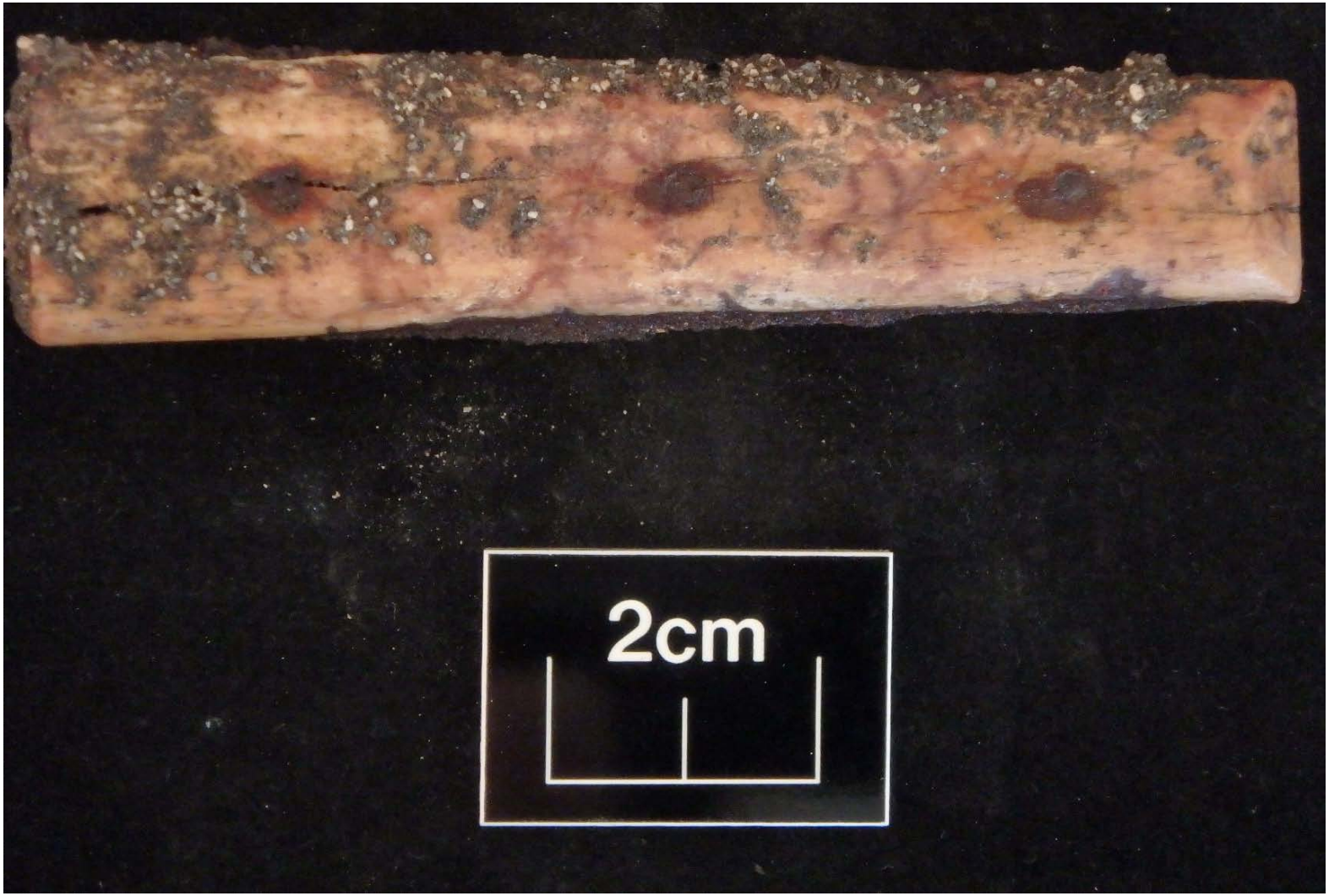


Figure 16. Acc. #2, bone handled knife

Section 2 Summary and Interpretation

We started on a 6 m (20 foot long) excavation. This needed to be cut short by about a 85 cm at the Diamond Head end due to the presence of a sprinkler system water line and extensive collapse due to buried unstable concrete rubble. We regard the loss of this portion of the trench as not of any consequence as were able to observe the stratigraphy in the rest of the test excavation down to the water table. We dig these particularly long trenches in part because we assume we may not be able to see the stratigraphy in the entire length. We got a good view of an expanse of stratigraphy for a length of approximately 5.15 m (16.9 feet) down to the water table at 160 cmbs (5 feet 3 inches) which is what we sought.

Several discrete episodes of fill deposits were observed which is no surprise. These fill episodes, designated Strata Ia through Ic, extend to a depth of 50 cm below surface.

Strata IIa and IIb appeared mechanically altered and both strata lacked signatures of Native Hawaiian occupation (no sea shells, bones or other food scraps, charcoal staining fire cracked rocks, or lithic debitage from stone tool manufacture).

Stratum III is relatively undisturbed native Jaucas sand which again lacked any sea shells, bones, charcoal staining fire cracked rocks, lithic debitage from stone tool manufacture.

We observed only one archaeological feature consistent with a possible fence post hole circa 1900 and of no consequence for development.

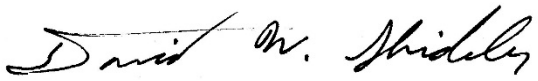
We observed no human bones and no direct indication (neither artifacts or midden food scraps, or a cultural layer) of traditional Native Hawaiian occupation.

Based on my substantial experience the probability of human bones or other Native Hawaiian significant historic properties in the immediate area of this test excavation appears to be on the low side of moderate – which is about as good as it gets for the sands of Waikiki.

As a result of this test excavation our assessment of the likelihood of the probability of human bones or other Native Hawaiian significant historic properties has gone down.

Happy to address any questions.

Aloha.



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Due-diligence natural resources assessment for TMKs: 2-6-006:001 & 004 in Waikīkī, Island of Oʻahu, Hawaiʻi

June 9, 2015 *AECOS* No. 1436

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Introduction

At the request of Rider Levett Bucknall (RLB), *AECOS* Inc. conducted a survey of natural resources (essentially biological resources) on two adjoining parcels in Waikīkī, Honolulu, Oʻahu. The parcels (TMKs: 2-6-006:001 & 004) front on Kalākaua Avenue (2051 and 2057 Kalākaua Avenue) across from Waikīkī Gateway Park (Figure 1) and are developed and landscaped as a single, one and two-story structure (Figure 2) with attached commercial parking garage. Surrounding properties include the Luana Waikiki Hotel & Suites on the north (TMK: 2-6-006:002) and Fort DeRussy Park (TMK: 2-6-005:001) on the west and south. The park land on the west includes the cul-de-sac of Maluhia Road and the U.S. Army, Fort DeRussy chapel close to the subject parcel (Figure 3).

Methods

Plant Survey

For the botanical survey conducted by Eric Guinther on June 3, 2015, a boundary map was loaded into a Trimble 6000 Series GNSS unit (GeoXH) to serve as a guide to the survey area limits. The GNSS unit recorded the progress tracks of the botanists, providing real time feedback on location and adequacy of coverage during the wandering (pedestrian) survey (see Fig. 3). Plant species were identified as they were encountered and notes taken to develop

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Figure 1. Honolulu on south side of Oʻahu. Subject parcels are outlined in red near center of image.

the relative abundance of each species encountered. Any plant not immediately recognized during the survey was photographed and/or a representative feature (flower, fruit, etc.) collected for later identification at the laboratory.

Figure 2. 2051 Kalākaua Avenue showing maintained plantings fronting the public sidewalk (lower right corner in photo).

Because the existing building occupies the entirety of the two parcels, and any sensitive botanical resources closely adjacent could be of concern, the area we surveyed extended beyond the parcel boundaries on all sides but the west for a distance of roughly 20 ft (7 m; see Figure 3).

Plant species names in our report follow *Manual of the Flowering Plants of Hawai'i* (Wagner, Herbst, & Sohmer, 1990; Wagner & Herbst, 1999) for native and naturalized flowering plants, *Hawai'i's Ferns and Fern Allies* (Palmer, 2003) for ferns, and *A Tropical Garden Flora* (Staples & Herbst, 2005) for ornamental plants. More recent name changes for naturalized plant species follow Imada (2012).

Bird and Mammal Survey

Reginald David conducted the birds and mammals survey during the early morning hours of June 3, 2015. Two avian count stations were established on

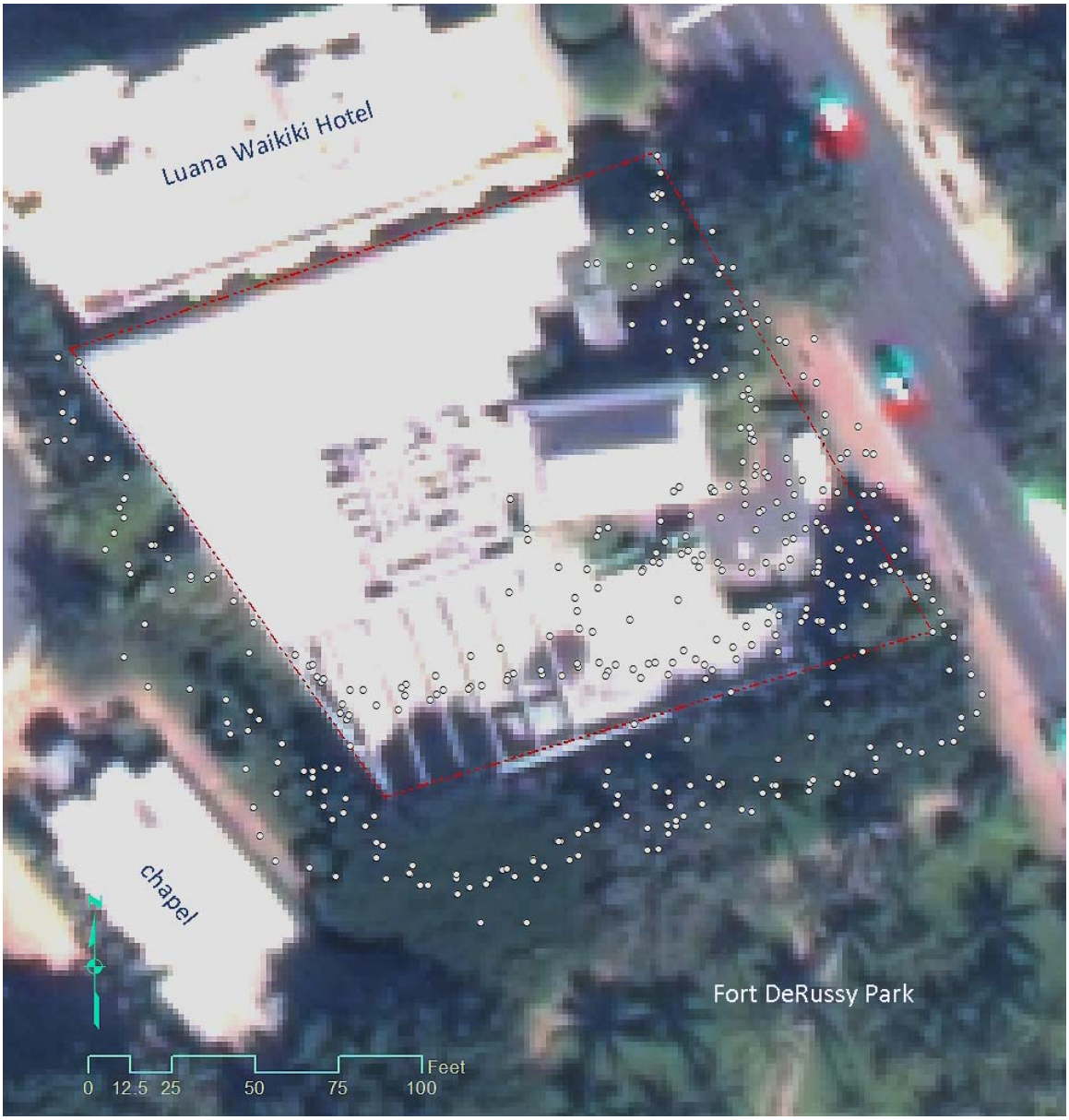

Figure 3. Project area in satellite view showing parcels (outlined in red) and GNSS recorded positions of the botanist on June 3.

or adjacent to the parcels: the first in the middle of the parking structure driveway and the second adjacent to the *makai* boundary of the property on Fort DeRussy lands between the subject property and the Fort DeRussy chapel. A single, six-minute avian point count was made at each count station. Field observations were made with the aid of Leica 8 X 42 binoculars and by listening for vocalizations. Time not spent counting at point count stations was used to

search the property and areas immediately adjacent to the property on the west and south for species and habitats not detected during the point counts. Weather conditions were ideal, with no rain, unlimited visibility and winds of between 2 and 5 kilometers-per-hour.

The avian phylogenetic order and nomenclature used in this report follows the *AOU Check-List of North American Birds* (American Ornithologists' Union, 1998), and the 42nd through the 55th supplements to the Check-List (American Ornithologists' Union, 2000; Banks et al., 2002, 2003, 2004, 2005, 2006, 2007, 2008; Chesser et al., 2009, 2010, 2011, 2012, 2013, 2014).

The survey of mammals was limited to visual and auditory detection, coupled with visual observation of scat, tracks, and other animal sign. A running tally was kept of all terrestrial vertebrate mammalian species detected within the survey area. Mammal scientific names follow *Mammal species of the world: a taxonomic and geographic reference* (Wilson and Reeder, 2005).

Results

Vegetation

Since the site itself is fully developed, the site vegetation is limited to landscaping. Park land on the west and south is also landscaped vegetation that supports some growth of weeds and forms a buffer approximately 4 to 6 m (12 to 18 ft) wide of mostly herbs and shrubs (hedges) between the walls of the building and the pedestrian access areas (lawn or walkway) of the park.

Flora

Table 1 is a listing of all the species of ferns, gymnosperms, and flowering plants observed during the survey. Total number of taxa listed is 82. Of these, only one (1; 1%) is actually a native plant species: *moa* (*Psilotum nudum*), a small fern relative observed growing in a planter on the second floor of the garage structure. Another four species (5%) are regarded as very early Polynesian introductions and therefore of potential cultural interest. These are: *ʻōhaʻi ʻai* or mountain apple (*Syzygium malaccense*), *ʻihiʻai* or yellow wood sorrel (*Oxalis corniculata*), *ki* or ti (*Cordyline fruticosa*), and *niu* or coconut (*Cocos nucifera*). Only the *ʻihiʻai* (a small clover-looking weed) and *ki* (common landscape plant) were observed on the subject property. The *ʻōhaʻi ʻai,* located between the project building and the Fort DeRussy chapel, is a beautiful specimen of this fruit tree. Coconut trees are located throughout Fort DeRussy park.

Table 1. Flora listing for 2051 and 2057 Kalākaua Avenue and surrounding grounds.

Species listed by family	Common name	Status	Abundance	Notes
	FERNS AND FERN ALLIES			
PTERIDACEAE	(ferns)			
Pteris vittata L.	ladder brake	Nat	R	<1> <2>
PSILOTACEAE	(whisk ferns)			
Psilotum nudum (L.) P. Beauv.	*moa*	**Ind**	R	<1> <2>
	GYMNOSPERMS CONIFERS AND CYCADS			
PODOCARPACEAE	(yew pines)			
Podocarpus sp.	podocarpus	Orn	R	<2> <3>
	FLOWERING PLANTS DICOTYLEDONES			
ACANTHACEAE				
Asystasia gangetica (L.) T. Anderson	Chinese violet	Nat	U	<2>
Barleria repens L.	pink-ruellia	Orn	O1	<2>
Graptophyllum pictum (L.) Griff.	caricature plant	Orn	U	
APOCYNACEAE				
Carissa macrocarpa (Ecklon) A. de Candolle	Natal-plum (hedge)	Orn	U	<2>
Cantharanthus roseus (L.) G. Don	Madagascar periwinkle	Nat	R	<1> <2>
ARALIACEAE				
Schefflera actinophylla (Endl.) Harms	octopus tree	Nat	R	<1>
ASTERACEAE (COMPOSITAE)	(daisies)			
Calyptocarpus vialis Less.	---	Nat	C	<2>
Cyanthillium cinereum (L.) H. Rob.	little ironwood	Nat	U	
Eclipta prostrata (L.) L.	false daisy	Nat	R	
Emilia fosbergii Nicolson	Flora's paintbrush, *pualele*	Nat	U	
Sonchus oleraceus L.	sow thistle	Nat	U	<2>
Sphagneticola triloba (L.) Pruski	wedelia	Nat	U	<1>
Synedrella nodiflora (L.) Gaertn.	---	Nat	O	
Youngia japonica (L.) DC.	Oriental hawksbeard	Nat	U	<2>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
BIGNONIACEAE				
Spathodea campanulata P. Beauv.	African tulip tree (juv.)	Nat	R	
Tabebuia cf. *heterophylla* (A. P. de Candolle) Britt.	pink tecoma (juv.)	Orn	R	<3>
CACTACEAE				
Opuntia cochenillifera (L.) P. Mill.	cochineal cactus	Orn	R	<2>
CARICACEAE				
Carica papaya L.	papaya	Nat	R	<1> <2>
CONVOLVULACEAE				
Evolvulus glomeratus C. Nees & Martius	blue daze	Orn	R	<2>
Ipomoea obscura (L.) Ker-Gawl	---	Nat	C	<2>
CUCURBITACEAE				
Coccinia grandis (L.) Voigt	scarlet-fruited gourd	Nat	R	
ERICACEAE				
Rhododendron sp.	rhododendron	Orn	U	
EUPHORBIACEAE				
Codiaeum variegatum (L.) Blume	croton	Orn	R	
Euphorbia hypericifolia L.	graceful spurge	Nat	U	<2>
Euphorbia prostrata Aiton	prostrate spurge	Nat	U	<2>
Euphorbia pulcherrima Klotz.	poinsettia	Orn	R	<2>
Phyllanthus debilis Klein ex Willd.	niruri	Nat	U	<2>
Phylanthus tenellus Roxb.	---	Nat	R	<2> <3>
FABACEAE				
Acacia confusa (L.) Willd.	Formosan *koa*	Nat	R	<1> <2>
Albizia saman F. Muell.	monkeypod	Nat	R	<1>
Cassia xnealiae H.S. Irwin & Barneby	rainbow shower tree	Orn	R	
Desmanthus pernambucanus (L.) Thellung	virgate mimosa	Nat	U	
MALVACEAE				
Hibiscus rosa-sinensis L.	Chinese hibiscus cult.	Orn	R1	
MORACEAE				
Ficus microcarpa L. f.	Chinese banyan	Nat	R	<1>
Ficus microcarpa var. *crassifolia* (W.C. Shieh) J.C. Liao	wax ficus (hedge)	Orn	R1	<2>
Ficus religiosa L.	bo tree (juv.)	Nat	R	
MYRTACEAE				
Psidium cattleianum L.	strawberry guava	Nat	R	<1> <2>
Syzygium malaccense (L.) Merr. & L.M. Perry	*ʻōhiʻa ʻai*	**Pol**	R	<1>

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
NYCTAGINACEAE				
Boerhavia coccinea Mill.	false *alena*	Nat	R	
OXALIDACEAE				
Oxalis corniculata L.	*ʻihiʻai,* yellow wood sorrel	**Pol?**	U1	<2>
PASSIFLORACEAE				
Passiflora suberosa L.	*huehue haole*	Nat	R	
PITTOSPORACEAE				
Pittosporum tobira (Thunb.) W.T. Aiton	tobira (hedge)	Orn	A	
RUBIACEAE				
Gardenia augusta (L.) Merr.	gardenia	Orn	R	<2> <3>
Hedyotis corymbosa (L.) Lam.	---	Nat	R	
RUTACEAE	(citruses)			
Murraya paniculata (L.) Jack	mock orange	Nat	U2	<1> <2>
VERBENACEAE				
Lantana camara L.	lantana	Nat	R	<2>
	FLOWERING PLANTS			
	MONOCOTYLEDONES			
AGAVACEAE				
Cordyline fruticosa (L.) A. Chev.	*ki,* ti; ornamental	**Pol**	R	<1> <2>
Dracaena marginata Lam.	money tree, tricolor	Orn	R	<2>
ARACEAE				
Dieffenbachia maculata (Lodd.) G. Don	dumb cane	Orn	R	<2>
Epipremnum pinnatum (L.) Engler	pothos	Nat	O2	<1>
Syngonium sp.	nephthytis	Nat	A	<1> <2>
Xanthosoma violaceum Schott	blue *ʻape*	Orn	R	<2>
ARECACEAE	(palms)			
Cocos nucifera L.	coconut palm	**Pol**	R	<1>
Dypsis lutescens (H. Wendl.) Beentje & J. Dransfield	areca palm	Orn	R	
Livistonia chinensis (N. Jacq.) Mart.	Chinese fan palm	Nat	R	<1>
Pritchardia pacifica Seemann. & H. Wendl.	Fiji fan palm	Orn	R	
Ptychosperma macarthurii (Vietch) J.D. Hook.	Macarthur palm	Orn	R	
Veitchia merrilli (Becarri) H.E. Moore	Manila palm	Orn	U	

Table 1 (continued).

Species listed by family	Common name	Status	Abundance	Notes
COSTACEAE				
Costus cf. *woodsonii* Maas	Indian-head ginger (sedges)	Orn	R	<2> <3>
CYPERACEAE				
Cyperus gracilis R. Br.	McCoy grass	Nat	C	<2>
Cyperus rotundus L.	nut grass	Nat	U	
Kyllinga brevifolia Rottb.	*kili'o'opu*	Nat	C	
Kyllinga nemoralis (J.R. & G. Forst.) Dandy ex Hutchinson & Dalziel	*kili'o'opu*	Nat	O	
HELICONIACEAE	(heliconias)			
Heliconia psittacorum L. f.	rhizomatosa heliconia	Orn	R	<2>
LILIACEAE	(lilies)			
Asparagus densiflorus (Kunth) Jessop	asparagus "fern"	Nat	U	<1> <2>
Crinum asiaticum L.	giant lily	Nat	R	<1>
Liriope sp.	lilyturf	Orn	R1	<2> <3>
POACEAE	(grasses)			
Axonopus compressus (Swartz) P. Beauv.	brd-lv carpet grass	Nat	A	<1> <2>
Bambusa multiplex (Lour.) J.A. & J.H. Schultes	hedge bamboo	Orn	R1	<2>
Bothriochloa pertusa (L.) A. Camus	pitted beardgrass	Nat	O	
Cenchrus echinatus L.	sand bur	Nat	R	
Digitaria ciliaris (Retz.) Koeler	Henry's crabgrasss	Nat	R	
Digitaria radicosa (J. Prsl.) Miq.	---	Nat	U	
Eremochloa ophiuroides Büse	centipede grass	Orn	O	<2> <3>
Paspalum conjugatum Bergius	Hilo grass	Nat	O1	
Sporobolus indicus (L.) R. Br.	West Indian dropseed	Nat	U	
Stenotaphrum secundatum (Walter) Kuntze	St. Augustine grass	Nat	C	<1>
Zoysia matrella var. *matrella* Merr.	Manila grass	Orn	U	
STRELITZIACEAE				
Strelitzia reginae Dryander	bird-of-paradise	Orn	R	

Key to Table 1

STATUS = distributional status for the Hawaiian Islands:

Ind = indigenous; native to Hawaii, but not unique to the Hawaiian Islands.

Nat = naturalized, exotic, plant introduced to the Hawaiian Islands since the arrival of Cook Expedition in 1778, and well-established outside of cultivation.

Orn = A cultivated plant; a species not thought to be naturalized (spreading on its own) in Hawai'i.

Table 1 (continued).

ABUNDANCE = occurrence ratings for plant species:

R – Rare	seen in only one or perhaps two locations.
U - Uncommon	seen at most in several locations
O - Occasional	seen with some regularity
C - Common	observed numerous times during the survey
A - Abundant	found in large numbers; may be locally dominant.

Numbers (1 – 3) following qualitative rating of abundance indicate localized abundance is greater than occurrence rating. For example, R3 would be a plant encountered only once or twice, but very numerous where encountered.

NOTES: <1> – Plant status not ornamental, but planted at this site in the landscaping as an ornamental.
<2> - Species observed within the property boundary.
<3> - Plant lacking key diagnostic characteristics (flower, fruit); identification, therefore, somewhat uncertain.

Twenty-nine (29) of the species are ornamental plants; 21 are plants naturalized in Hawai'i (non-natives that do grow in the wild) but planted and maintained in this landscape as ornamentals. Thus, 50 species (61%) are purposely planted in and around the site; the remaining species (naturalized, not planted) are weeds.

Avian Survey

Avian Point Count Survey

A total of 134 individual birds of 11 species, representing seven separate families, was recorded during station counts (Table 2). Avian diversity was relatively low, but in keeping with the urban resort nature of the surrounding area. Three species—Common Waxbill (*Amandava amandava*), House Sparrow (*Passer domesticus*), and White Tern (*Gygas alba*)—accounted for 62% of all birds recorded during station counts. The most frequently recorded species was Common Waxbill, which accounted for 30% of the total number of individual birds recorded during station point counts.

Native Species

One of the species recorded, White Tern, is an indigenous breeding seabird species. White Terns are listed as a threatened species under State of Hawai'iendangered species statutes (DLNR, 1998). This species is not listed as either endangered or threatened under the federal Endangered Species Act (ESA). The remaining 10 species recorded during the course of this survey are alien to the Hawaiian Islands (USFWS, 2014).

Table 2 – Avian species detected at 2051 and 2057 Kalākaua Avenue and area surrounding.

Common Name	Scientific Name	ST	RA
	CHARADRIIFORMES		
	LARIDAE - Gulls, Terns & Skimmers		
	Sterninae - Terns		
White Tern	*Gygis alba*	IR	10.50
	COLUMBIFORMES		
	COLUMBIDAE - Pigeons & Doves		
Rock Pigeon	*Columba livia*	A	3.50
Spotted Dove	*Streptopelia chinensis*	A	2.00
Zebra Dove	*Geopelia striata*	A	5.50
	PASSERIFORMES		
	PYCNONOTIDAE - Bulbuls		
Red-vented Bulbul	*Pycnonotus cafer*	A	2.00
Red-whiskered Bulbul	*Pycnonotus jocosus*	A	1.00
	STURNIDAE - Starlings		
Common Myna	*Acridotheres tristis*	A	7.50
	FRINGILLIDAE - Fringilline and Carduline Finches & Allies Carduelinae - Carduline Finches		
House Finch	*Haemorhous mexicanus*	A	1.50
	PASSERIDAE - Old World Sparrows		
House Sparrow	*Passer domesticus*	A	11.00
	ESTRILDIDAE - Estrildid Finches		
Common Waxbill	*Estrilda astrild*	A	20.00
Java Sparrow	*Lonchura oryzivora*	A	2.50

Key to Table 2

ST Status
- A Alien – Introduced to the Hawaiian Islands by humans
- IR Indigenous Resident – A native resident breeding species, not unique to the Hawaiian Islands
- RA Relative Abundance – Number of birds detected divided by the number of count stations (2)

Mammals Survey

No terrestrial mammalian species were detected on site during the course of this survey. No mammalian species currently protected or proposed for protection under either the federal or State of Hawai‘i endangered species programs (DLNR, 1998; USFWS, 2014) are anticipated to visit or utilize the subject property.

Discussion

Botanical Resources

Our survey revealed no issues on the subject property with respect to the species of plants growing there. No species listed under either state or federal endangered species programs (DLNR, 1998; USFWS, 2014) are present on or immediately adjacent to the site.

Avian Resources

The findings of the avian survey are consistent with the urban resort development present within the general project area, and the reality that the subject property is almost completely covered with a two-story structure. As previously noted, one of the species detected, White Tern, is an indigenous resident seabird species with the O‘ahu population listed under state endangered species statutes as a threatened species (DLNR, 1968). The species is a relatively common, nesting species in the general Waikiki area, first recorded as one pair in Honolulu in 1961 (Ord, 1961; VanderWerf, 2003; David, 2013, 2015). VanderWerf reported a population growth rate in Honolulu of this species of 14% a year, which for a seabird species nesting in an urban setting is amazing. His published results of surveys conducted for nesting White Terns in Honolulu between 2001 and 2003 indicated a population of approximately 250 birds (VanderWerf, 2003). Clearly the number of birds has continued to increase over the intervening 12 years, evidenced here by the 20 or so birds we recorded flying around the subject property.

White Terns in Honolulu nest year round, but with a marked peak between January and April, with March having the greatest nesting activity. A species pair lays and tends one egg, not in a nest, but rather setting the egg in a tree limb crotch, depression, or other location where it will not easily be dislodged. The nesting birds in and around Kalākaua Avenue have been breeding there since at least the early part of the century. We encountered one pair of adults

tending a pre-fledgling chick in a shower tree located along Kalākaua Avenue in front of the property, and another pair with a recently fledged juvenile bird in one of the banyan trees located immediately south of the structure within Fort DeRussy property, and three other pairs roosting and flying in and out of various other shower trees adjacent to the subject property.

We did not record any migratory shorebirds, likely due to the timing of the survey, which was conducted in early June, approximately a month after migratory shorebirds depart the Hawaiian Islands for their breeding grounds in the high Arctic. It is likely that at least one of these species, Pacific-Golden Plover (*Pluvialis fulva*) use resources in the area surrounding the property during the winter and spring months each year, as this migratory species is commonly seen around the state in grassy areas, and often on building roofs around the state.

Mammalian Resources

Although we did not record any mammalian species on or adjacent to the subject property, it can be expected that all of the standard human commensal species, including cats (*Felis catus*), dogs (*Canis familiaris*), small Indian mongoose (*Herpestes auropunctatus*), and one or more of the four established alien Muridae found on Oʻahu—roof rat (*Rattus rattus*), brown rat (*Rattus norvegicus*), European house mouse (*Mus musculus domesticus*), and Polynesian rat (*Rattus exulans hawaiiensis*)—use various resources found within the general area on a seasonal basis. All of these introduced species are deleterious to native species. The native *ʻōpeʻapeʻa* or Hawaiian hoary bat (*Lasiurus cinereus semotus*) is an endangered species, but was not detected during the course of our survey. Given the limited natural environment on the property, this listed mammal is not anticipated to be present.

Federal Jurisdictional Waters / Critical Habitat

Our survey revealed no federal jurisdictional waters (streams or wetlands) on the subject property. Further, no federally delineated Critical Habitat for any species includes or is adjacent to the parcels. Thus, modifications of habitats on the site will not result in impacts to federally designated Critical Habitat. There is no equivalent statute under state law.

Issues of Potential Significance

The only species recorded during the course of these surveys or likely to occur within the subject property or adjacent area that we are aware of from a

literature review and our combined 90-years of experience in conducting biological surveys and bio-regulatory permitting in Hawai'i is the White Tern. In the recent past, the City and County of Honolulu, Department of Planning and Permitting (DPP) has required construction projects in the greater Waikīkī area to consult with the State of Hawai'i, Department of Natural Resources, Division of Forestry and Wildlife (DOFAW) regarding potential impacts of construction activity on nesting terns. The usual condition included in a building permit is that a qualified biologist conduct a survey of vegetation (trees) that will likely be directly impacted and vegetation within a reasonable buffer zone prior to the onset of heavy construction to ensure that at the time of clearing, grubbing, demolition, or other heavy construction activity, no White Tern egg, chick, or fledgling is endangered. These surveys are relatively straight-forward. In the worst-case, heavy construction or demolition activities are delayed until a discovered egg, chick, or fledgling departs a potentially impacted tree, usually within 10 to 50 days. Peak egg-laying occurs in March, with potential egg-laying for this species occurring between January and May.

Currently there is no federal agency consultation triggered by any biological species or other feature present, or realistically expected to be present, within the survey area.

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Cultural Impact Assessment for One Waikīkī Feasibility Study (EA), Waikīkī Ahupuaʻa, Honolulu (Kona) District, Oʻahu TMKs: [1] 2-6-006:001 and 004

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Management Summary

Reference	Cultural Impact Assessment for the One Waikīkī Feasibility Study (EA), Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu, TMKs: [1] 2-6-006:001 and 004 (Ishihara et al. 2015)
Date	July 2015
Project Number(s)	Cultural Surveys Hawai‘i, Inc. (CSH) Job Code: WAIKIKI 167
Agencies	State of Hawai‘i Department of Health/Office of Environmental Quality Control (DOH/OEQC)
Land Jurisdiction	City and County of Honolulu Department of Planning and Permitting data shows TMK: [1] 2-6-006:001 at 2045 Kalākaua Avenue and TMK: [1] 2-6-006:004 at 2051 Kalākaua Avenue as owned in fee by Leahi LLC
Project Location	The project area is located on the northwest end of central Waikīkī adjacent to the west side of Kalākaua Avenue (at 2045 and 2051 Kalākaua Avenue). The project area is bounded to the west by Kalākaua Avenue, to the south and east by federal Fort DeRussy lands, and to the north by the grounds and the buildings of the Luana Waikiki Condominium/Hotel (TMK: [1] 2-6-006:002).
Project Description	Details of any possible project development are not known by CSH at this time. Possible development could include a high-rise condominium or hotel.
Project Acreage	0.27 ha or 0.66 acres or 2672.0 sq m or 28,761 sq ft
Document Purpose	This CIA was prepared to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the proposed project’s potential effect on cultural beliefs, practices, and resources. Through document research and cultural consultation efforts, this report provides information compiled to date pertinent to the assessment of the proposed project’s potential impacts to cultural beliefs, practices, and resources (pursuant to the Office of Environmental Quality Control’s *Guidelines for Assessing Cultural Impacts*) which may include Traditional Cultural Properties (TCPs). These TCPs may be significant historic properties under State of Hawai‘i significance criterion “e,” pursuant to Hawai‘i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance criterion “e” refers to historic properties that “have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity” (HAR §13-275-6 and §13-284-6). The document will likely also support the project’s historic preservation

	review under HRS §6E and HAR §13-275 and §13-284. 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 §6E-8 and HAR §13-284.
Results of Background Research	Background research for this project yielded the following results: 1. Waikīkī was comprised of a vast system of irrigated taro fields which spanned from Waikīkī Kai to the valleys of Mānoa. The Waikīkī marshland was an excellent place to grow taro. 2. The Waikīkī area was full of aquatic resources including fishponds that dotted the shoreline of the *ahupua‘a* (land division extending from the mountain to the sea). 3. Several *heiau* (pre-Christian place of worship) including Papa‘ena‘ena Heiau, Kapua Heiau, Kūpalaha Heiau, Helumoa Heiau, Kamauakapu, Makahuna Heiau, Pahu-a-Maui, and Ōpūnahā Heiau were amongst those that stood in Waikīkī Ahupua‘a. 4. During the first decade of the twentieth century, the U.S. War Department acquired more than 70 acres in Kālia ‘Ili to establish the Fort DeRussy Military Reservation, named in honor of Brigadier General R.E. DeRussy of the Army Corps of Engineers. The western and southwestern portion of the project area is bound by the Fort DeRussy Military Reservation. 5. Two historic properties were found on the west and southwest portions of the project area. State Inventory of Historic Places (SIHP) # 50-80-14-04970 is a pre- and post-Contact *‘auwai* (irrigation ditch) and bund system used in the cultivation of taro. SIHP # 50-80-14-04576, Loko Paweo II fishpond, was filled for the construction of the Fort DeRussy Military Reservation.
Impacts and Recommendations	Based on information gathered from the cultural and historic background detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH summarizes the potential impacts: 1. Community consultation should be conducted to inform *kama‘āina* (Native born), *kūpuna* (elders), lineal and cultural descendants of the proposed project and to collect information on traditional cultural practices (past and present) within Waikīkī Ahupua‘a. A proposed community contact outreach list is available in Appendix B 2. There is a significant possibility that *iwi kūpuna*, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural materials. 3. Personnel involved in the project construction activities should be informed of the possibility of inadvertent cultural finds, including

	human remains. Should burials or other cultural finds be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law, HRS §6E. 4. Project proponents should consult with lineal and cultural descendants of Waikīkī to develop a reinterment plan and cultural preservation plan in the event that any human remains, cultural sites or artifacts are uncovered during construction or long-term maintenance for this project.

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Section 1 Introduction

1.1 Project Background

At the request of Rider Levett Bucknall Ltd., Cultural Surveys Hawai‘i, Inc. (CSH) has prepared this cultural impact assessment (CIA) report for the One Waikīkī Feasibility Study (EA), Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu, TMKs: [1] 2-6-006:001 and 004. The property evaluated here consists of two adjacent parcels, the southeastern parcel 001 of 17,257 sq ft at 2045 Kalākaua Avenue and the northwestern parcel 004 of 11,504 sq ft at 2051 Kalākaua Avenue for a total area of 28,761 sq ft (0.66 acres or 0.27 ha or 2,672.0 sq m). The project area is depicted on a portion of the 1998 U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), tax map plat (Figure 2), and a 2013 aerial photograph (Figure 3). The project area is located on the northwest end of central Waikīkī adjacent to the west side of Kalākaua Avenue. The project area is bounded to the west by Kalākaua Avenue, to the south and east by federal Fort DeRussy lands, and to the north by the grounds and the buildings of the Luana Waikiki Condominium/Hotel (TMK: [1] 2-6-006:002).

1.2 Scope of Work

The scope of work for this CIA includes the following:

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

1.3 Document Purpose

The purpose of this CIA is to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the project’s potential effect on cultural beliefs, practices, and resources. Through document research and cultural consultation efforts, this report provides information compiled to date pertinent to the assessment of the proposed project’s potential impacts on cultural beliefs, practices, and resources (pursuant to the Office of Environmental Quality Control’s *Guidelines for Assessing Cultural Impacts*), which may include Traditional Cultural Properties (TCPs). These TCPs may be significant historic properties under State of Hawai‘i significance criterion “e,” pursuant to Hawai‘i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance criterion “e” refers to historic properties that “have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group’s history and cultural identity” (HAR §13-275-6 and §13-284-6). The document will likely also support the project’s historic preservation review under

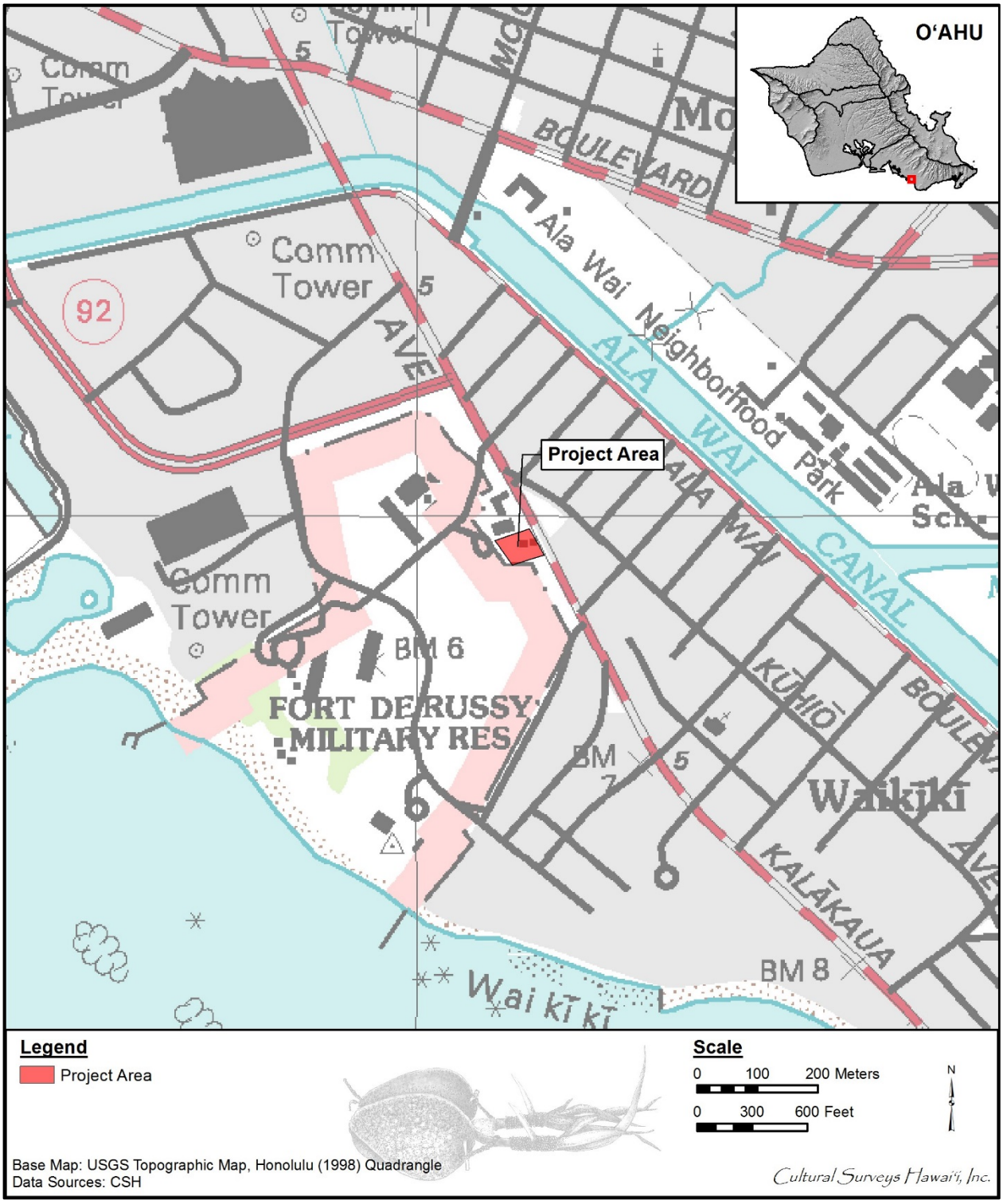

Figure 1. Portion of the 1998 USGS 7.5-minute topographic Honolulu quadrangle showing the location of the study area

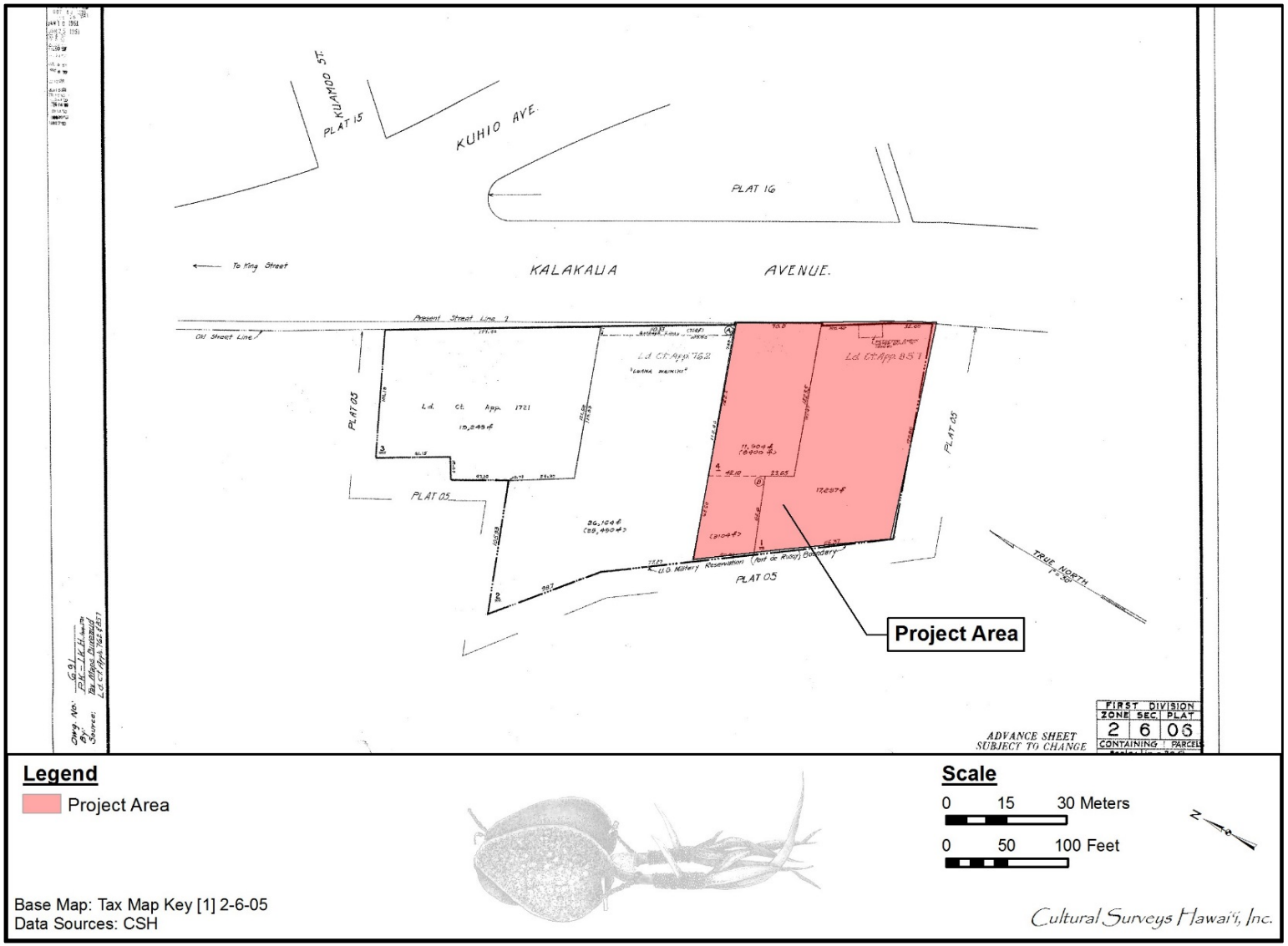

Figure 2. Tax Map Key (TMK) [1] 2-6-006 depicting the project area (Hawai‘i TMK Service)

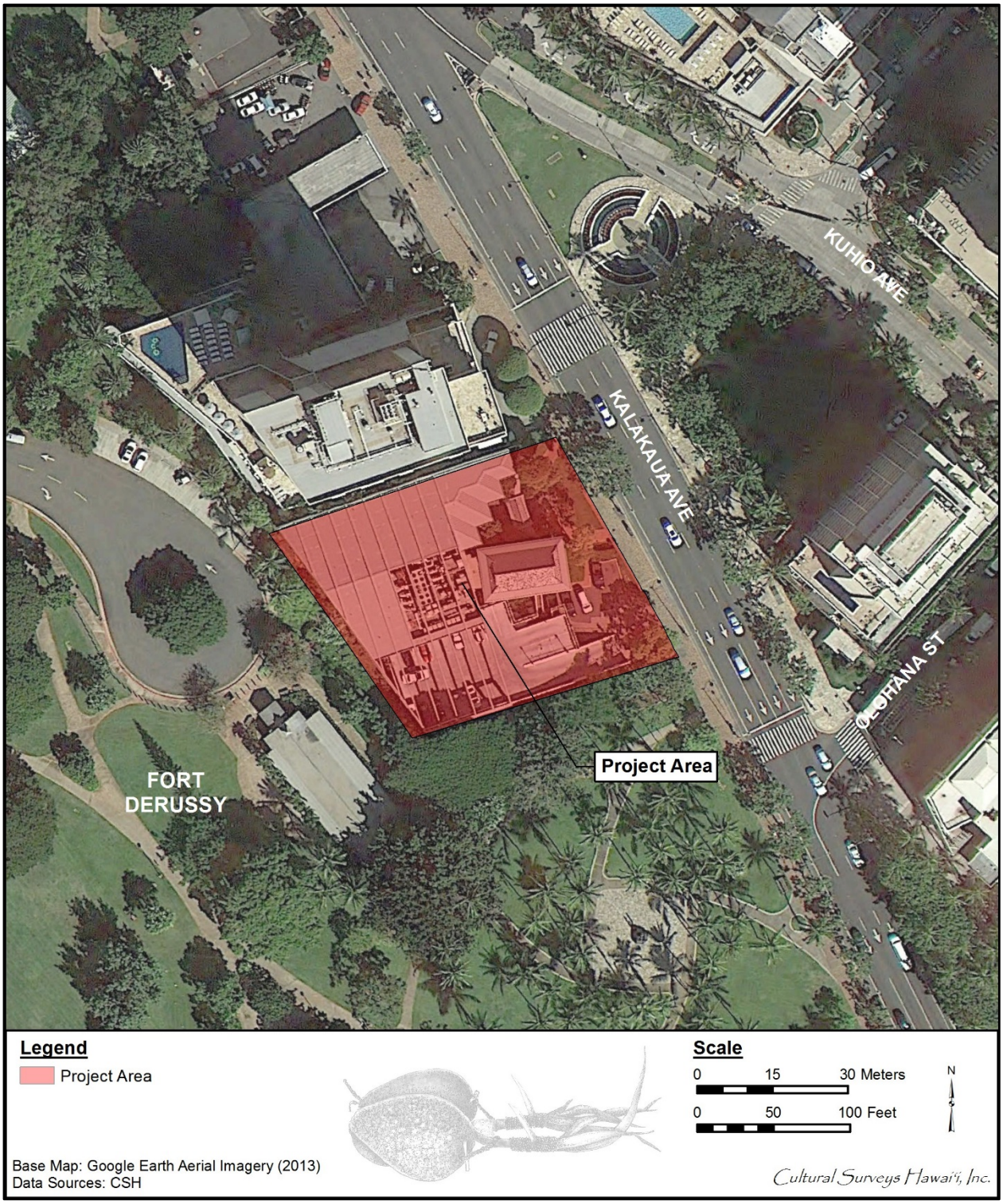

Figure 3. Aerial photograph (Google Earth 2013), showing study area bordered by Pi‘ikoi Street, Alder Street, and Elm Street

HRS §6E and HAR §13-275 and §13-284. 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 §6E-8 and HAR §13-284.

1.4 Environmental Setting

1.4.1 Natural Environment

Each small geographic area on O‘ahu had a Hawaiian name for its own wind, rain, and seas. The name of the winds of O‘ahu are listed in a chant concerning a powerful gourd called the wind gourd of La‘amaomao. When the gourd was opened, a specific wind could be called to fill the sails of a canoe and take the person in the desired direction.

1.4.1.1 *Makani* (Prevailing Winds)

Northeasterly trade winds prevail throughout the year, although their frequency varies from 80 to 95% of the time during the summer months, when high-pressure systems tend to be located north and east of Hawai‘i. During the winter months, the high pressure systems are located farther to the south, decreasing the occurrence of the trade winds to about 50 to 80% of the time (WRCC 2010).

Ancient Hawaiians recognized different weather characteristics and named each of the predominant winds using an expressive term descriptive of the wind's direction and velocity. *Makani* is the Hawaiian word for wind. A‘e Loa is the primary Hawaiian name given to the northeasterly trade winds (Nakuina 1990: 138). A‘e, Moa‘e, and Na‘e are other names given to this island trade wind (Pukui and Elbert 1986: 3). Two additional winds found in the vicinity of the project area are ‘Ōlauniu of Kahaloa and Kukalahale of Honolulu (Nakuina 1990:50–51)

1.4.1.2 *Ua* (Precipitation)

Precipitation is the main component of the water cycle responsible for depositing *wai* (fresh water) on local flora. Pre-Contact *kānaka* (Native Hawaiians) recognized two distinct annual seasons. The first, known as *kau* (period of time, especially summer), lasts typically from May to October and is a season marked by a high-sun period corresponding to warmer temperatures and steady trade winds. The second season, *ho‘oilo* (winter, rainy season), continues through the end of the year from November to April and is a much cooler period when trade winds are less frequent, and widespread storms and rainfall become more common (Giambelluca et al. 1986:17). Typically the maximum rainfall occurs in January and the minimum in June (Giambelluca et al. 1986:17). Handy and Pukui describe the Hawaiian seasons:

> The season of storm and rain was termed Ho‘oilo, including roughly the period of November through March, It commenced with ‘Ikuwa (October-November) whose name mean ‘Loud-voice,’ when Lono's thunder resounds over uplands and plains. Now the long drought of summer, when the intense heat of radiation of sun on black lava combined with the steady tradewinds made the kula kai seared and dry as a black tropical desert and the kula uka brown and arid, gives way to moisture-laden southern warm fronts pressing inshore, as tradewinds lapse. November is a noisy month with variable strong winds; and with the winds come the roaring and pounding surf on Ka-‘u's lava-walled shores and small beaches. Commencing now and continuing through the rainy months until March, there was and is little deep-

> sea fishing, and inshore fishing depending on those occasions when the sea was not too rough. [Handy and Pukui 1977: 23]

Annual rainfall in the project area varies between 25 and 125 inches, higher volumes occur in the rainy season between November and April. The mean rainfall in the project area is 600 mm (23.625 inches) (Giambelluca et al. 1986:138). In the Honolulu District, rainfall averages less than 30 inches per year (Armstrong 1983:62). Kūkalahale is the Hawaiian name for one of the rains that fall in Honolulu.

1.4.1.3 *Wai* (Streams, Rivers, and Estuaries)

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

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

Fishponds in the *‘ili* (land division) of Kālia included Kaihikapu (or Ka‘ihikapu), Kaipuni, and Paweo (or Pāweo) among others. Prior to the formalization of these fishponds, which would have required extensive social organization and management, it is likely that the area immediately inland of the current project area was part of a vast natural wetland habitat for shorebirds, fish, and other estuary resources.

1.4.1.4 *‘Āina* (Soil Surveys)

Lands within the project area are relatively level with an elevation of 3 ft above mean sea level (AMSL). According to U.S. Department of Agriculture (USDA) soil survey data, sediments within the project area consist exclusively of Fill Land (FL):

> Fill is described as a land type occurring 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. [Foote et al. 1972]

During the pre-Contact and early post-Contact periods, natural vegetation would have consisted of coastal marshland species, but the original wetlands have been filled and replaced with an entirely modified landscape and manicured landscaping. Figure 4 illustrates the various soil sediments within and in the vicinity of the project area.

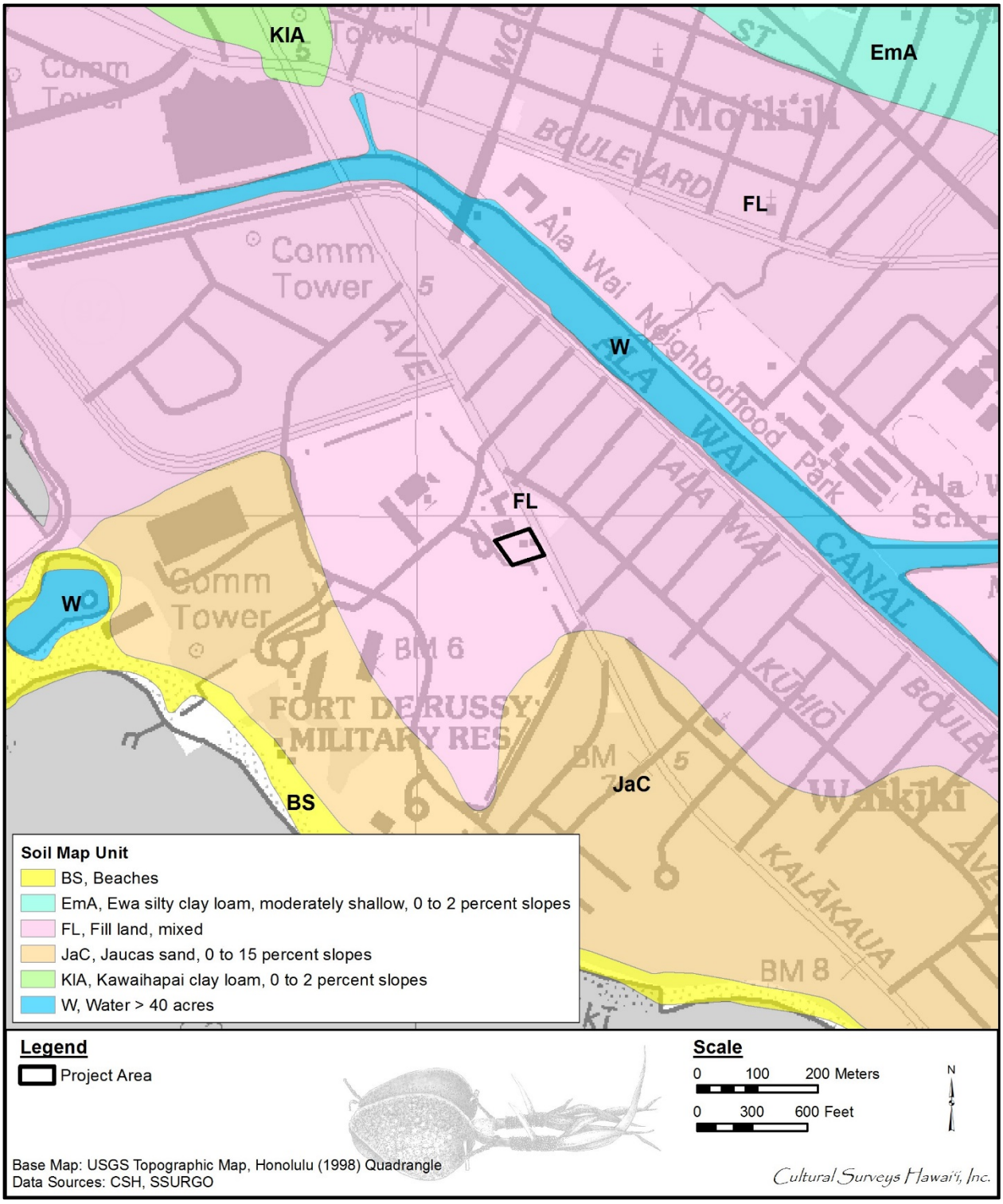

Figure 4. 2013 aerial photograph (Google Earth 2013) with an overlay of the USDA SSURGO database (2001) and soil survey data gathered by Foote et al. (1972)

1.4.2 Built Environment

The first major modifications to the natural landscape of the study area were undertaken following the translocation of the O‘ahu royal seat to Waikīkī in the 1400s. The natural wetlands of Waikīkī were transformed into a large network of fishponds, *‘auwai* (irrigation ditches), bunds, and agricultural fields, such as taro *lo‘i* (irrigated terrace), banana and sugar cane plantings, and coconut groves. Within the study area an interlocking complex of fishponds (known as Loko Kaipuni, Loko Pāweo I and II, Loko Kapuuiki, Loko Kaihipu, and Loko Kohai) were created and remained extant up until the late 1920s.

Subsequent intensive historic development of the project area has resulted in an entirely modified landscape in which the original wetlands have been filled in and surfaced with paved asphalt roads, concrete walkways, and manicured landscaping. Kalākaua Avenue, one of the major vehicular and pedestrian thoroughfare in Waikīkī bounds the project area to the northeast. The original Kyo-Ya Restaurant was built in 1958 and was extensively remodeled in 1991. The building adjacent to the property—the 17-story condominium/hotel, the Luana Waikiki—was constructed in 1971. This section of Kalākaua Avenue consists of a dense concentration of hotels, condos, shops, restaurants, and tourist attractions, broken only by the extensive parkland green spaces of Fort DeRussy to the south, southwest, west, and northwest of the project area. A Fort DeRussy wedding chapel is located immediately southwest of the present study area.

Section 2 Methods

2.1 Archival Research

Research centers on Hawaiian activities including *ka‘ao* (legends), *wahi pana* (storied places), *‘ōlelo no‘eau* (proverbs), *oli* (chants), *mele* (songs), traditional *mo‘olelo* (stories), traditional subsistence and gathering methods, ritual and ceremonial practices, and more. Background research focuses on land transformation, development, and population changes beginning with the early post-Contact era to the present day.

Cultural documents, primary and secondary cultural and historical sources, previous archaeological reports, historic maps, and photographs were reviewed for information pertaining to the study area. Research was primarily conducted at the CSH library. Other archives and libraries including the Hawai‘i State Archives, the Bishop Museum archives, the University of Hawai‘i at Mānoa’s Hamilton Library, Ulukau, The Hawaiian Electronic Library (Ulukau.org 2004), the State Historic Preservation Division (SHPD) library, the State of Hawai‘i Land Survey Division, the Hawaiian Historical Society, and the Hawaiian Mission Houses Historic Site and Archives are also repositories where CSH cultural researchers gather information. Information on Land Commission Awards (LCAs) were accessed via Waihona ‘Aina Corporation’s Māhele database (Waihona ‘Aina 2000), the Office of Hawaiian Affairs (OHA) Papakilo Database (Office of Hawaiian Affairs 2015), and the Ava Konohiki Ancestral Visions of ‘Āina website (Ava Konohiki 2015).

2.2 Community Consultation

2.2.1 Scoping for Participants

We begin our consultation efforts by utilizing our previous contact list to facilitate the interview process. We then review an in-house database of *kūpuna* (elders), *kama‘āina* (native born), cultural practitioners, lineal and cultural descendants, Native Hawaiian Organizations (NHOs; includes Hawaiian Civic Clubs and those listed on the Department of Interior’s NHO list), and community groups. We also contact agencies such as SHPD, OHA, and the appropriate Island Burial Council where the proposed project is located for their response on the project and to identify lineal and cultural descendants, individuals and/or NHO with cultural expertise and/or knowledge of the study area. CSH is also open to referrals and new contacts.

2.2.2 “Talk Story” Sessions

Prior to the interview, CSH cultural researchers explain the role of a CIA, how the consent process works, the project purpose, the intent of the study, and how their *‘ike* (knowledge) and *mana‘o* (thought, opinion) will be used in the report. The interviewee is given an Authorization and Release Form to read and sign.

“Talk Story” sessions range from the formal (e.g., sit down and *kūkā* [consultation, discussion] in the participant’s place of choice over set interview questions) to the informal (e.g., hiking to cultural sites near the study area and asking questions based on findings during the field outing). In some cases, interviews are recorded and transcribed later.

CSH also conducts group interviews, which range in size. Group interviews usually begin with set, formal questions. As the group interview progresses, questions are based on interviewees' answers. Group interviews are always transcribed and notes are taken. Recorded interviews assist the cultural researcher in 1) conveying accurate information for interview summaries, 2) reducing misinterpretation, and 3) adding missing details to *mo‘olelo*.

CSH seeks *kōkua* (assistance) and guidance in identifying past and current traditional cultural practices of the study area. Those aspects include general history of the *ahupua‘a* (traditional land division extending from the mountain to the sea); past and present land use of the study area; knowledge of cultural sites (for example, *wahi pana*, archaeological sites, and burials); knowledge of traditional gathering practices (past and present) within the study area; cultural associations (*ka‘ao* and *mo‘olelo*); referrals; and any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the study area.

2.2.3 Interview Completion

After an interview, CSH cultural researchers transcribe and create an interview summary based on information provided by the interviewee. Cultural researchers give a copy of the transcription and interview summary to the interviewee for review and ask that they make any necessary edits. Once the interviewee has made those edits, we incorporate their *‘ike* and *mana‘o* into the report. When the draft report is submitted to the client, cultural researchers then prepare a finalized packet of the participant's transcription, interview summary, and any photos that were taken during the interview. We also include a thank you card and honoraria. This is for the interviewee's records.

It is important that CSH cultural researchers cultivate and maintain community relationships. The CIA report may be completed, but CSH researchers continuously keep in touch with the community and interviewees throughout the year—such as checking in to say hello via email or by phone, volunteering with past interviewees on community service projects, and sending holiday cards to them and their *‘ohana* (family). CSH researchers feel this is an important component to building relationships and being part of an *‘ohana* and community.

"*I ulu no ka lālā i ke kumu*—the branches grow because of the trunk," is an *‘ōlelo no‘eau* (#1261) shared by Mary Kawena Pukui with the simple explanation: "Without our ancestors we would not be here" (Pukui 1983:137). As cultural researchers, we often lose our *kūpuna* but we do not lose their wisdom and words. We routinely check obituaries and gather information from other informants if we have lost our *kūpuna*. CSH makes it a point to reach out to the *‘ohana* of our fallen *kūpuna* and pay our respects including sending all past transcriptions, interview summaries, and photos for families to have on file for genealogical and historical reference.

Section 3 *Ka‘ao* (Legends)

3.1 *Ka‘ao* Associated with Waikīkī

3.1.1 Overview

Storytelling is better heard than read for much becomes lost in the transfer from the spoken word to the written word. Hawaiian storytellers of old were greatly honored and played a major entertainment role. Their stories contained teachings while interweaving parts of Hawaiian life-styles, genealogy, history relationships, arts, and the natural environment. *Ka‘ao* are often full of hidden and double meanings (Pukui and Green 1995:ix).

Beckwith notes that Hawaiians use the term *ka‘ao* "for a fictional story or one in which fancy plays an important part"; *mo‘olelo* is "a narrative about a historical figure, one which is supposed to follow historical events. Stories of the gods are *mo‘olelo*." In reality, the distinction between *ka‘ao* as fiction and *mo‘olelo* as fact cannot be "pressed too closely. It is rather in the intention than in the fact" (Beckwith 1970:1). Thus a so-called *mo‘olelo*, which may be enlivened by fantastic adventures of *kupua* (supernatural beings), "nevertheless corresponds with the Hawaiian view of the relation between nature and man" (Beckwith 1970: 1). A *ka‘ao*, on the other hand, was consciously composed to tickle the fancy rather than to inform the mind as to supposed events (Beckwith 1970:1).

The following section presents traditional accounts of ancient Hawaiians living in the vicinity of the project area. Many relate an age of mythical characters whose epic adventures inadvertently lead to the Hawaiian race of *ali‘i* (chief) and *maka‘āinana* (commoner). The *ka‘ao* in and around the project area shared below are some of the oldest Hawaiian stories that have survived; they still speak to the characteristics and environment of the area and its people.

3.1.2 Nā Pōhaku ‘Ola Kapaemāhū a Kapuni (Wizard Stones)

Nā Pōhaku ‘Ola Kapaemāhū a Kapuni, or the Life-giving Stones of Kapaemāhū and Kapuni, are commonly referred to as the Wizard Stones (Paglinawan 1997:1). According to various *mo‘olelo*, four healers gifted in medicinal practices once came from Kahiki, most likely the sacred land of Raiatea. While some sources claim they were homosexuals, Tutu Mary Kawena Pukui asserts they were gender neutral. The wizards included Kapaemāhū, who, due to his neutral gender, could examine and heal both men and women; Kahoe, a diagnostician who could determine illness just by visual assessment; Kahaloa, who was able to breathe life into ill patients; and Kapuni, who could envelope his patients with his *mana* (power, authority) to overcome their illness (Paglinawan 1997:1).

> The wizards or soothsayers proved to be adepts in the science of healing, and many wonderful cures by the laying on of hands are reported to have been effected by them, so that their fame spread all over this island (Oahu), as the ancients say, 'from headland to headland,' And their wisdom and skill was shown by many acts which gave them prestige among the people.
>
> . . . As an enduring reminder. The wizards agreed amongst themselves that the people should be asked to erect four monumental tablets, two to be placed on the ground of the habitation, and two at their usual bathing place in the sea. They gave

> their decision to the people as a voice from the gods, and instructed that the stones be selected from among those in the ‘bell rock’ vicinity of Kaimuki. [Thrum 1923: 262]

When the four healers returned to Kahiki, they had stones placed to commemorate their existence. They were most likely quarried from a site in Kaimukī near the present-day intersection of Wai‘alae Avenue and Fifth Avenue, and then transported to Waikīkī. The coastal and inland region of Waikīkī was dominated by *lo‘i*, which would have made the movement of these *pōhaku* (stone) difficult but, according to Dr. George S. Kanahele, the stones may have been moved on a 12-ft wide causeway that extended between Mānoa and Waikīkī.

3.1.3 Kamō‘ili‘ili (the pebble lizard)

Waikīkī’s earliest *mo‘o* (lizard deity) 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. [Kanahele 1995:42]

3.1.4 Kalamakua and His Romantic Meeting with Keleanuinoho‘ana‘api‘api (“Great Kelea who flutters”)

Surfing was one of the principal attractions of Waikīkī to both chiefs and commoners. So important was surfing that there is a major *heiau* (pre-Christian place of worship) dedicated to the *nalu* or surf, and its riders. The “surfing *heiau*” of Papa‘ena‘ena, a terraced structure built at the foot of Lē‘ahi (Diamond Head), is where surfers came to offer their sacrifices in order to obtain *mana* (spiritual power) and knowledge of the surf. The *heiau* overlooked what surfers call today “First Break,” the start of the Kalahuawehe surfing course that 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 Keleanuinoho‘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) lei

and leave them in the water as a request to the gods for forgiveness of past wrongs that were the cause of much illness.

The residents welcomed Keleanuinoho‘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* (*Cordian subcordata*) grove of Kahaloa where one may view the surfing of the chiefs and of the *ali‘i nui* (high schief) 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* (*Dictyopteris plagiogramma*) 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* [black nightshade; *Solanum nigrum*] 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* 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 cape and wrapped it around her. Then he guided her to a *kapu* (sacred) place and made her his *ali‘i wahine mō‘ī*, or queen. (Kanahele 1995:56–58)

3.1.5 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 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 leaped 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]

3.2 *Wahi Pana* (Legendary Places)

Wahi pana can refer to natural geographic locations such as streams, peaks, rock formations, ridges, offshore islands and reefs, or they can refer to Hawaiian land divisions such as *ahupua‘a* or *‘ili*, and man-made structures such as fishponds. In this way, the *wahi pana* of Waikīkī tangibly link the *kama‘āina* of Waikīkī to their past. It is common for places and landscape features to have multiple names, some of which may only be known to certain *‘ohana* (families) or even certain individuals within an *‘ohana*, and many have been lost, forgotten or kept secret through time. Place names also convey *kaona* (hidden meanings) and *huna* (secret) information that may even have political or subversive undertones. Before the introduction of writing to the Hawaiian Islands, cultural information was exclusively preserved and perpetuated orally. Hawaiians gave names to literally everything in their environment, including individual garden plots and *‘auwai* (irrigated ditch), house sites, intangible phenomena such as meteorological and atmospheric effects, *pōhaku*, *pūnāwai* (freshwater springs), and many others. According to Landgraf (1994) Hawaiian *wahi pana*, also referred to as a place name, “physically and poetically describes an area while revealing its historical or legendary significance” (Landgraf 1994:v).

The historic land division of Waikīkī extends on the west from the land called Kou (traditional name for Honolulu) to Lē‘ahi (Diamond Head) in a strip along the coast. In modern times, the area identified as Waikīkī generally extends from Kalākaua Avenue on the west, from King Street/Wai‘alae Avenue on the *mauka* (toward the mountain) side, to Diamond Head on the east side, and to the sea coast on the *makai* (toward the sea) side. A distinction is sometimes made between Waikīkī Kai, the coastal area on the *makai* side of the Ala Wai Canal—within which the current project area is located—and Waikīkī Waena (middle), the *mauka* lands between King Street/Wai‘alae Avenue and Ala Wai Boulevard.

Large portions of Waikīkī were once part of a wide marshland, which extended as far east as the volcanic craters of Lē‘ahi and the Kaimukī Dome (where the present day Kaimukī fire station is built). This marshy area was once about 3 miles long and 1 mile wide, enclosing approximately 2,000 acres (Kanahele 1995:5–6).

Several royal residences (e.g., Kamehameha I and Kamehameha V) and other residential compounds belonging to various *ali‘i* were once located in the area of ‘Āpuakēhau and Helumoa (currently the Royal Hawaiian Hotel), and extending further to the southeast. See Sections 4.2 and 4.4 for an expanded reading on *ali‘i* residences in Waikīkī.

Waikīkī Kai was once divided into smaller *‘ili* lands, including (listed generally from west to east) Kālia (waited for), Pau (finished), Niukukahi (coconut standing alone), Loko Mo‘o,

Keōmuku (the shortened sand), Helumoa (chicken scratch), Ulukou (*kou* tree grove), Mookahi, Kaluaokau, Auaukai, Hamohamo, Uluniu (coconut grove), Kapuni (the surrounding), Kekio, Kāneloa (tall Kāne), Kapua (the flower), and Kaluahole (the *āhole* fish cavern) (‘Ī‘ī 1959:92–94).

The project area is located in Kālia ‘Ili, which is located in the western section of Waikīkī. Kālia is a name used for the central portion of Mānoa Stream and the name of the coastal area where the Pi‘inaio Stream emptied into the ocean. The exact meaning of Pi‘inaio is unknown, but *pi‘ina* means “climb or ascend” (Pukui and Elbert 1986:327).

3.2.1 ‘Āpuakēhau

There is a large body of oral-historical information about royal residences and other residential compounds belonging to various *ali‘i*. According to Martha Beckwith (1940:383), by the end of the fourteenth century Waikīkī had become “the ruling seat of the chiefs of O‘ahu.”

> Kamehameha’s houses were at Puaaliilii, makai of the old road, and extended as far as the west side of the sands of Apuakehau. [‘Ī‘ī 1959: 17]

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

> Loheloa came from Waipio on a huge log. He came first to Makapuu and then to Keauau Point, now called Leahi. He saw a strange glow like a ball of fire there. He asked for the chief Olohe and was told that the light was his.
>
> He saw some fishermen who told him to go away for he was scaring the fish. He called to Ku and Hina to bring them a school of fish which they did. The natives were grateful. He lifted his huge canoe and rested one end at Haula and the other at Namahana, against the hill. He told the people that he wanted to wrestle with their chief Olohe, a dogman who lived at Apuakehau, Waikiki. A messenger came to tell the chief who accepted the challenge. In the meantime the men were busy catching fish brought to them by Loheloa. A messenger was sent to bring Loheloa to the chief and Loheloa suggested that they wrestle in the open where they can be seen. He would bet his bones and his canoe on himself.
>
> Olohe and Loheloa fought on the field now known as Kapiolani Park. Olohe punched and raised a gale that flattened the ilima bushes. Loheloa slapped his ear hard enough to throw him in the air. The place he fell is called Kalua-Olohe (Olohe’s pit) to this day. Loheloa won and the people shouted with joy over the defeat and death of their cruel chief. [Hainakolo, *Hawaii Holomua*, 21 July 1912, Oahu Place Names in Sterling and Summers 1978:279]

3.2.2 Hamohamo

Hamohamo translates as “rub gently, disappointment, failure” (Pukui et al. 1974:40) and is the name of a shoreline area of Waikīkī: “*Ua hō‘ea i Hamohamo i kahi nui i ka ‘ahu‘awa* (arrived empty-handed at the place of great disappointment).” The following *‘ōlelo no‘eau* help translate the *kaona* of this phrase famous among ancient Hawaiians.

> Two sayings explained by Pukui help translate this sentence. The first is ‘Ho‘i ‘ōlohelohe i ke kula o Hamohamo (Going home destitute on the plain of Hamohamo)’ (Pukui 1983:111, #1044). Hamohamo, a place in Waikīkī, is a play on the word ‘hamo’ or to ‘rub.’ Hands being rubbed together imply that one is empty-handed and therefore destitute. The second expression is ‘Aia akula paha i Waikīkī i ka ‘imi ‘ahu‘awa (Perhaps gone to Waikīkī to seek the ‘ahu‘awa sedge)’ (Pukui 1983:6, #27). This saying plays on the words ahu (heap) and ‘awa (sour) to indicate disappointment. [Desha 2000:396]

‘Ōlelo no‘eau #1044

> *Ho‘i ‘ōlohelohe i ke kula o Hamohamo.*
>
> Going home destitute on the plain of Hamohamo.
>
> Going home empty-handed. A play on *hamo* (rub), as in the act of rubbing the hands together to indicate that one is empty-handed. Hamohamo is a place in Waikīkī. [Pukui 1983:111]

‘Ōlelo no‘eau #27

The following *‘ōlelo no‘eau* is a classic Hawaiian play on words. Literally the saying is speaking about a sedge plant, *‘ahu‘awa* (*Cyperus javanicus*), found in Waikīkī. However, the original composer would have intended an alternative connotation. Breaking the word apart *ahu* (heap) and *‘awa* (sour), it now describes a heap of sour, in other words—disappointment found in Waikīkī. This is a clever Hawaiian way of saying something negative, without actually saying anything negative.

> *Aia aku la paha i Waikīkī i ka ‘imi ‘ahu‘awa.*
>
> Perhaps gone to Waikīkī to seek the ‘ahu‘awa sedge.
>
> Gone where disappointment is met. A play on ahu (heap) and ‘awa (sour). [Pukui 1983:6]

3.2.3 Helumoa

Helumoa translates as “chicken scratch” (Pukui et al. 1974:44). Ma‘ilikukahi, the first *mō‘ī* (island-wide chief) of O‘ahu, moved the capital of the island from ‘Ewa and Waialua to Waikīkī in this period. About AD 1350, he constructed a *heiau* at Helumoa for the Makahiki festival. Two idols, the long god and the short god, were carried on a circuit of the island, each carried in the opposite direction and meeting again at Kualoa on the windward coast of O‘ahu. The preeminence of Waikīkī continued into the eighteenth century and is confirmed by the decision of Kamehameha, in the midst of unifying control of the Islands, to reside there after winning control of O‘ahu by defeating the island’s chief, Kalanikūpule. The nineteenth-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 Kaahumanu *ma* went to while away the time. The king built a stone house there, enclosed by a fence . . . [‘Ī‘ī 1959:17]

3.2.4 Kālia

Kālia translates as “waited for” (Pukui et al. 1974:77). The seaweed called *limu ‘ele‘ele* was plentiful near the stream’s outlet. A Hawaiian saying talks about this pleasant portion of the coast (Pukui 1983:186):

Ke kai wawalo leo le‘a o Kālia The pleasing, echoing sea of Kālia.

Kālia is also a place where *‘alamihi* crabs were once plentiful, leading to a play on the word *‘ala-mihi* (path of repentance), indicating someone who is in a repentant mood (Pukui 1983:110):

Ho‘i i Kālia ka ‘ai ‘alamihi. Gone to Kālia to eat ‘alamihi crabs.

Kālia was also known for a fishing technique used to catch schools of mullet. When a school of mullet appeared, a bag net was set and the men swam out in a row, surrounded the fish, and slapped the water together and kicked their feet, thus driving the frightened fish into the opening of their bag net. The fishermen of Kālia became known as human fishnets (Pukui 1983:150):

Ka i‘a pīkoi kānaka o Kālia; The fish caught by the men of Kālia;

he kānaka ka pīkoi, men are the floaters,

he kānaka ka pōhaku. men are the sinkers.

Kālia is also mentioned in a story about a woman who left her husband and children on Kīpahulu, Maui to go away with a man of O‘ahu. Her husband missed her and went to see a *kahuna* (priest) who was skilled in *hana aloha* (sorcery for love making potions with herbs, prayers and even hypnosis). The *kahuna* told the man to find a container with a lid and then speak into it of his love for his wife. The *kahuna* then uttered an incantation into the container, closed it, and threw it into the sea. The wife was fishing one morning at Kālia, O‘ahu, and saw the container. She opened the lid, and was possessed by a great longing to return to her husband. She walked until she found a canoe to take her home (Pukui 1983:158):

Ka makani kā‘ili aloha o The love-snatching wind

o Kīpahulu. of Kīpahulu

3.2.5 Kawehewehe

One of the most noteworthy *wahi pana* located near the proposed project area is Kawehewehe. Kawehewehe takes its meaning from the root word, *wehe*, which can be translated as “to remove” (Pukui et al. 1974:383). Thus, as the name implies, Kawehewehe was a traditional place where people went to be cured of all types of physical and spiritual illnesses. Two healing areas share the name Kawehewehe, one being a healing pond and the other a beach. Kawehewehe pond is located in the vicinity of Saratoga Road, west of the proposed project area. As a treatment for illness and defilement, the sick were brought here to bathe in the healing waters of the ocean. As part of the healing ritual, the ill might wear a *lei* (flower necklace) made from the *limu kala* and leave it in the water as a request that his sins be forgiven; hence the origin of the name *kala* (“the removal”; Pukui et al. 1974:99). By ducking under the water, the ill person releases the *lei* from around his neck, letting the *lei kala* float out to sea. Upon turning around to return to shore, the custom is to never look back, symbolizing the *‘oki* (to sever or end) and putting an end to the illness; as well as forgiveness (*kala*) and the leaving behind of anything negative. It is uncertain if the tradition of Kawehewehe as a healing place originated hundreds of years ago in Hawaiian history or whether

it began after the introduction of foreign diseases and epidemics that decimated thousands of Hawaiians.

3.2.6 Waikīkī

The name Waikīkī translates as “water spurting from many sources,” and reveals the character of the intact watershed system of Waikīkī prior to European Contact, where water from the valleys of Mānoa and Pālolo gushed forth from underground.

3.3 *Heiau*

Thomas G. Thrum reports that eight *heiau* were once located in Waikīkī, consisting of Papa‘ena‘ena Heiau, Kapua Heiau, Kūpalaha Heiau, Helumoa Heiau, Makahuna Heiau, Kamauakapu Heiau, Pahu-a-Maui Heiau, and Kulanihakoi Heiau (Thrum 1905:44–45). Samuel Kamakau notes another *heiau* of Waikīkī called Halekumukaaha Heiau (Kamakau n.d. in McAllister 1933:78), and early historic maps by C.J. Lyons (Registered Maps [RM] 726 and RM 727) indicate the location of another *heiau* called Ōpūnahā Heiau. Several of the *heiau* were of *po‘okanaka* (sacrificial) classification, used ceremoniously for human sacrifices (Stokes 1991:24). In addition there are four large *pōhaku* that constituted a religious site, commonly called the Wizard Stones of Kapeimāhū (Thrum 1906:139–141).

3.3.1 Papa‘ena‘ena Heiau

Papa‘ena‘ena Heiau was once located at the base of Lē‘ahi (Diamond Head) (McAllister Site 58, McAllister 1933:71–74). Papa‘ena‘ena Heiau, of *po‘okanaka* class, was a quadrangular paved terrace approximately 130 by 70 ft with walls on three sides from 6 to 8 ft in height and 8 ft thick at the base, and open on the western side facing the village of Waikīkī (McAllister 1933:74). Papa‘ena‘ena Heiau may have been built by the Maui ruler Kahekili to honor his victory over O‘ahu in 1780 and to avenge his ancestor, Kauhi-a-Kama, whose remains were desecrated at ‘Āpuakēhau Heiau in the sixteenth century (Thrum 1926:109). Kamehameha, who took O‘ahu from Kahekili’s successor, Kalanikūpule, in 1795, commanded sacrifices at Papa‘ena‘ena Heiau and impaled the bodies of Kiana, *mō‘ī* of O‘ahu, and other slain chieftains upon its walls (Jarves 1844:59–60 in McAllister 1933:73).

John Papa ‘Ī‘ī (1959:33, 35) described the physical layout and customs of Papa‘ena‘ena Heiau when Kamehameha became ill in late 1803 or early 1804, and Paul Rockwood drew an image of such a *luakini* (sacrificial, to include human sacrifices) class *heiau* as described by ‘Ī‘ī.

> The house in which they dwelt was called the Hale Pahu, for that was where the drums of the gods were kept. These drums, which were sounded every morning at dawn, were kept in the gods’ houses by their keepers, who did the drumming. It was also said that the drums were sounded in the Hale Pahu when the king did not utter the ‘amama [finished] prayer.
>
> The Hale Pahu was closed from top to bottom on the side and back walls, whereas the front had only posts, like a lanai. It faced the ‘anu‘u tower and the row of idols in front of the ‘anu‘u. Between them was the lele altar. Three of the houses were thatched with leaves of the loulu palm (lau lauli‘i). The largest house, called the Hale Mana, was long, like a halau [long house]. Its front and door faced the entrance of this luakini heiau. The third house was the Hale Umu, or Oven House, which

> stood on the left side of the Hale Mana, extending forward of it a little, with front and door directly toward the back of the Hale Pahu. The fourth house, called the Hale Waiea, was a small one between the Hale Umu and the Hale Pahu. It was twice the length of the distance from fingertip to elbow in length, its height, and breadth being half that measure. Two images stood before it on either side of the opening, and the king and kahuna conducted their ‘aha (prayer) services at the right side of the opening, in the dark of the night before the birds began to twitter. [‘Ī‘ī 1959:33, 35]

Kamehameha was said to have visited Papa‘ena‘ena Heiau before setting off to battle for Ni‘ihau and Kaua‘i in 1804. Five years later, Kamehameha placed the remains of his nephew Kanihonui, who committed adultery with Ka‘ahumanu, at Papa‘ena‘ena Heiau, “all prepared in the customary manner of that time” (‘Ī‘ī 1959:51). This would have been one of the last human sacrifices in the kingdom. Queen Emma, the widow of Alexander Liholiho (Kamehameha IV), had Papa‘ena‘ena Heiau dismantled, and she used the rocks to build a fence to surround her Waikīkī estate in Kaluaokau (Kanahele 1995:136).

In addition to functioning as a site of human sacrifice, Papa‘ena‘ena Heiau also served as a way for surfers to obtain *mana*; *kahuna* at the *heiau* notified surfers of excellent surfing conditions by flying a kite high into the air (Kanahele 1995:56). In 1919, Walter F. Dillingham purchased the area once occupied by Papa‘ena‘ena Heiau from the James Campbell Estate and built a palatial home (Hibbard and Franzen 1986:40), which later became the site of the Hawai‘i School for Girls at La Pietra (Becket and Singer 1999:x).

3.3.2 Kapua Heiau

Kapua Heiau was of *po‘okanaka* class and located in Kapi‘olani Park near Camp McKinley. It is reported to have been connected to Papa‘ena‘ena Heiau. Fragments of its walls torn down in 1860 reveal it was approximately 240 ft. *Mo‘olelo* indicate that Kaolohaka, a chief from Hawai‘i, was sacrificed at Kapua Heiau on suspicion of being a spy (Thrum 1905:44).

3.3.3 Kūpalaha Heiau

Another *heiau* in Kapi‘olani Park closely associated with Papa‘ena‘ena Heiau was Kūpalaha Heiau, located southeast of the intersection of Kalākaua Avenue and Monsarrat Avenue (Thrum 1905:44). Kakuhihewa, *mō‘ī* of O‘ahu ca. 1540–1634, attempted to sacrifice a man from Honolulu named Kapo‘i at Kūpalaha Heiau for consecrating a *heiau* called Manu‘a on a day that the *mō‘ī* had made *kapu* (forbidden). Kakuhihewa’s warriors were then attacked by owls from Moloka‘i, Lāna‘i, Maui, Hawai‘i, O‘ahu, Kaua‘i, and Ni‘ihau at the order of Kapo‘i’s *‘aumakua* (family deity), which was a *pueo* (owl). The owls defeated Kakuhihewa’s warriors in the *mo‘olelo* known as the “Battle of the Owls.” Kakuhihewa acknowledged that Kapo‘i’s *akua* (god) was a powerful one and from that time, the owl has been recognized as one of the many deities venerated by the Hawaiian people (Kamakau 1964:23; Thrum 1904:200–202). This failed attempt to sacrifice Kapo‘i at Kūpalaha Heiau may indicate this *heiau* was of *po‘okanaka* class.

Emma Metcalf Nakuina (Nakuina 1904:8 in Sterling and Summers 1978:98) describes two *heiau* on O‘ahu devoted to the sun; one of these was located at Kāneloa in Kapi‘olani Park (the other was located at Kuaokala in Wai‘anae at Pu‘u o Kapolei). Nakuina describes sun worshippers being among the first settlers of Hawai‘i, and that only a few could claim it as a privilege. The

Waikīkī sun *heiau* could have been Kūpalaha Heiau—*kūpalaha* is defined as a temporary *heiau* structure (Pukui and Elbert 1986), and the syllable "*la*," if spelled "*lā*," also denotes the sun.

3.3.4 Helumoa Heiau (‘Āpuakēhau Heiau)

Helumoa Heiau, formally known as ‘Āpuakēhau Heiau, was located in central Waikīkī near the *muliwai* (river mouth) of ‘Āpuakēhau Stream. This *heiau* was of *po‘okanaka* class and was the site of the sacrifice of Kauhi-a-Kama, a defeated *mō‘ī* of Maui. He was killed during his attempted conquest of O‘ahu in approximately 1610 (Thrum 1905:44). This sacrificial *heiau* was also where Ka‘opulupulu—the last O‘ahu-born Kahuna Nui of O‘ahu—was laid after being slain in Wai‘anae by Kahāhana (Thrum 1903:112–113). The memory of Kauhi-a-Kama's death and desecration of his remains at ‘Āpuakēhau Heiau may have prompted his descendant, Kahekili, to massacre the O‘ahu chiefs and sacrifice Kahāhana at ‘Āpuakēhau Heiau (Fornander 1918:2:208) and to build Papa‘ena‘ena Heiau (Thrum 1926:109). Portions the Royal Hawaiian Hotel are built on the former site of ‘Āpuakēhau Heiau. An athletic field of *ali‘i* was also formerly built at the site of the Royal Hawaiian Hotel, as excavations for the hotel uncovered *‘ulu maika* (ancient Hawaiian game suggesting bowling) (Thrum 1905:79).

3.3.5 Kamauakapu, Makahuna Heiau, and Pahu-a-Maui Heiau

Two other *heiau* near Kapi‘olani Park were Kamauakapu Heiau and Makahuna Heiau. Kamauakapu Heiau, of husbandry class, measured about 11 by 16 ft and was located in Kapahulu. It was erected by Kalākaua in 1888 for his Naua Society but was already in partial ruins in the early 1900s (Thrum 1905:44). Makahuna Heiau was a large *heiau* dedicated to Kāne and Kanekoa, "of Kuula [*kū‘ula*] character," located at Diamond Head (Thrum 1905:44). A third *heiau*, Pahu-a-Maui, was located on the site of the light house station on Diamond Head (Thrum 1905:45).

3.3.6 Ōpūnahā Heiau

A second possible Waikīkī sun *heiau* could be Ōpūnahā Heiau, located on the Honolulu Aquarium property just seaward of the Hawaiian Monk Seal exhibit as drawn on maps by C.J. Lyons between 1875–1877 (RM 726 and RM 727).

Depending on its pronunciation, relevant translations for *ōpū* include "to rest, exist" and "a tower in a *heiau*," while the relevant translations for *‘opu* include "to dive into the water," and, as a rare form of *‘upu*, "to keep thinking of with anticipation." The second part of the word, if pronunciated *nahā*, means "to blot out from sight." Given that the place where the sun set was called the "resting place of Kāne" (Beckwith 1970:62), the various combinations of these words certainly conjure imagery of an anticipated event of the sun sinking below Pu‘u o Kapolei.

Joyce Akin, Michael Akin, and Rick Scudder linked Nakuina's reference to a sun *heiau* with Kamakau's description of the changing of the seasons (Akin et al. 1985 in *Ka Nuhou o ka ‘Aina* 2002:2). Their synthesis of Kamakau's writings describe that the passage of seasonal time on O‘ahu was reckoned according to where the sun set: When the sun set over Pu‘u o Kapolei and migrated north to Mahimaomao, this period of warmth was called Kau or Makali‘i; when the setting of the sun shifted south of Pu‘u o Kapolei, this colder period of rainfall, planting, germination (*‘ōilo*), and harvesting was called Ho‘ōilo. According to Akin et al. (1985), the exact timing of the sun setting over Pu‘u o Kapolei is May 1. Cultural practitioner Shad Kāne explains that this shifting of the seasons—the northern and southern movement of the setting sun—is, from a non-Hawaiian perspective, the summer solstice (about June 21), but that *kūpuna* describe this

event occurring one month earlier in May (Kāne 2008). After many observations of the setting of the sun from various locations, Akin et al. (1985 in *Ka Nuhou o ka ‘Aina* 2002:2) determined that an observer would witness this event—actually the sun sinking below Pu‘u Pālailai, which is directly behind Pu‘u o Kapolei—by looking out from Queens Surf near Kapi‘olani Park. Their review of a map drawn about 1840-1850 indicated an altar on the beach on the Aquarium property just *makai* of the Hawaiian monk seal exhibit (which may be similar to that recorded by C.J. Lyons (1875–1877). An ‘Ewa *hālau* (group) commemorates this changing of the seasons at the Aquarium each year on May 1 (Akin et al. 1985 in *Ka Nuhou o ka ‘Aina* 2002:2).

3.4 Pōhaku (Stone)

3.4.1 Nā Pōhaku ‘Ola Kapaemāhū a Kapuni (Wizard Stones)

Another religious site in Waikīkī is Nā Pōhaku ‘Ola Kapaemāhū a Kapuni, commonly referred to as the Wizard Stones of Kapaemāhū. These stones were unearthed in the late 1800s on the Waikīkī premises of the Cleghorn family, Governor A. Cleghorn, his wife Princess Likelike, and their daughter Princess Ka‘iulani. According to a *mo‘olelo* gathered by Thrum (1906:139–141), four soothsayers from the court of a Tahiti king came to Hawai‘i and helped heal many people. Four large stones were gathered from the vicinity of a “bell rock” in Kaimukī and erected in Waikīkī to commemorate them, two at their habitation and two at their bathing place in the sea. The chief of the wizards, Kapaemāhū, named his stone after himself, and a virtuous young chiefess was sacrificed and placed beneath the stone. Today they are located at Kūhiō Beach Park (Thrum 1906:139–141).

The Honorable A.S. Cleghorn unearthed an 8-ton stone at his residence close to the Moana Hotel in 1905. Another stone weighing 10 tons was uncovered by Mr. Lutted, and two more were excavated in a straight line with the others. Underneath the 10-ton stone Mr. Cleghorn uncovered a female jaw bone and some crude images, which he later cemented onto the stone. In 1941, the Waikiki Bowling Alley was constructed with the stones serving as part of the foundation, but they were then uncovered in 1958 when the building was razed. In 1963 the stones were located together on the beach, and in 1980 they were relocated to their present site near the police substation. The location of Mr. Cleghorn’s cement casings indicated the stones had been positioned incorrectly; however, a decision was reached to leave them as they had been placed (Paglinawan 1997:5–6).

3.5 *‘Ōlelo No‘eau* (Proverbs) of Waikīkī

Hawaiian knowledge was shared by way of oral histories. The following section draws from author and historian Mary Kawena Pukui and her knowledge of Hawaiian proverbs describing *‘āina*, weather, and places.

3.5.1 *‘Ōlelo No‘eau* #110

Alia e ‘oki ka ‘āina o

Kahewahewa, he ua.

Wait to cut the land of Kahewahewa, for it is raining.

Let us not rush. Said by Kaweloleimakua as he wrestled with an opponent at Waikīkī. [Pukui 1983:14]

3.5.2 *‘Ōlelo No‘eau* #285

E ho‘i ka u‘i o Mānoa, ua ahiahi.

Let the youth of Mānoa go home, for it is evening.

Refers to the youth of Mānoa who used to ride the surf at Kalehuwehe in Waikīkī. The surfboards were shred among several people who would take turns using them. Those who finished first often suggested going home early, even though it might not be evening, to avoid carrying the boards to the *hālau* [long house] where they were stored. Later the expression was used for anyone who went off to avoid work. [Pukui 1983:35–36]

3.5.3 *‘Ōlelo No‘eau* #1378

The following *‘ōlelo no‘eau* describes the fishing techniques found in the Kālia area on O‘ahu Island.

Ka i‘a pīkoi kānaka o Kālia; he kānaka ka pīkoi, he kānaka ka pōhuku.

The fish caught by the men of Kālia; men are the floaters, men are the sinkers.

In ancient days, when a school of mullet appeared at Kālia, O‘ahu, a bag net was set and the men swan out in a row and surrounded the fish. Then the men would slap the water together and kick their feet, driving the frightened fish into the opening of their bag net. Thus the fishermen of Kālia became known as human fishnets. [Pukui 1983:151]

3.5.4 *‘Ōlelo No‘eau* #1493

Ka nalu ha‘i o Kalehuawehe.

The rolling surf of Kalehuawehe.

Ka-Lehua-wehe (take-off-the-*lehua*) was Waikiīkī’s most famous surf. It was so named when a legendary hero took off his *lei* of *lehua* [the flower of the *‘ōhi‘a* tree] blossoms and gave it to the wife of the ruling chief, with whom he was surfing. [Pukui 1983:161–162]

3.5.5 *‘Ōlelo No‘eau* #1734

The following *‘ōlelo no‘eau* describes the pleasant ocean reverberations characteristic of shallow reef shorelines.

Ke kai wawalo leo le‘a o Kālia.

The pleasing, echoing sea of Kālia.

Refers to the sea of Kālia, Honolulu, now known as Ala Moana. [Pukui 1983:186]

3.5.6 *‘Ōlelo No‘eau* #1772

Ke one ‘ai ali‘i o Kakuhihewa.

The chief-destroying sands of Kakuhihewa.

> The island of O‘ahu. When the priest Ka‘opulupulu was put to death by the chief Kahāhana for warning him against cruelty to his subjects, he uttered a prophecy. He predicted that where his own corpse would lie in a heiau at Waikīkī, there would lie the chief’s corpse as well. Furthermore, he said, the land would someday go to the sea—that is, to a people from across the sea. This was felt to be a curse. When Kamehameha III was persuaded by a missionary friend to move the capital from Lahaina to O‘ahu, a kahuna, remembering the curse, warned him not to, lest the monarchy perish. The warning was ignored, and before the century was passed, the Kingdom of Hawai‘i was no more. [Pukui 1983:190]

3.6 *Oli* (Chant)

In Waikīkī when the waves were running, the *kāhuna* (priests who were in charge of all rites pertaining to surfing) signaled to the people by flying a kite. An ancient chant tells of Papa‘ena‘ena:

> There at Kalahuewehe is the big surf created by Papa‘ena‘ena.
>
> Arise, of ye surf of Kalahuewehe, arise!
>
> The kahuna of Papa‘ena‘ena flies his moon kite
>
> To proclaim the suitability of the sea for surfing.
>
> The eager lookout on yonder highland
>
> Anxiously scans the skies for this signal,
>
> And relays the good news by runners;
>
> Farmers, woodsmen, bird catchers all,
>
> Leave their tasks and fetching their surf boards
>
> Hurry to the beach at Waikīkī.
>
> Soon the sea is filled with natives
>
> Sporting in the billowy surf;
>
> Trick riding, zigging and zagging, amidst the foam
>
> Shouting words of defiance against the angry surf'
>
> To topple the rider if it can . . .
>
> [Kanahele 1995:56–57]

Section 4 Traditional *Mo‘olelo* and Historical Accounts

4.1 Traditional *Mo‘olelo*

Various *mo‘olelo* are associated with Waikīkī Ahupua‘a suggesting this area was settled by a significant Native Hawaiian population. The following section describes in detail those *mo‘olelo* associated with the study area.

4.1.1 Ka-lua-‘Ōlohe

Mo‘olelo describe how ‘Ōlohe was a cruel chief master of *lua* wrestling, a type of dangerous hand-to-hand fighting in which the fighters break and dislocate bones. The defeat of this chief involved a battle in Kapi‘olani Park and led to the naming of an area in Pālolo as Ka-lua-‘Ōlohe, or “the *lua* fighting of ‘Ōlohe”:

> Loheloa came from Waipio on a huge log. He came first to Makapuu and then to Keauau Point, now called Leahi. He saw a strange glow like a ball of fire there. He asked for the chief Olohe and was told that the light was his.
>
> He saw some fishermen who told him to go away for he was scaring the fish. He called to Ku and Hina to bring them a school of fish which they did. The natives were grateful. He lifted his huge canoe and rested one end at Haula and the other at Namahana, against the hill. He told the people that he wanted to wrestle with their chief Olohe, a dogman who lived at Apuakehau, Waikiki. A messenger came to tell the chief who accepted the challenge. In the meantime the men were busy catching fish brought to them by Loheloa. A messenger was sent to bring Loheloa to the chief and Loheloa suggested that they wrestle in the open where they can be seen. He would bet his bones and his canoe on himself.
>
> Olohe and Loheloa fought on the field now known as Kapiolani Park. Olohe punched and raised a gale that flattened the ilima bushes. Loheloa slapped his ear hard enough to throw him in the air. The place he fell is called Kalua-Olohe (Olohe’s pit) to this day. Loheloa won and the people shouted with joy over the defeat and death of their cruel chief. [Hainakolo, *Hawaii Holomua*, 21 July 1912 in Sterling and Summers 1978:279]

4.1.2 Ka‘opulupulu

Thrum (1998:203–214) recounts the *mo‘olelo* of the *kahuna nui* (highest priest) of O‘ahu, Ka‘opulupulu, whose curse upon his death resulted in *ke one ‘ai ali‘i o* Kakuhihewa (the chief devouring sand of Kakuhihewa). Ka‘opulupulu had a son named Kahulupu‘e, who he taught all the traditions and rituals of the priestly caste. At this time, the *ali‘i aimoku* (ruler) of O‘ahu was Kumuhana, a cruel chief who terrorized his people and would not listen to the counsel of his priest, Kahulupu‘e. Kumuhana was finally driven off the island by the people and the lesser chiefs. When Kahekili, the king of Maui, heard this news, he sent his foster son, Kahāhana (brother of Kumuhana), to rule O‘ahu in Kumuhana’s place (ca. 1773). Kahāhana chose a grove of coconut and *kou* (*Cordia subcordata*) trees called Ulukou, located on the Waikīkī coast, as his place of residence and many *ali‘i* gathered in that place around him. One day, Kahāhana sent a messenger to Ka‘opulupulu asking that he attend him at Ulukou; Ka‘opulupulu traveled from his home in

Waimea and was greeted by the retainers of the king when he reached the mouth of the stream ‘Āpuakēhau. At first Kahāhana valued the wisdom of the priest, but after several years, Kahāhana began to be as cruel to the people as his predecessor, Kumuhana. In protest, the priest Ka‘opulupulu left Waikīkī to return to his home in Waimea where he tattooed his knees, a sign that Kahāhana had turned a deaf ear to his advice. This angered the king, who sent messengers to order Ka‘opulupulu and his son, Kahulupu‘e, to come to Wai‘anae, where Kahāhana then resided.

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

E nui ke aho, e ku‘u keiki,	Take a deep breath, my son, and
a moe i ke kai, no ke kai la	lay yourself in the sea, for then
ho‘i ka ‘āina.	the land shall belong to the sea. [Pukui 1983:44]

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

The sands of Ulukou were known as “*Ke One ‘Ai Ali‘i o Kākuhihewa*” because of the curse placed by the prophet Ka‘opulupulu. When Ka‘opulupulu was brought with his son, Kahulupu‘e, to be executed at Waikīkī, he cursed the place where his body-grease (*hinu*) would drip upon the sand, as well as the chiefs and the people (Hibbard and Franzen 1986:5). This curse continued to have an effect for the descendants of Kamehameha. Kamehameha II died in England. From the warning of this curse by the *kahuna* (priest), Luau-nui-a-lepokapo, after the death of Kamehameha II, Kamehameha III (Kauikeaouli) transferred the seat of the government from O‘ahu to Lahaina in 1838. He later reconsidered moving back to O‘ahu against the counsel of his *kahuna*:

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

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

4.1.3 Kawelo

In the “Legend of Kawelo,” two boys are born on the same day, Kawelo-lei-makua, called Kawelo, the great nephew of the king of Kaua‘i, and Kawelo-aikanaka, called ‘Aikanaka, the grandson of the king. Kawelo’s older brothers and his parents soon moved from Kaua‘i to live at Waikīkī on O‘ahu near the ruling chief of O‘ahu, Kākuhihewa. The older brothers of Kawelo often challenged a famous wrestler living with Kākuhihewa, but they could never beat him.

The brothers of Kawelo were great surf riders, and they often went to ride the surf at Kalehuawehe (near the present Seaside Hotel in Waikīkī). After the surf ride they would go to the stream of ‘Āpuakēhau and wash, and from there they would go to the shed where the wrestling bouts were held and test their skill with Kākuhihewa’s strong man; but in all their trials they never once were able to throw him (Fornander 1918:4).

When the king of Kaua‘i died, ‘Aikanaka became the new king. The grandparents, who longed to see their other children, traveled with Kawelo to O‘ahu, to Ulukou in Waikīkī, near the mouth of the stream ‘Āpuakēhau, where his elder brother and parents had been living. His grandparents later took him just inland of the coast. While Kawelo was working in the fields, he heard some shouting from the beach, and asked his grandparents, “What is that shouting down yonder?” (Fornander 1918:5). The grandparents answered that his older brothers had just finished surfing and must have challenged the king’s strong man. The shouting indicated one of them must have been thrown. Next day, Kawelo went down to the beach, went surfing with his brothers, and then bathed in the freshwater stream of ‘Āpuakēhau. He challenged the strong man to a match, even though his brothers mocked him, saying “Are you strong enough to meet that man? If we whose bones are older cannot throw him, how much less are the chances of yourself, a mere youngster?” (Fornander 1918:6). The strong man, impressed by Kawelo’s courage, said:

> *‘Ina wau e kahea penei, “Kahewahewa, he ua!” alaila, kulai kaua.’ Hai aku la no hoi o Kawelo i kana olelo hooulu, penei: ‘Kanepuaa! Ke nahu nei! Alia! Alia i oki ka aina o Kahewahewa, he ua!*
>
> ‘If I should call out “Kahewahewa, it is raining,” then we begin.’ Kawelo then replied in a mocking way: ‘Kanepuaa, he is biting, wait awhile, wait awhile. Don’t cut the land of Kahewahewa, it is raining.’ [Fornander 1918:6]

Kawelo won the match, shaming his older brothers so much that they returned to Kaua‘i. In another version (Thrum 1923:154), the strong man was from Halemano (central O‘ahu), and was killed by a mighty blow from Kawelo. The man’s body was given to the king of O‘ahu, and was carried as a sacrifice to the gods to a *heiau* in Lualualei, Wai‘anae.

4.2 Early Historic Period

By the time of the arrival of the first Europeans in the Hawaiian Islands in the late eighteenth century, Waikīkī had long been a center of population and political power on O‘ahu. Martha Beckwith (1970) writes that by the end of the fourteenth century, Waikīkī had become “the ruling seat of the chiefs of O‘ahu.” The preeminence of Waikīkī continued into the eighteenth century, betokened by Kamehameha’s decision to reside there after winning control of O‘ahu by defeating the island’s chief, Kalanikūpule. The nineteenth century Hawaiian historian John Papa ‘Ī‘ī, himself a member of the *ali‘i*, describes 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 Kaahumanu ma went to while away the time. The king built a stone house there, enclosed by a fence . . . [‘Ī‘ī 1959:17]

‘Ī‘ī (1959:17) further notes 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.”

Chiefly residences, however, were only one element of a complex of features which were able to sustain the large population that characterized Waikīkī up through the pre-Contact period. 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 (Figure 5). This field system—an impressive engineering feat traditionally attributed to the chief Kalamakua—took advantage of streams descending from Makiki, Mānoa, and Pālolo valleys that also provided ample fresh water for Hawaiians living in the *ahupua‘a* (Kanehele 1995:55), 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 (Figure 6). A sizeable population developed amidst this Hawaiian-engineered abundance. Captain George Vancouve, arriving at “Whyteete” in 1792, captured something of this profusion in his journals:

> On shore, 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. 1798:161–164]

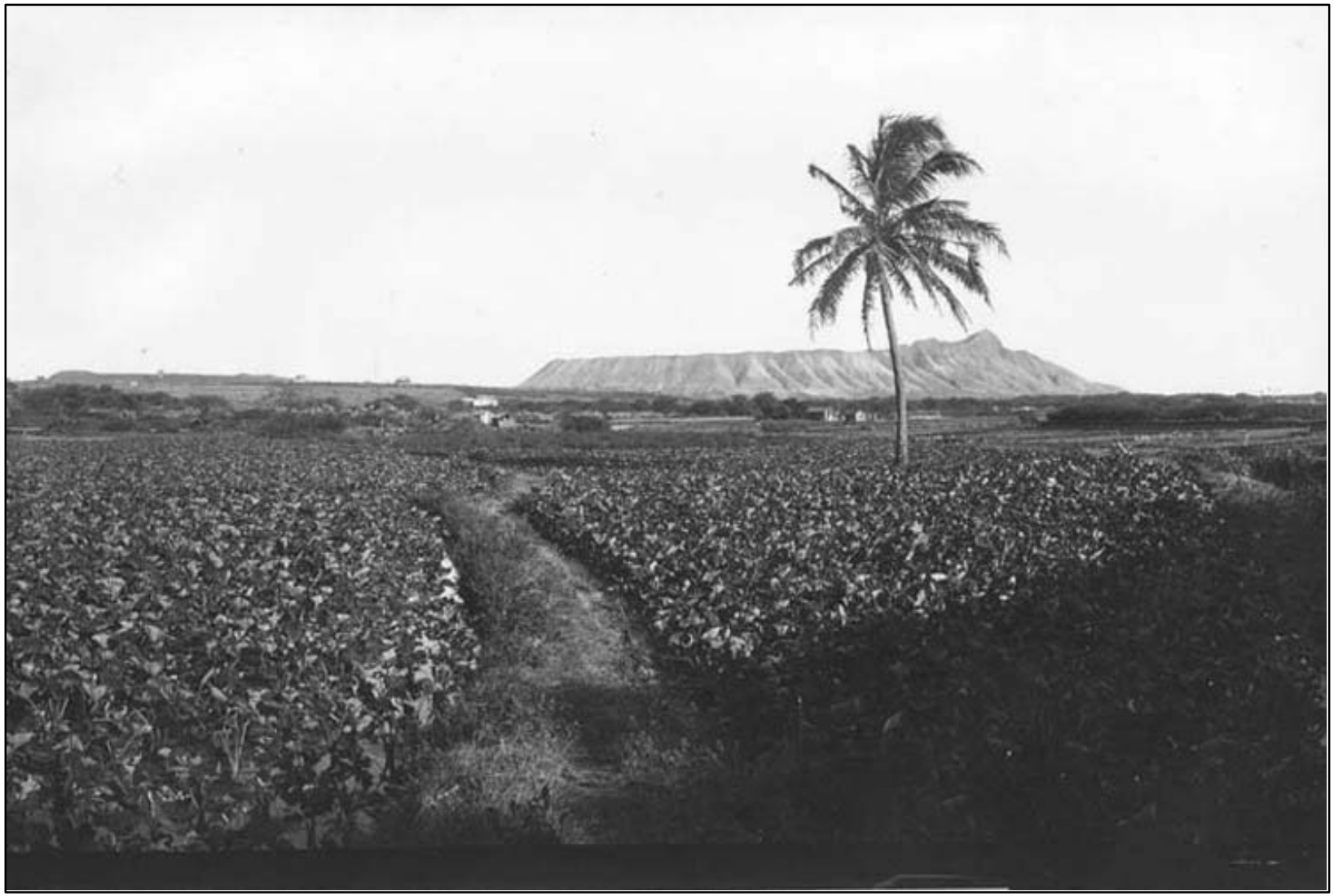

Figure 5. Photo of Waikīkī with Diamond Head in background; photo was taken from McCully Street across taro fields, n.d. (courtesy of R.J. Baker Collection, Kamehameha Schools)

Figure 6. Photo of fishpond in Kālia ‘Ili (foreground) with Diamond Head (background), n.d. (Hawai‘i State Archives)

Further details of the exuberant life of the time are given by Archibald Menzies, a naturalist accompanying Vancouver's expedition:

> The verge of the shore was planted with a large grove of coconut 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* [*Dracaena, ti* or *kī*] without the aid of much cultivation, and the whole was watered in a most ingenious manner by dividing the general stream into little aqueducts leading in various directions so as to be able to supply the most distant fields at pleasure, and the soil seemed to repay the labour and industry of these people by the luxuriancy of its productions. Here and there we met with ponds of considerable size, and besides being well stocked with fish, they swarmed with water fowl of various kinds such as ducks, coots, water hens, bitterns, plovers and curlews. [Menzies 1920:23–24]

The abundance of fishponds in the area is shown on Figure 7 and Figure 8, testament to the productivity of the land. 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 Euro-American Contact. The *ahupua‘a* of Honolulu became the center for trade with visiting foreign vessels, drawing increasing numbers of Hawaiians away from their traditional environments. The shift in preeminence is illustrated by the fact that Kamehameha moved his residence from Waikīkī to Honolulu. By 1828, Levi Chamberlain described a journey into Waikīkī and noted the following:

> 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 1820s, the population was estimated at 6,000 to 7,000) but also of the western diseases that had devastating effects upon the Hawaiian populace (Chamberlain 1957:26).

4.3 The Māhele and the Kuleana Act

Prior to 1848, all land in Hawai‘i belonged to *nā akua* (the gods), held in trust for them by the *ali‘i* and managed by *konohiki* (land managers, subordinate chiefs). In the mid-1800s, Kamehameha III decreed a division of lands called the Māhele, which divided land in Hawai‘i for private land ownership (Chinen 1958). In 1848, lands were divided into three portions, crown lands, government lands, and lands set aside for the chiefs. Individual plots, called *kuleana* (Native Hawaiian land rights) awards, were granted within these divided lands to native inhabitants who lived on and farmed these plots and who came forward to claim them. The *ali‘i* and *konohiki* were

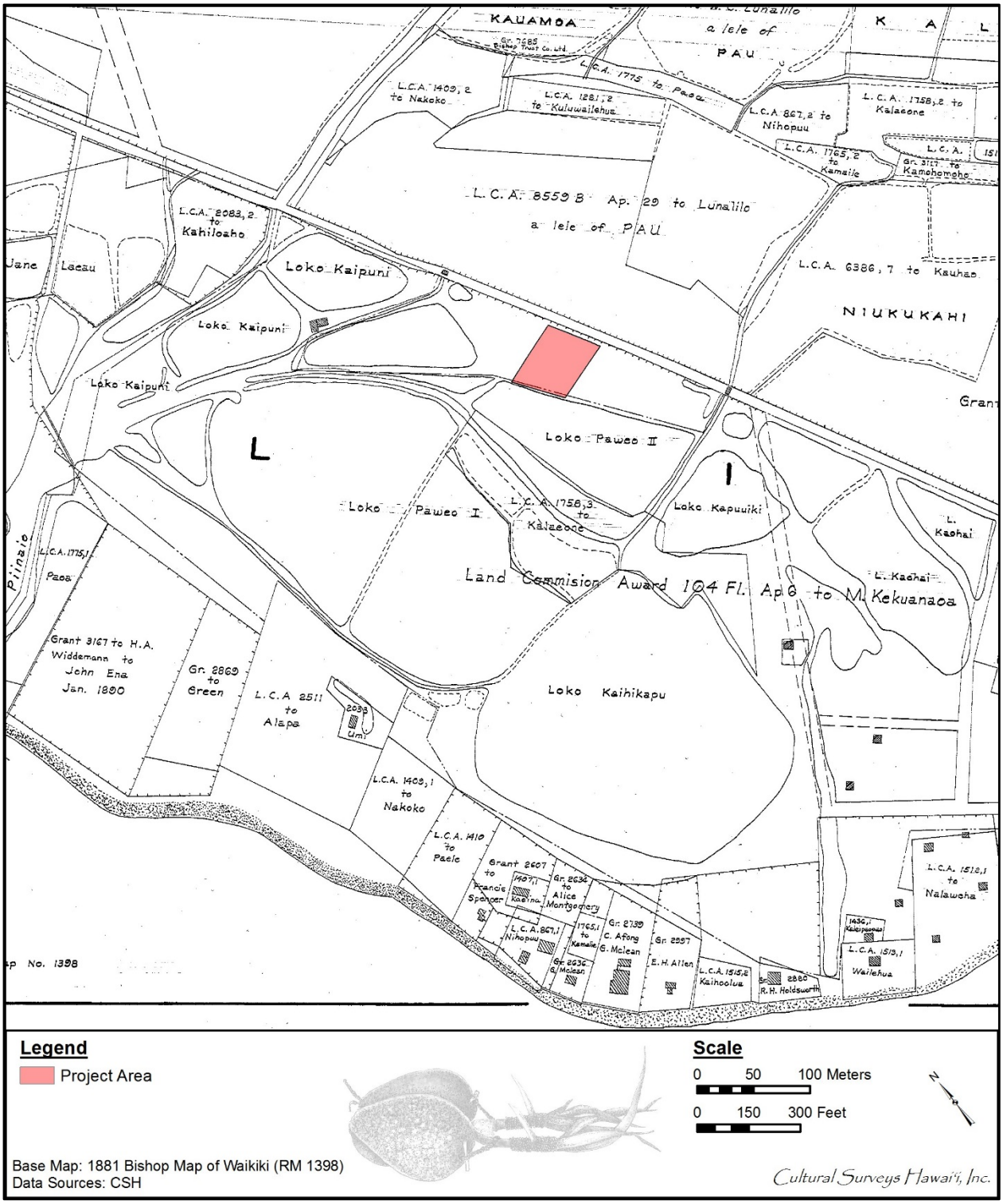

Figure 7. 1881 Bishop map of Waikīkī with project area depicted in red; note the project area is bordered to the west by Loko Paweo II and the northeast is bordered by a road, which is the current alignment of Kalākaua Avenue today

Figure 8. 1887 Wall map of Honolulu with project area in red; note the many fishponds in Kālia ‘Ili

required to pay a commutation fee for their lands, usually about one-third the value of any unimproved lands. Awardees usually “returned” a portion of the lands awarded to pay the commutation fee for the lands they “retained.” The returned lands usually became government lands (Chinen 1958:13).

The Kuleana Act was legislated in 1850 allowing *maka‘āinana* (commoners) to own land parcels which they were currently and actively cultivating and/or using as a residence. In theory, this “set aside” hundreds of thousands of acres as potential *kuleana* parcels; in reality about 10,000 claimants obtained approximately 30,000 acres. The *konohiki*, 252 chiefs, divided up about a million acres. Many Hawaiians were disenfranchised by these acts (Cordy et al. 1991).

In the *ahupua‘a* of Waikīkī, there were 437 land claims of which only 243 were awarded. One LCA was awarded within the project area. LCA 8559B was awarded to William C. Lunalilo whose lands spanned island-wide. It is unclear what his Waikīkī lands were used for. However, a land dispute was filed by Charles Kanaina, Lunalilo’s father, for land in Pau ‘Ili, which suggests the land was most likely used for *lo‘i kalo* (irrigated terrace of taro). A resident by the name of Pahau acquired a parcel that consisted of nine *lo‘i kalo* after the death of Kaaha. However, when all claimants who had land in Pau ‘Ili died, they were returned to Lunalilo. Therefore, Kanaina felt those patches belonged to Lunalilo. See Appendix A

Table 1. LCAs within the Project Area

LCA Number	**Claimant**	***‘Ili***	**Land Use**
8559B	Lunalilo, W.C.	Pau	*‘Āpana* 29: Nine *lo‘i kalo*

4.4 Mid- to Late 1800s

Waikīkī became a popular site among foreigners who had settled on O‘ahu throughout the course of the nineteenth century. The area continued to be popular with the *ali‘i* and several notables had residences there (Figure 9 and Figure 10). William Root Bliss traveled to O‘ahu in 1873 to escape from the northern winters; he describes Waikīkī as “a hamlet of plain cottages, stretching along the seashore, in the edge of a grove of cocoanut-palms, whither the white people of Honolulu go to revel in bathing-clothes, mosquitoes, and solitude, at odd times of the year” (Bliss 1873:195).

Several developments during the second half of the nineteenth century dramatically impacted and altered the landscape of Waikīkī during the twentieth century. These included improvement of the road connecting Waikīkī to Honolulu (present day Kalākaua Avenue, Beretania Street, Kapi‘olani Boulevard, and Ala Moana Boulevard); the building of a tram line between the two areas; and the opening of Kapi‘olani Park on 11 June 1877 (Figure 11). Traditional land uses in Waikīkī were abandoned or modified. By the end of the nineteenth 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 (Coulter and Chun 1937).

Figure 9. Photo of Kamehameha V, Lot Kapuāiwa, home in Helumoa ‘Ili ca. 1863 (courtesy of R.J. Baker Collection, Kamehameha Schools)

Figure 10. Photo of Queen Emma’s home at ‘Āpuakēhau Stream, formerly located near the Moana Hotel, ca. 1880 (Hawai‘i State Archives)

Figure 11. Photo of Kalākaua Avenue with streetcar tracks ca. 1895 (Library of Congress)

As the sugar industry throughout the Hawaiian kingdom expanded in the second half of the nineteenth 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. Upon completion of their contracts, a number of the immigrants remained in Hawai‘i, many becoming merchants or rice farmers. As was happening in other locales in the 1880s, groups of Chinese began leasing and buying (from the Hawaiians of Waikīkī) former taro lands for conversion to rice farming (Coulter and Chun 1937). By 1892, Waikīkī had 542 acres planted in rice, representing almost 12% of the total 4,659 acres planted in rice on O‘ahu (Figure 12).

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

4.5 1900s

4.5.1 Fort DeRussy

During the first decade of the twentieth 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 Brigadier General 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]

Initial development of Fort DeRussy focused on the filling in of fishponds near the coast (Loko Kaihikapu, Loko Kapu‘uiki, a portion of Loko Paweo I, and possibly Loko Waiku‘apu‘u) (Davis 1989:19). A 1910 U.S. Engineer’s map of Waikīkī shows the development of roads and open space in the southern half of Fort DeRussy, although the northern ponds were still present (Figure 13). Filling and development proceeded at a rapid pace; a 1919 War Department map shows a network of roads and buildings on Fort DeRussy, with only a portion of the Kaipuni fishponds still remaining (Figure 14). In 1928, the last of the fishponds (a portion of the Kaipuni complex) at Fort DeRussy were filled with coral spoil from the reef areas at the mouth of the Ala Wai Canal (Nakamura 1979:107). Between 1943 and 1953 the northern portion of Fort DeRussy had been further developed and Ala Moana Boulevard (previously known as Beach Road) had been extended from Kālia Road to Kalākaua Avenue. The west and southwest portions of the project area are bordered by a pre-Contact and post-Contact *‘auwai* (irrigation ditch) and bund system

Figure 12. Photo of rice fields looking *mauka* to Mānoa Valley, ca. 1890 (Hawaiian Historical Society)

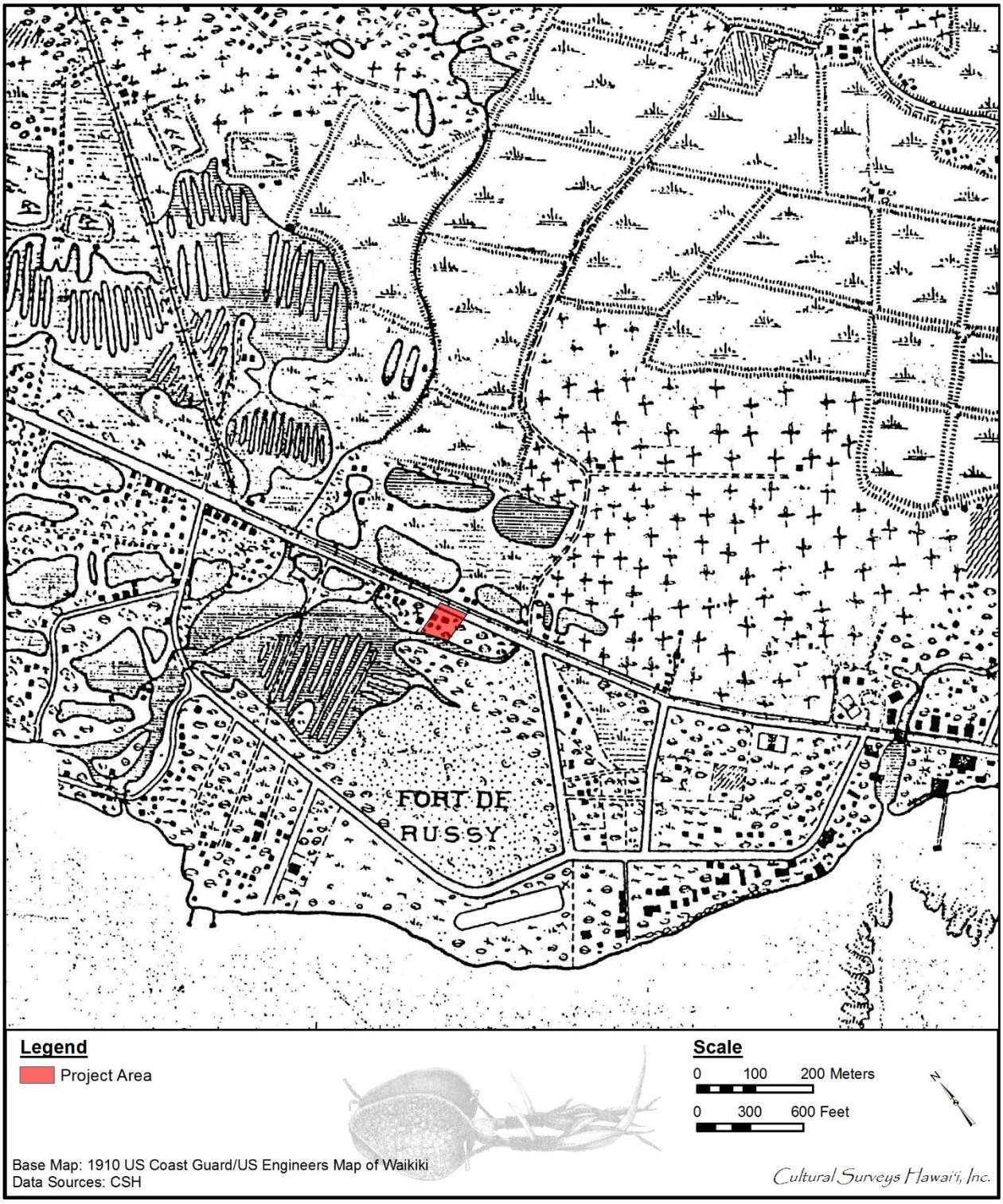

Figure 13. 1910 U.S. Coast Guard/U.S. Engineers map of Waikīkī with project area; note the filling in of fishponds within Fort DeRussy and the development of roads with Waikīkī Ahupua‘a

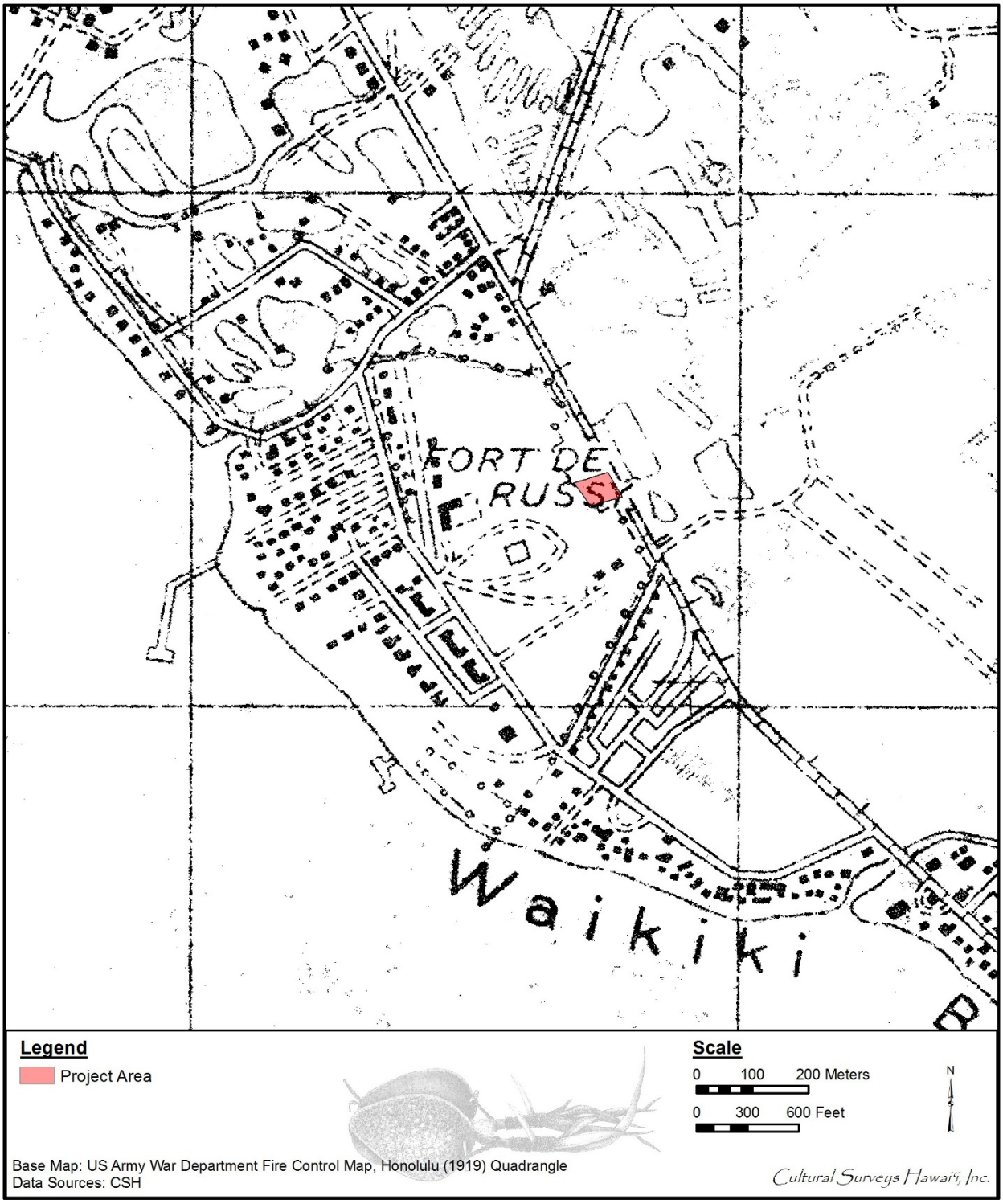

Figure 14. 1919 U.S. Army War Department Fire Control map, Honolulu Quadrangle with project area; Waikīkī Ahupua‘a continues to grow with its many buildings and roads, now expanding *mauka*; fishponds are still evident in Kālia ‘Ili, however, many residences and buildings are now present near the fishponds

(State Inventory of Historic Places [SIHP] # 50-80-14-04970). Just beyond the *‘auwai* and bund system is Loko Paweo II fishpond (SIHP # 50-80-14-04576), which was filled for the construction of the Fort DeRussy Military Reservation (Figure 15). Both historic properties were found during archaeological data recovery at Fort DeRussy (Simons et al. 1995).

4.5.2 The Ala Wai Canal

During the 1920s, the Waikīkī landscape was transformed by construction of the Ala Wai Drainage Canal—begun in 1921 and completed in 1928—which resulted in the draining and filling in of the remaining ponds and irrigated fields of Waikīkī. Information about the dredging and filling process and the materials dredged up and used for fill is minimal. Available documents suggest dredging was conducted both off-shore, on the ocean bed, and in the area slated for the canal. Information regarding the filling process of personal properties—with the excess dredge that became the property of the Hawaiian Dredging Company—is unclear. Numerous phases seem to have taken place to complete the construction of the canal:

> The [Honolulu city] planning commission began by submitting street layout plans for a Waikiki reclamation district. In January 1922 a Waikiki 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, Moiliili, and McCully districts, as well as lower Makiki and Manoa. 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]

Nakamura (1979:85) writes that the government of the Territory of Hawaii solicited bids in 1920 for the dredge and fill project planned for the environs of Waikīkī. The plan was to create hundreds of acres of urban land—at the expense of wetland agriculture and aquaculture in the area. The advertisement soliciting bids for the project, put forward by Lyman H. Bigelow, masked the significance of the project by stating it was “for Dredging a Drainage Canal and Filling and Reclaiming Certain Unsanitary Lands at Waikiki” (Nakamura 1979:85). Nakamura further writes that laws were passed requiring property owners to pay for the filling in of their lands, which apparently was going to be done whether they wanted it or not. A lien would be fixed against their property and if all payment was not made on time, land would be foreclosed on. Nakamura points out that the cost was so high for some of the property owners that the bank lien could extend into a fifteen year mortgage (Nakamura 1979:89).

Once land that the Territory of Hawaii wanted filled in (for government buildings) was complete, any further dredged materials became the property of the dredging company—the Hawaiian Dredging Company—and they in turn could sell the materials to the property owners, who in turn were forced to buy the product (Figure 16, Figure 17). Walter F Dillingham, head of the Hawaiian Dredging Company, died in 1963. *Time* magazine, in its article about him and his involvement in the project stated that “Walter Dillingham used the muck dragged up from the sea to fill in low, marshy areas around Honolulu, over the years created 5,000 acres of solid ground that now holds a full third of the city’s population” (Nakamura 1979:112).

Figure 15. Photo of Fort DeRussy, n.d. (Hawai‘i State Archives)

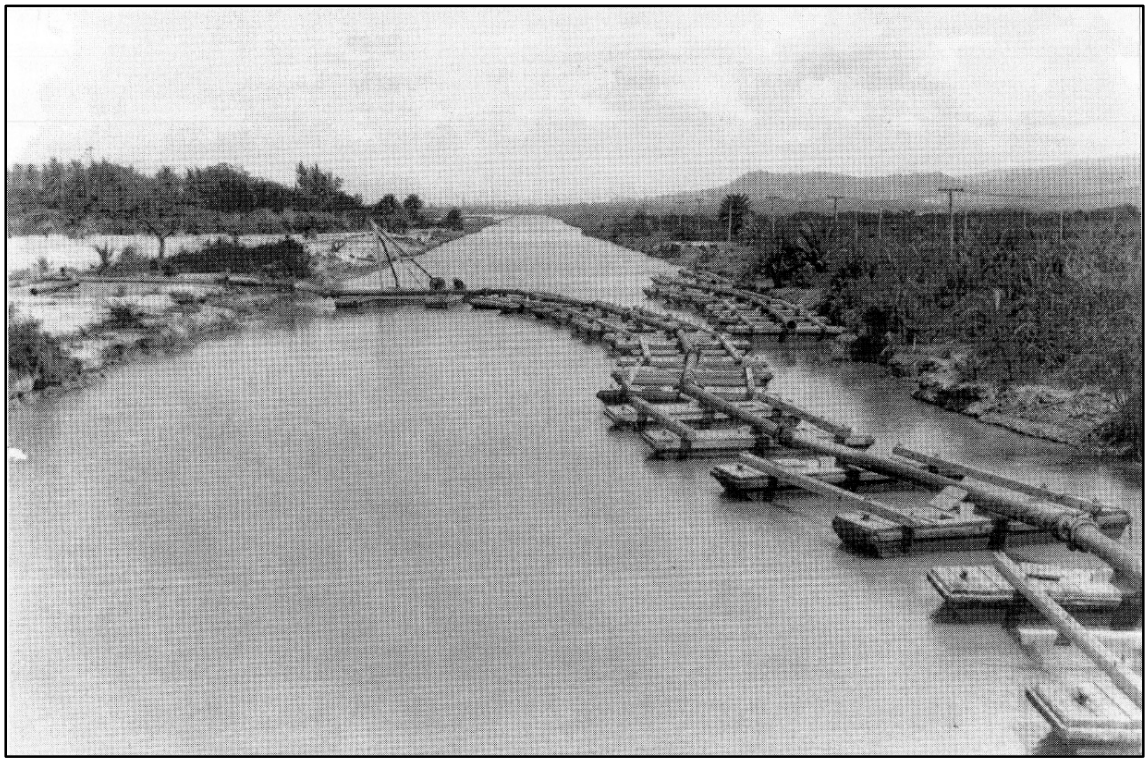

Figure 16. Photo of Ala Wai Canal dredging, ca. 1924 (Hawai‘i State Archives)

Figure 17. Photo of fishermen at the Ala Wai Canal, ca. 1931 (Hawai‘i State Archives)

The final result was a “canal three miles long, with an average depth of twenty-five feet and a breadth of two hundred fifty feet” (*Honolulu Advertiser*, 17 October 1928:2:16). Several claims were made against the dredging company, including requests for compensation for destroyed crops and livestock, by farmers living in Waikīkī.

For instance, a Chinese tenant farmer named Chang Fow, leasing lands in Waikīkī from the Bishop Trust Company, wrote a letter of complaint indicating the salt water that leached into his lands as a result of the dredging of the canal had devastated his fishponds and stocks of ducks and chickens (letter from Chang Fow to the Bishop Trust Company, 23 May 1922 in Nakamura 1979:100–101). His claims, along with those of other residents of the area, give an impression of the continuing agricultural subsistence base in Waikīkī that lasted into the 1920s, and rapidly became a thing of the past. A 1933 U.S. Army War Department Fire Control map (Figure 18) illustrates that the fishponds and swamplands were now a part of history.

The land surface of modern Waikīkī is situated on the result of this decade-long dredging and filling project of which the creation of the Ala Wai Canal was a part. In Nakamura’s (1979:113) *The Story of Waikīkī and the Reclamation Project,* he writes that this land “reclamation” program changed the ecology of Waikīkī, once a viable and important agriculture and aquaculture center. It was “destroyed by profit-seeking capitalist entrepreneurs . . . under the subterfuge of ‘drainage’ and ‘sanitation.’” Many of the original property owners lost their land or had serious damage to their property as a result of the reclamation activities and/or the costly expense for the mandatory filling in of their properties.

The construction of the Ala Wai Golf Course, built on the Territorial Fair Grounds, began as part of the reclamation project. These grounds had once been part of extensive wetland rice fields.

> The fairgrounds were situated on the lands now occupied by the Ala Wai Golf course. The Territory purchased the property in 1918, prior to the construction of the Ala Wai Canal. In 1921 the governor conveyed these lands to the Territorial Fair commission, which constructed a seven hole golf course as one of its attractions. In 1938 the golf course was expanded to its current size, the first eighteen hole public golf course in the territory. [Hibbard and Franzen 1986:110]

Some say this area had been used as a golf course much earlier, with tin cups sunk into a makeshift green on the fairgrounds (Figure 19). The first nine holes of the golf course were completed by 13 September 1931; the second nine holes by 10 July 1937. The clubhouse was finished in 1948. The Honolulu architectural firm of Nelson & Wright realigned and redesigned the seven holes of the front nine in 1989. During this renovation, they added a new water hazard, and landscaped the entire course anew.

Waikīkī had been changed forever by the Ala Wai Canal. The pre-Contact irrigation systems were gone, the farms were gone, the streams were gone, the mosquitoes were gone, and Waikīkī was separated from the rest of Honolulu by a broad canal. On the new high-and-dry lands behind the hotels, developers laid out tracts of inexpensive homes and garden apartments. Almost overnight Waikīkī became urban (Grant 1996:54).

4.5.3 Hotel Development

W.C. Peacock, a wealthy Honolulu landowner, had a seaside cottage in Waikīkī, east of ‘Āpuakēhau Stream. He tore down his cottage and built the Moana Hotel, which opened on

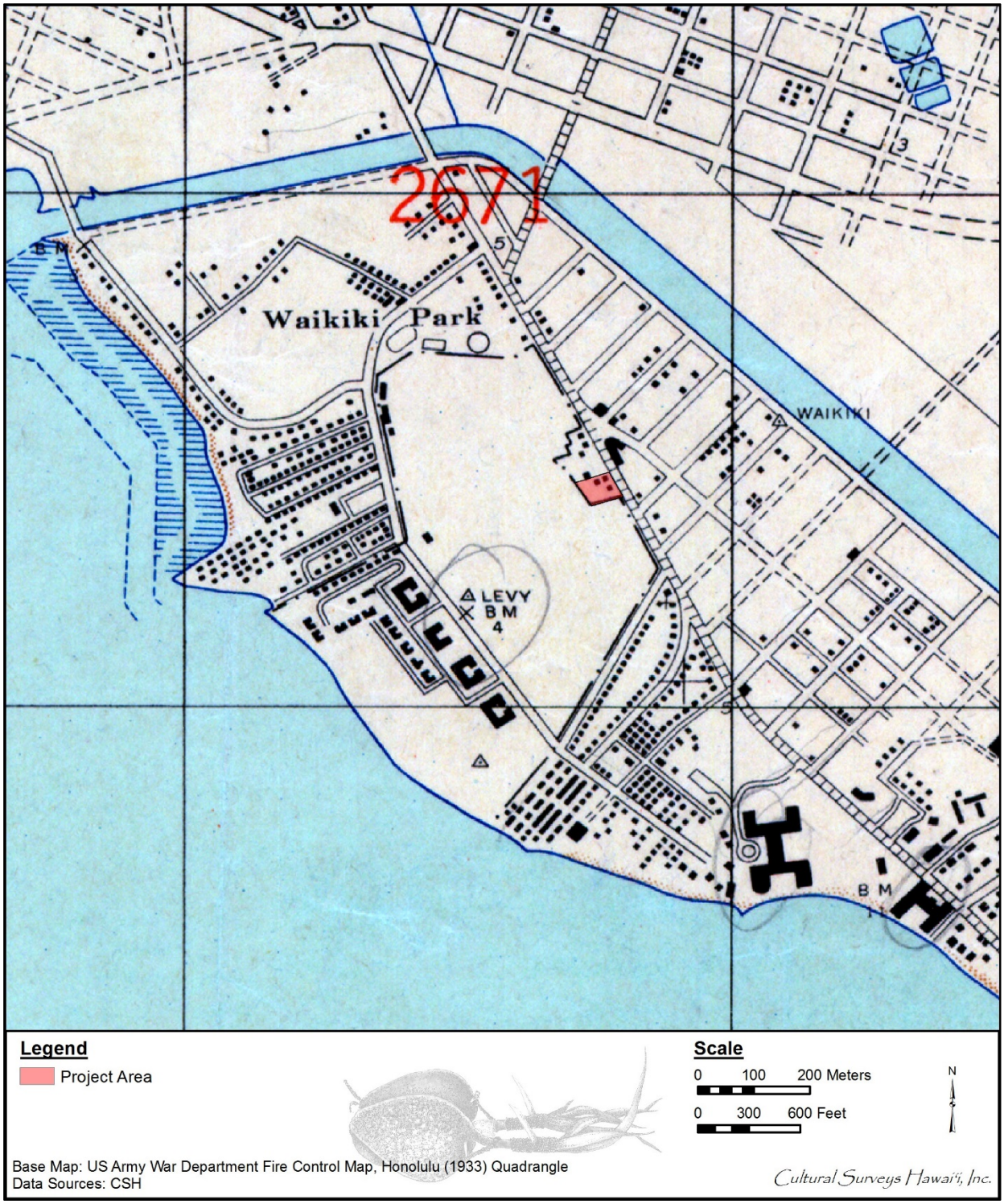

Figure 18. 1933 U.S. Army War Department Fire Control map, Honolulu Quadrangle with project area; the Ala Wai Canal has been constructed, the fishponds that once dotted Kālia ‘Ili have now been filled in and are non-existent, and a series of roads is present in Waikīkī Kai and *mauka* of the Ala Wai Canal

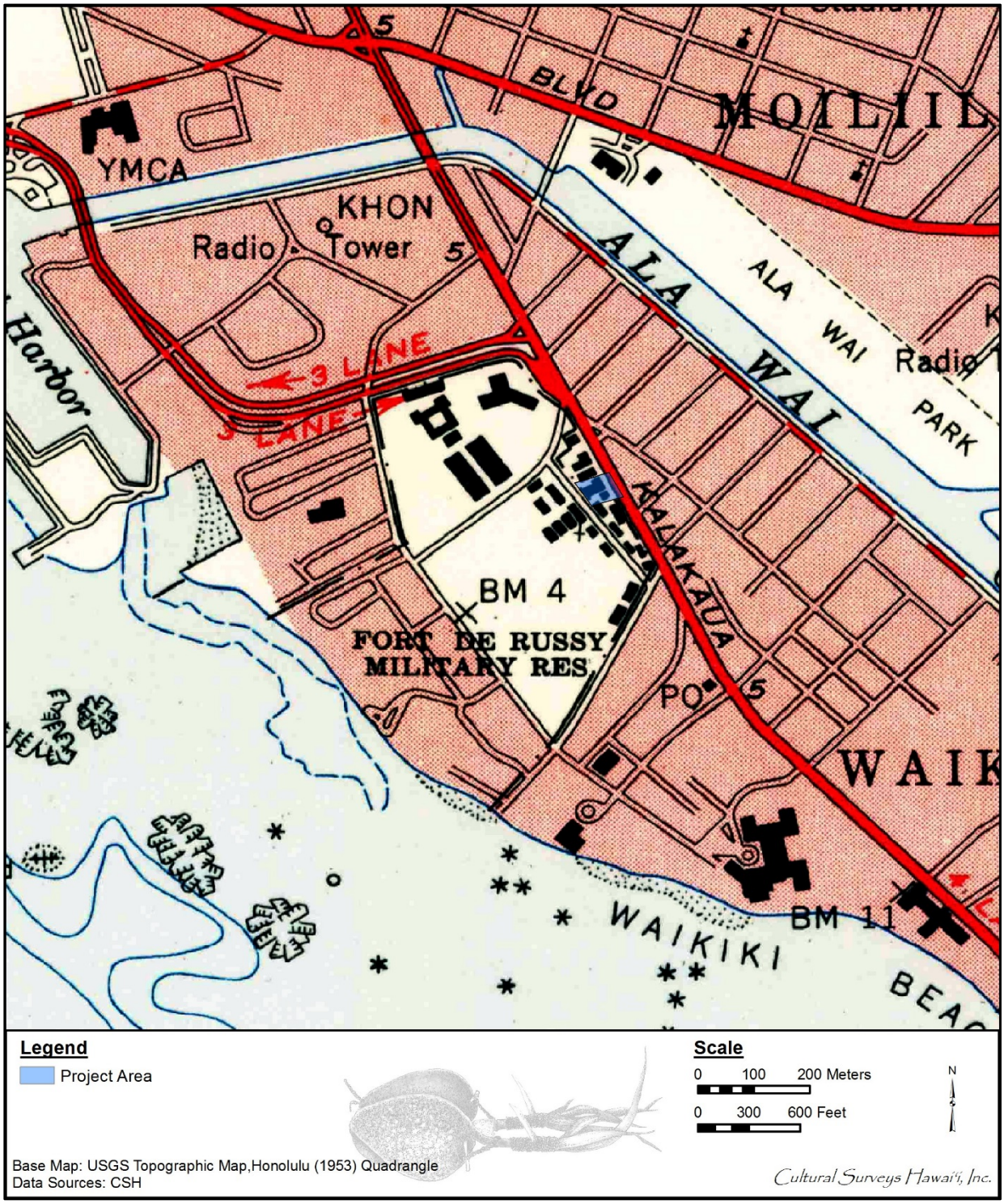

Figure 19. Portion of 1953 Honolulu USGS topographic quadrangle with project area in blue; several points of interest include the KHON Radio Tower northwest of the project area, the YMCA of Honolulu on Atkinson Drive, and the Ala Wai Canal

11 March 1901 (Figure 20). The first hotel building had 75 rooms, each with its own private bath and telephone, an unheard of luxury (Figure 21). In 1905, Peacock sold the hotel to Alexander Young, who had an interest in several other Hawai‘i hotels. Young’s estate managed the hotel until 1928, when it was purchased by the Matson Steamship Company to cater to the new steamship tourists who were flocking to Hawai‘i as a vacation destination. Under the title of the Territorial Hotel Company, Ltd., Matson operated a number of hotels in Hawai‘i, including the Moana, the Royal Hawaiian, and its predecessor the Seaside Hotel.

The Center for Oral History, Social Science Research Institute located at the University of Hawai‘i at Mānoa (UHCOH) interviewed various *kūpuna* including Mr. Joseph Akana. Mr. Akana lived and grew up in Waikīkī in the 1920s. He shared his memories of the Moana Hotel and the area east of the project area. He also pointed out that he went to Waikīkī School, located right across the street from the Moana Hotel which had been a Hawaiian church with a cemetery.

The Seaside Hotel was built in 1906, and consisted of a 10-acre parcel west of ‘Āpuakēhau Stream and west of the Moana Hotel (Figure 22). Scattered on the grounds were bungalows and tent houses for guests. Many famous people came to stay at the hotel, including Alice Roosevelt Longworth, the daughter of the Theodore Roosevelt, and Jack London, who wrote several of his South Pacific stories at the hotel during his stay (Scott 1968).

By 1928, the Matson Steamship Company owned the Moana Hotel and held the lease for the Seaside Hotel. In 1925, they began to move many of the bungalows and cottages from the Seaside Hotel beach area to the *mauka* side of Kalākaua Avenue to clear the ground for construction of the new Royal Hawaiian Hotel. UHCOH interviewee Beatrice Tominagam, who lived in the Moana Hotel employee housing area east of Ka‘iulani Street from 1919 to 1925, shared memories of life in this area when she was just a young girl:

> Oh, when we were there when I was a little girl, this was an empty lot. Just empty, nothing was on it. When I was living there, we watched them build these four big beautiful buildings (and a small two-bedroom cottage). They were beautiful (and painted white). They were two stories and they had a chimney on each one of them, and a big yard. The hotel called it the Moana Hotel Annex. And then, this part, ‘Āinahau Court, had many two-bedroom cottages and lot of date trees over here. We used to pick dates when they fell on the ground. [University of Hawai‘i Center for Oral History 1985:4:1986]

Mrs. Tominagam remembered that many of the buildings on the *mauka* side of Kalākaua Avenue were used for hotel guests; not all the buildings were used for hotel employees. The small cottages *mauka* of the Moana Annex, in the ‘Āinahau Court, were also for visitors. She noted, “Ainahau Court, were [for] Mainland people who rented those cottages and they lived there for many years.” She described the area where the current International Market place is located:

> Oh, this area right here where the International Market [Place] is now was the Seaside Hotel cottages that they moved from Kālia Road to make room for the Royal Hawaiian Hotel. They moved them here and they were over here. They were cottages, you see. After the war [World War II] they got rid of those cottages. And in the middle 1950s they built the International Market Place. [University of Hawai‘i Center for Oral History 1985:4:1987]

Figure 20. Photo of the Moana Hotel on 11 March 1901, Opening Day with bunting (*Honolulu Advertiser*)

Figure 21. Photo of Moana Hotel pier, n.d. (University of Hawai‘i at Mānoa Digital Collection)

Figure 22. Photo of the Seaside Inn with ‘Āpuakēhau Stream (left foreground) and the Moana Hotel pier (background), ca. 1896 (University of Southern California Pierce Collection)

Stan Cohen (1997:42), in his book on the Princess Ka‘iulani Hotel, recounts, “In 1920 cottages and an expansive lawn were built across Kalākaua Avenue at the former site of ‘Āinahau.” This generally refers to a number of small rectangular cottages directly opposite the Moana Hotel on the *mauka* side of Kalākaua Avenue, east of Ka‘iulani Avenue.

The Royal Hawaiian Hotel, also known as the “Pink Palace of the Pacific,” opened on 1 February 1927 at an estimated cost of $4 million (Figure 23). Construction began in 1925 and at the time, it was the biggest construction project in the Pacific. Notable visitors to the Royal Hawaiian Hotel included the Rockefellers, the Beatles, and Marilyn Monroe. During World War II, the hotel closed its doors after Pearl Harbor was attacked. Subsequently, the United States Navy used the hotel as a rest and recreation center for enlisted sailors. The Navy vacated the hotel shortly after the end of World War II and it reopened in January 1947 (Fischer n.d.:1–2).

Between 1954 and 1955, Henry J, Kaiser and Fritz Burns purchased the Niumalu Hotel and its surrounding lots (Hibbard and Franzen 1986:144). The duo commissioned architects Welton Beckett and Ed Bauer, and landscape architect Richard Tongg to design the hotel. When the hotel was completed, it was called the Kaiser Hawaiian Village. It was a complex of 24 thatched roofed guest cottages and boasted three below sea level salt water swimming pools that contained continuously flowing and filtered ocean water (Hibbard and Franzen 1986:145). In 1961, hotelier Conrad N. Hilton purchased Kaiser’s interest in the hotel. The name Hilton was added to the hotel. Today, the 22-acre complex consists of six towers with guest accommodations, 20 restaurants, 90 shops, an artificial lagoon, four pools, a branch of the Bishop Museum, and a concierge with guest activities (Feeser and Chan 2006:39).

Development of hotel properties in Waikīkī during the 1950s raised concern over public rights of way for access to the Waikīkī beach which, like all of Hawai‘i’s beaches, is public from the ocean to the high water mark. The population in 2000 included 13,124 residents in the Waikīkī-Kālia area, 17,216 in the McCully/Kapahulu neighborhoods, 13,877 in the combined Punahou/Mō‘ili‘ili area, 13,712 in the Kapahulu/Diamond Head areas, and 16,529 persons in the Kaimukī area (Schmitt 1977:18–19).

4.5.4 World War II

The Japanese bombing of Pearl Harbor on 7 December 1941, put a hold on development plans for Waikīkī as a tourist destination. The tourist trade was non-existent while the war was still on; “the Navy controlled travel to and from Hawai‘i and did not allow pleasure trips” (Brown 1989:141). During the war, Waikīkī was used as 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).

4.5.5 Post-World War II

The war ended in 1945 and by the mid-1950s there were more than 50 hotels and apartment buildings from the Kālia area to the Diamond Head end of Kapi‘olani Park. The Waikīkī population at that time 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.

Figure 23. Photo of the Royal Hawaiian Hotel; note the Ala Wai Canal (middle); ca. 25 November 1928 (Hawai‘i Aviation Museum)

Development of hotel properties in Waikīkī during the 1950s raised concern over public rights-of-way for access to the Waikīkī beach which, like all of Hawai‘i’s beaches, is public from the ocean to the high water mark. An article in the *Honolulu Star-Bulletin* of 16 January 1957 noted there were no public right-of-ways to the beach for “nearly a half mile strip in the heart of Waikiki” from “the Diamond Head side of the Surf Rider Hotel to the Ewa side of the Halekulani Hotel.”

4.6 Background Summary and Predictive Model

Based on background research, the primary area of traditional Hawaiian settlement and intensive agriculture within Waikīkī Ahupua‘a seems to have spanned across the entire plain. From Mānoa to Waikīkī consisted of *lo‘i*. Fresh water springs could be found in Mō‘ili‘ili and Punahou. The project area and the vicinity of the project area was primarily used for aquaculture via fishponds. Prior archaeological reports indicate the project area was bordered by SIHP # 50-80-14-04970 (a pre-Contact and post-Contact irrigation ditch, primarily used in the role of cultivating taro) and SIHP # 50-80-14-04576 (Loko Paweo II fishpond). According to LCA 8559B awarded to William C. Lunalilo, the land was being utilized by a resident named Pahau who planted nine *lo‘i kalo* on the property. The LCA claim in conjunction with archaeological findings confirm that the *‘ili* of Kālia was very agriculturally productive.

Waikīkī was the epicenter of population and political power on O‘ahu. Life in Waikīkī was soon disrupted by Euro-American Contact. The local population shifted its focus to Honolulu, which became the center for trade with foreign vessels. Native Hawaiians also shifted their focus from cultivation to new endeavors with foreigners. Contact with foreigners led to the introduction of western diseases that Hawaiians were not accustomed to. Disease had a devastating effect upon the Hawaiian population killing natives by the thousands.

Waikīkī continued to be a popular area for foreigners as well as *ali‘i* who continued to reside in the area post-Contact. Developments in the late nineteenth century began to impact and alter the landscape of Waikīkī. These changes included the construction of roads (such as Kalākaua Avenue, Beretania Street, Kapi‘olani Boulevard, and Ala Moana Boulevard, which connected Honolulu to Waikīkī); the building of a rail line between the two populated areas; and the opening of Kapi‘olani Park. Traditional land uses focusing on agriculture and aquaculture declined. Fishponds and *lo‘i* were either abandoned or heavily modified. Modifications included the shift from *lo‘i* to rice fields.

In the early twentieth century, the many fishponds of Kālia were filled for the establishment of a military reservation called Fort DeRussy. Soon after, the Waikīkī landscape was altered again for the construction of the Ala Wai Canal. Construction on the canal began in 1921 and was completed by 1928. The *lo‘i* lands that spanned the plain between Waikīkī and Mānoa were dredged and used to fill marshy areas around Honolulu.

Hotel development also became a venture within Waikīkī Ahupua‘a. In 1901, the Moana Hotel was built. The hotel was considered luxurious with 75 rooms—each with a private bath and telephone. The Seaside Hotel was constructed in 1906. The 10-acre parcel next to ‘Āpuakēhau Stream included bungalows and tents used to house guests. In 1925, the bungalows were moved to make room for a new hotel—the Royal Hawaiian Hotel. Two years later at the estimated cost of $4 million, the “Pink Palace of the Pacific” opened. Construction of hotels continued to boom throughout the twentieth century with the exception of World War II. The war put development plans in Waikīkī on hold. The Navy controlled travel to and from Hawai‘i and used Waikīkī as a recreation area for military.

Section 5 Previous Archaeological Research

5.1 Previous Archaeology in the Vicinity of the Project Area

Archaeological studies in the vicinity of the current study area inform us about traditional Hawaiian cultural practices and are presented in Table 2**.** and Figure 24 Historic properties in relation to the project area are shown in Figure 25 and are summarized in Table 3. Locations of previous reported burials are shown in Figure 26. Archaeological monitoring programs, investigations, data recovery, or inventory surveys have previously been conducted along the majority of the study area. Archaeological finds documented during these studies include human burials, pre- and post-Contact cultural layers, buried fishponds, ditches, and other remains of extensive wetland agriculture, trash pits, and construction debris.

5.1.1 Kimble 1976

Denham and Pantaleo (1997a:9, citing Kimble 1976) relate that in 1976, “Five prehistoric or late-historic period bundle burials were recovered from a sand deposit” during construction of the Hale Koa Hotel on the beach at Fort DeRussy. A sixth burial also was reported, seemingly from a different context and possibly just pre-dating 1948. The Federal Register “Notice of Inventory Completion for Native American Human Remains and Associated Funerary Objects from the Island of Oahu” (Bishop Museum NAGPRA inventory) of 28 January 1998 makes no mention of these remains being in the museum collection at that time which is consistent with the account by Neller (1980:7) that “all were reburied near the hotel.” Denham and Pantaleo (1997a:33) indicate the reburial site is north of the Hale Koa Hotel and is marked by a stand of red ti plants.

5.1.2 Sinoto 1977

In 1977, the Bishop Museum conducted an archaeological reconnaissance survey of the southeast corner of the Hilton Hawaiian Village grounds. The exact boundaries of the survey are unknown as no map indicating the specific study area was included in the report. No historic properties were identified during the surface reconnaissance, however, it was noted that the presence of subsurface cultural deposits in the form of human burials and filled-in fishponds were likely in the area.

5.1.3 Neller 1980

In 1980, three partial sets of human remains were inadvertently discovered during construction activities within the southeastern corner of the Hilton Hawaiian Village, i.e., the construction of Tapa Tower. All three sets of remains had been disturbed by construction activities and were removed from their primary burial context before SHPD archaeologists could document their stratigraphic provenience. The burials were determined to be of Hawaiian ethnicity and post-1850 in age based on a reconstruction of historic period shorelines. The burials were designated SIHP # 50-80-14-2870.

In addition to the three burials, three subsurface features, consisting of pit features pre-dating the construction of the Ala Wai Canal, also were observed. Two of the features had an undetermined function; however, Neller (1980) suggested they may have been filled-in irrigation ditches. A “coffee bean” sinker used for octopus lures was collected from the pit fill of one of these possible ditches. The sinker was constructed of pink granite, an imported material which dated the

Table 2. Previous Archaeological Studies in the Vicinity of the Project Area

Reference	Nature of Study	SIHP # 50-80-14	Findings
Kimble 1976	Burial excavation	-9500 (BPBM # Oa-A4-25)	Five pre-Contact or early historic bundle burials and a sixth possibly twentieth century human burial encountered during construction of Hale Koa Hotel on beach at Fort DeRussy
Sinoto 1977	Archaeological reconnaissance survey	N/A	No historic properties observed
Neller 1980	Inadvertent discovery	-2870	Inadvertent burial discovery within the southeastern corner of Hilton Hawaiian Village (area of Tapa Tower); three disturbed burials postulated likely of Hawaiian ethnicity and post-1850, SIHP # -2870
Davis 1984	Archaeological and historical investigation	-9957	Excavated 48 historic and pre-Contact features in Fort DeRussy, including six human burials; originally designated Oa-A4-26, later assigned SIHP # 50-80-14-9957 for cultural deposits and burials
Davis 1989	Reconnaissance survey and historical research	4573, -4574, -4576, -4577, -4570	Fishponds and other features buried in this area of Fort DeRussy; SIHP #s -4573, -4574, -4576, and -4577 are fishponds; -4570 is remnant cultural deposit
Rosendahl 1989	Archaeological inventory survey		Documented disturbed cultural layer with historic artifacts in area of Fort DeRussy
Davis 1991	Archaeological monitoring	-9500	Subsurface features and material remains in Fort DeRussy date to early post-Contact period (ca. 1780s to 1790s) through mid-nineteenth century (see also Davis 1989); five sets of human remains designated SIHP # -9500
Hurlbett et al. 1992	Archaeological monitoring	-2870	Observed 15 subsurface pit features associated with post-Contact trash disposal; features incorporated into SIHP # -2870

Reference	Nature of Study	SIHP # 50-80-14	Findings
Streck 1992	Memorandum for record for data recovery	-9550	Human burial discovery (SIHP # -9550) at Fort DeRussy (late pre-Contact Hawaiian) during data recovery excavations, 20 May 1992
Carlson et al. 1994	Data recovery	“Burial Area 6” (-4570:8) and “Burial Area 7” (no SIHP # assigned)	BioSystems Analysis excavated human remains found during realignment of Kālia Road; Burial Area 6 included 27 to 34 individuals in a common pit feature located just SE of Paoa Place and Kālia Rd intersection; Burial Area 7 included four individuals in association with cultural layer located in vicinity of Army Museum
McMahon 1994	Inadvertent discovery report	-4890	Inadvertent discovery of a single burial of indeterminate ethnicity
Simons et al. 1995 (draft preceding Denham and Pantaleo 1997b)	Data recovery	-4574, -4576	Three previously identified historic properties encountered: Loko Paweo I (SIHP # -4574), Loko Paweo II (SIHP # -4576), and SIHP # -4579, a subsurface cultural layer associated with LCA 1785 and containing a set of fragmented skeletal remains; newly identified *‘auwai* system also discovered (SIHP # -4970); final results reported by Denham and Pantaleo (1997b) following restructuring of company/contract
Cleghorn 1996	Inventory survey	N/A	Seven backhoe trenches excavated, no historic properties located
Denham and Pantaleo 1997a	Archaeological monitoring	-4570 , -4574, -4966	Three historic properties observed: SIHP # -4574, fishpond sediments (Loko Paweo I), three historic trash pits, and two burials; SIHP # -4570, historic trash pit, four fire pits, an ash lens, and an unknown number of human burials; and SIHP # -4966, pre-Contact features and burials representing at least five individuals found in the Koko Head portion of Fort DeRussy; SIHP # -4966 is outside area shown in Figure 25

Reference	Nature of Study	SIHP # 50-80-14	Findings
Denham and Pantaleo 1997b	Data recovery	-4570, -4575, -4576, -4579, -4970	Five previously identified sites investigated: SIHP # -4570, a coastal area of pre- to post-Contact occupation, new documented features included a firepit, a coral rock concentration with associated posthole, and a cultural deposit; SIHP # -4575, Loko Ka‘ihikapu; SIHP # -4576, Loko Paweo II; SIHP # -4579, LCA 1758:3 containing five fire pits, one pit, one human burial, and historic as well as possible pre-Contact midden deposits; and SIHP # -4970, an *‘auwai* and bund system
Asbury-Smith and Dega 1998	Archaeological monitoring	N/A	No historic properties observed
Hammatt and McDermott 1999	Burial treatment plan and report	-5744	Documented disinterment of two pre-Contact or early post-Contact burials (SIHP # -5744)
Perzinski et al. 1999	Archaeological monitoring	-5744	Two pre-Contact or early post-Contact Native Hawaiian burials observed (SIHP # -5744)
LeSuer et al. 2000	Archaeological inventory survey	4970, -5796	SIHP # -5796, the wetland surface, adversely affected by land alteration of project area; SIHP # -4970 adequately documented
Corbin 2001	Archaeological inventory survey	N/A	No historic properties observed
Roberts and Bower 2001	Archaeological monitoring	N/A	No historic properties observed
Borthwick et al. 2002	Archaeological inventory survey	-6407	No burials found during testing; absence of dry Jaucas sand deposits indicate burial finds unlikely in project area; subsurface cultural layer, SIHP # -6407
Bush et al. 2002	Archaeological monitoring	-5856, -5860, -5864 (not shown on Figure 25; located beyond map area)	Documented several burials (SIHP #s -5856, -5860, -5864), pond sediments, *muliwai* sediments, an *imu* pit, and various pockets of trash and trash pits

Reference	Nature of Study	SIHP # 50-80-14	Findings
Elmore and Kennedy 2002	Archaeological monitoring	N/A	No historic properties observed
Putzi and Cleghorn 2002	Archaeological monitoring	-4573, -6399	Monitoring of force drain line and sewer relief line; pond sediments, organic sediments, and Jaucas sand documented beneath fill layers along Ala Moana Blvd and Kalākaua Ave; two features identified: a portion of Loko Kaipuni (SIHP # -4573) and a basalt alignment of indeterminate date; five post-Contact pit features documented within the Hilton Hawaiian Hotel grounds (SIHP # -6399); SIHP # -6399 is outside area shown in Figure 25
Kailihiwa and Cleghorn 2003	Archaeological monitoring	N/A	No historic properties observed
Esh and Hammatt 2004	Archaeological monitoring	N/A	No historic properties observed
Jones and Hammatt 2004	Archaeological monitoring	N/A	No historic properties observed
McIntosh and Cleghorn 2004	Archaeological inventory survey	-6680	Documents buried *lo‘i* (SIHP # -6680)
Tulchin et al. 2004	Archaeological data recovery	-6407 Feature A	Pollen and carbon dating results and Hawaiian use of Kuāuna and Paukū pond features discussed
Freeman et al. 2005	Archaeological inventory survey	-6700, -6701, -6702, -6703	Four historic properties identified: SIHP # -6700, a set of previously disturbed human skeletal remains; SIHP # -6701, a historic coffin burial; SIHP # -6702, a culturally enriched buried A horizon containing evidence of both pre- and post-Contact habitation; and SIHP # -6703, buried alluvial sediment associated with a buried fishpond
Rasmussen 2005	Archaeological monitoring	N/A	No historic properties observed
Esh and Hammatt 2006	Archaeological monitoring	N/A	No historic properties observed

Reference	Nature of Study	SIHP # 50-80-14	Findings
Jourdane and Dye 2006	Archaeological monitoring	N/A	No historic properties observed
O’Hare et al. 2006	Archaeological inventory survey	-6848	Twenty backhoe test trenches excavated; one new site, SIHP # -6848, a pre-Contact fire pit, dated to AD 1470-1660 recorded
O’Leary et al. 2006	Archaeological inventory survey	-6819 (not shown on Figure 25; located beyond map area)	One burial encountered, SIHP # -6819
Bell and McDermott 2007a	Archaeological assessment	N/A	No historic properties observed
Bell and McDermott 2007b	Archaeological inventory survey	-6873, -6875, -6874	Three historic properties documented: SIHP #s -6873 and -6875, consisting of isolated traditional Hawaiian burials; and SIHP # -6874, a subsurface cultural layer of pre- and post-Contact origin
Dye 2007	Archaeological inventory survey	N/A	No historic properties observed
Petrey et al. 2008	Archaeological monitoring	-1388 (not shown on Figure 25; located beyond map area)	No findings; a section of wall at Ala Moana Park Dr at Ala Moana Beach Park (SIHP # -1388) cut and replaced during project
Tulchin and Hammatt 2008	Archaeological inventory survey	N/A	No historic properties observed
Mooney et al. 2009	Archaeological monitoring	-7086, -7087	Documented one previously disturbed burial (SIHP # -7087) near the intersection of Kālia Rd and Ala Moana Blvd, consisting of a nearly complete cranium and cranial fragments; remains sealed and left in situ; also documented large historic trash feature complex (SIHP # -7086) along the north side of Hilton Hawaiian Village; SIHP # -7086 is outside area shown in Figure 25

Reference	Nature of Study	SIHP # 50-80-14	Findings
Tulchin and Hammatt 2009	Archaeological monitoring	-6700, -7057	Two historic properties identified: additional skeletal fragments associated with SIHP # -6700, previously identified (Freeman et al. 2005); SIHP # -7057, previously disturbed human skeletal remains
O'Hare et al. 2010	Cultural resources and ethnographic study	N/A	Field reconnaissance of open spaces; no historic properties observed
Park and Collins 2010	Archaeological monitoring	N/A	No historic properties observed
Tulchin et al. 2011	Archaeological inventory survey	-2870	Documented discontinuous A horizon beneath fill layers (SIHP # -2870) in southeastern corner of Hilton Hawaiian Village, determined to be remnants of a stable post-Contact historic land surface significantly disturbed by modern development
Yucha et al. 2011	Archaeological monitoring	-7015, -7016, -7017, and -7018	During off-site monitoring (for utility lines and road alignments) for Trump Tower, four human burials identified
Yucha and McDermott 2013	Archaeological inventory survey	-4570, -8770, -7087, -4573, -4970; 8770 (not shown on Figure 25; located beyond map area)	Recorded portions of five sites: SIHP #-4570, pre- and post-Contact subsurface cultural deposit and human burials; SIHP # -2870, subsurface cultural deposit with historic pit features and human burials; SIHP # -787, an inadvertent find of human skeletal remains preserved in place; SIHP # -4573, remnants of the Loko Kaipuni complex of fishponds; and SIHP # -4970, the *‘auwai* and bund system associated with Loko Kaipuni and Loko Paweo Fishponds

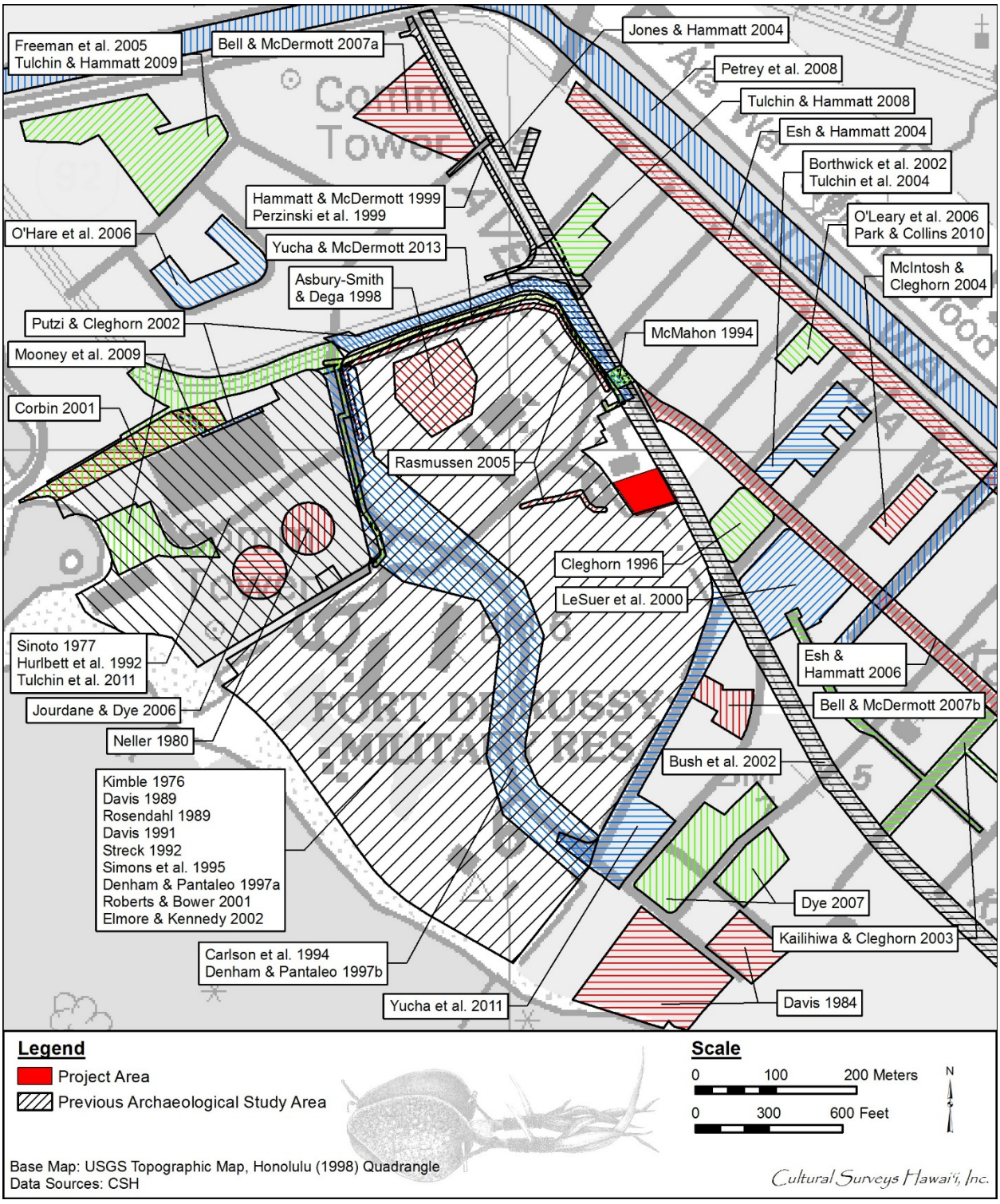

Figure 24. Previous archaeological studies within the immediate vicinity of the project area

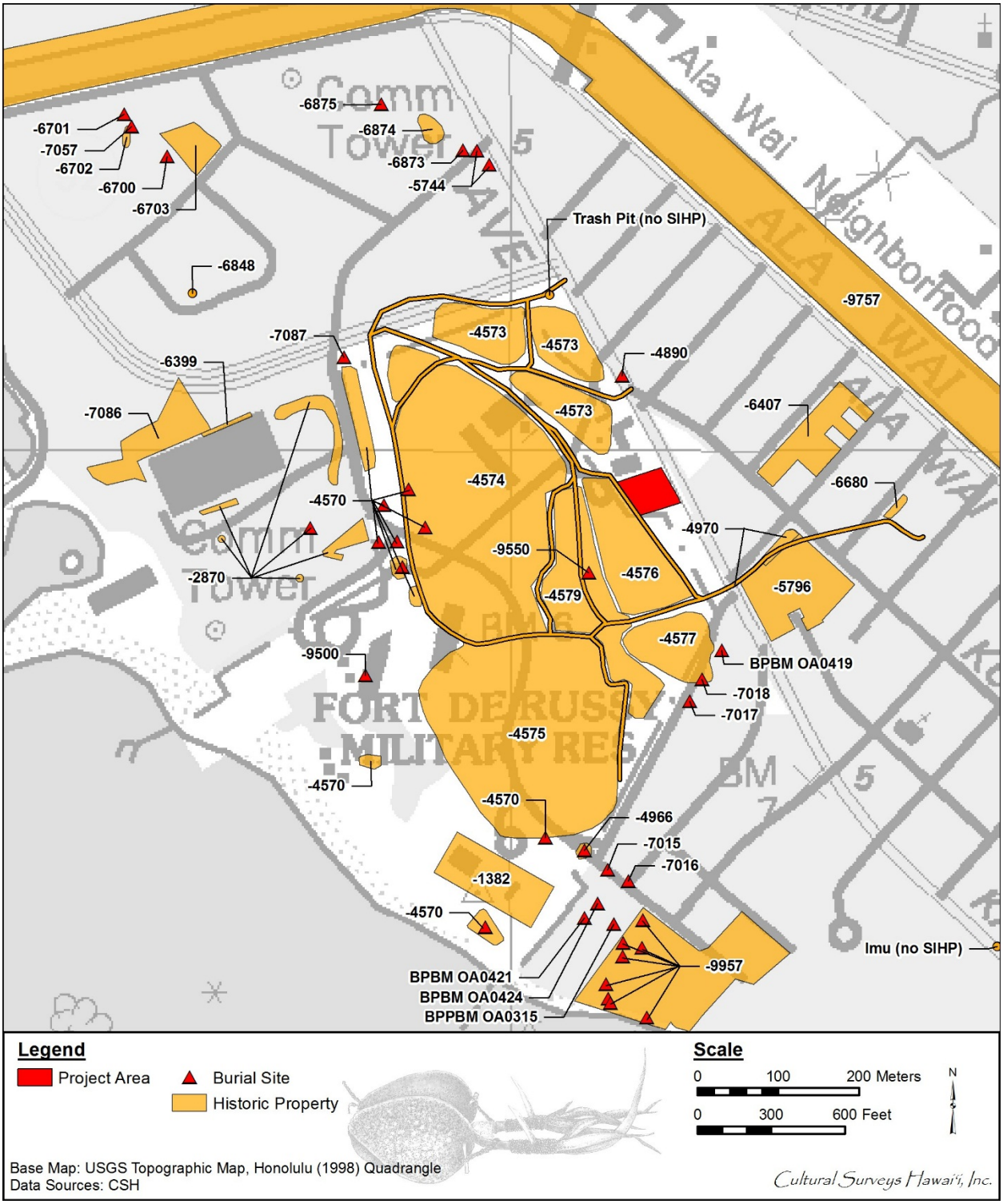

Figure 25. Aerial orthophotograph showing the project area and general locations of the previously identified subsurface historic properties in the immediate vicinity (Google Earth 2008)

Table 3. Previously Recorded Archaeological Sites in the Vicinity of the Project Area

SIHP # 50-80-14	Site Type/Name	Description	Reference
50-80-13-01382	Battery Randolph	WWII era battery	
-02870	Cultural deposit and burials	Subsurface cultural deposit with historic pit features and human burials	Neller 1980
-04570	Subsurface cultural deposit, burials	Historic trash pit (Feature 1), four fire pits (Features 2, 4–6), ash lens (Feature 3), and two human burials (Features 7 and 8)	Davis 1991; Denham and Pantaleo 1997a
-04573	Portion of Loko Kaipuni and basalt alignment of indeterminate date	Basal sediments within and underlying the fishpond; radiocarbon date of AD 1400-1700; indications of inland burnings associated with clearance of land for agriculture	Davis 1989; Putzi and Cleghorn 2002
-04574	Fishpond (Loko Paweo I)	Fishpond sediments, three historic trash pits, and two human burials	Davis 1989; Denham and Pantaleo 1997a
-04575	Loko Kaihikapu Fishpond	Pre- and post-Contact fishpond	Denham and Pantaleo 1997b
-04576	Loko Paweo II	Pre- and post-Contact fishpond	Davis 1989; Denham and Pantaleo 1997a
-04577	Loko Kapu‘uiki	Basal sediments within and underlying the fishpond; radiocarbon date of AD 1400–1700; indications of inland burnings associated with clearance of land for agriculture	Davis 1989; Denham and Pantaleo 1997a
-04579	Subsurface cultural deposit, burials	Five fire pits (Features 1A-C and 3A-B), a pit (Feature 2), dark stains (Features A and B), historic midden (Features 6 and 7), pre-Contact midden (Features 8 and 9), and one human burial (Feature 4)	Denham and Pantaleo 1997b
-04890	Burial	Inadvertent human burial discovered in back dirt pile during construction	McMahon 1994
-04966	Subsurface cultural deposit, burials	Subsurface cultural deposit contacting two human burials (Features 1 and 2) consisting of at least five interments	Denham and Pantaleo 1997a

SIHP # 50-80-14	Site Type/Name	Description	Reference
-04970	*‘Auwai* and bund system	Pre- and post-Contact irrigation system consisting of rock alignments (Feature 1), two *‘auwai* channels (Features 2 and 4), three bunds (Features 5–7), and a charcoal stain (Feature 3)	Denham and Pantaleo 1997b
-05744	Burials	Two pre-Contact or early post-Contact Native Hawaiian burials	Perzinski et al. 1999
-05796	Pre-Contact wetland deposits	Culturally modified wetland deposits	Yucha et al. 2009
-06399	Cultural deposit	Five post-Contact pit features	Putzi and Cleghorn 2002
-06407	Cultural deposit	Subsurface cultural layer	Borthwick et al. 2002
-06680	Pomnded field	ponded field sediments	McIntosh and Cleghorn 2004
-06848	Cultural deposit	Subsurface Cultural Deposit (pre-Contact fire pit radiocarbon dated to AD 1470-1660	O’Hare et al. 2006
-06700	Burial	Previously disturbed human burial	Tulchin, J. and Hammatt 2009
-06701	Burial	Undisturbed coffin burial	Tulchin, J. and Hammatt 2009
-06702	Cultural deposit	Subsurface Cultural Deposit	Freeman et al. 2005
-06703	Fishpond	Buried fishpond sediments	Freeman et al. 2005
-06873	Burial	Isolated traditional Hawaiian burial	Bell and McDermott 2006
-06874	Cultural deposit	Subsurface Cultural Layer	Bell and McDermott 2006
-06875	Burial	Isolated traditional Hawaiian burial	Bell and McDermott 2006
-07015	Burial	Disarticulated, disturbed human burial	Yucha et al. 2011
-07016	Burial	Disarticulated, disturbed human burial	Yucha et al. 2011
-07017	Burial	Disarticulated, disturbed human burial	Yucha et al. 2011
-07018	Burial	Disarticulated, disturbed human burial	Yucha et al. 2011
-07057	Burial	Inadvertent discovery of human skeletal remains	Tulchin, J. and Hammatt 2009
-07086	Cultural deposit	Subsurface Cultural Deposit	Mooney et al. 2009
-07087	Burial	One previously disturbed burial	Mooney et al. 2009

SIHP # 50-80-14	Site Type/Name	Description	Reference
-09500	Burial	Five pre-Contact or early historic human bundle burials and a sixth possibly twentieth century human burial	Kimble 1976 (referenced in Davis 1989 and Denham and Pantaleo 1997a)
-09550	Burial	One pre-Contact human burial	Streck 1992
-09757	Ala Wai Canal	1930s drainage canal	NRHP, HRHP
-09957	Subsurface cultural deposit, burials	Includes the Halekūlani Site that encompasses pre- and post-Contact subsurface cultural deposits and at least ten human burial sites consisting of multiple individuals	Davis 1984
OA0315	Burial	Human remains donated by an unknown person to Bishop Museum	NAGPRA Inventory Oahu 1998
OA 419	Burials	Four burials at Hale Koa	NAGPRA Inventory Oahu 1998
OA0421	Burial	Human remains and one funerary object donated to Bishop Museum by David Jackson Engineering	NAGPRA Inventory Oahu 1998
OA0424	Burial	Human remains donated to Bishop Museum by W.T. Change Contractors	NAGPRA Inventory Oahu 1998

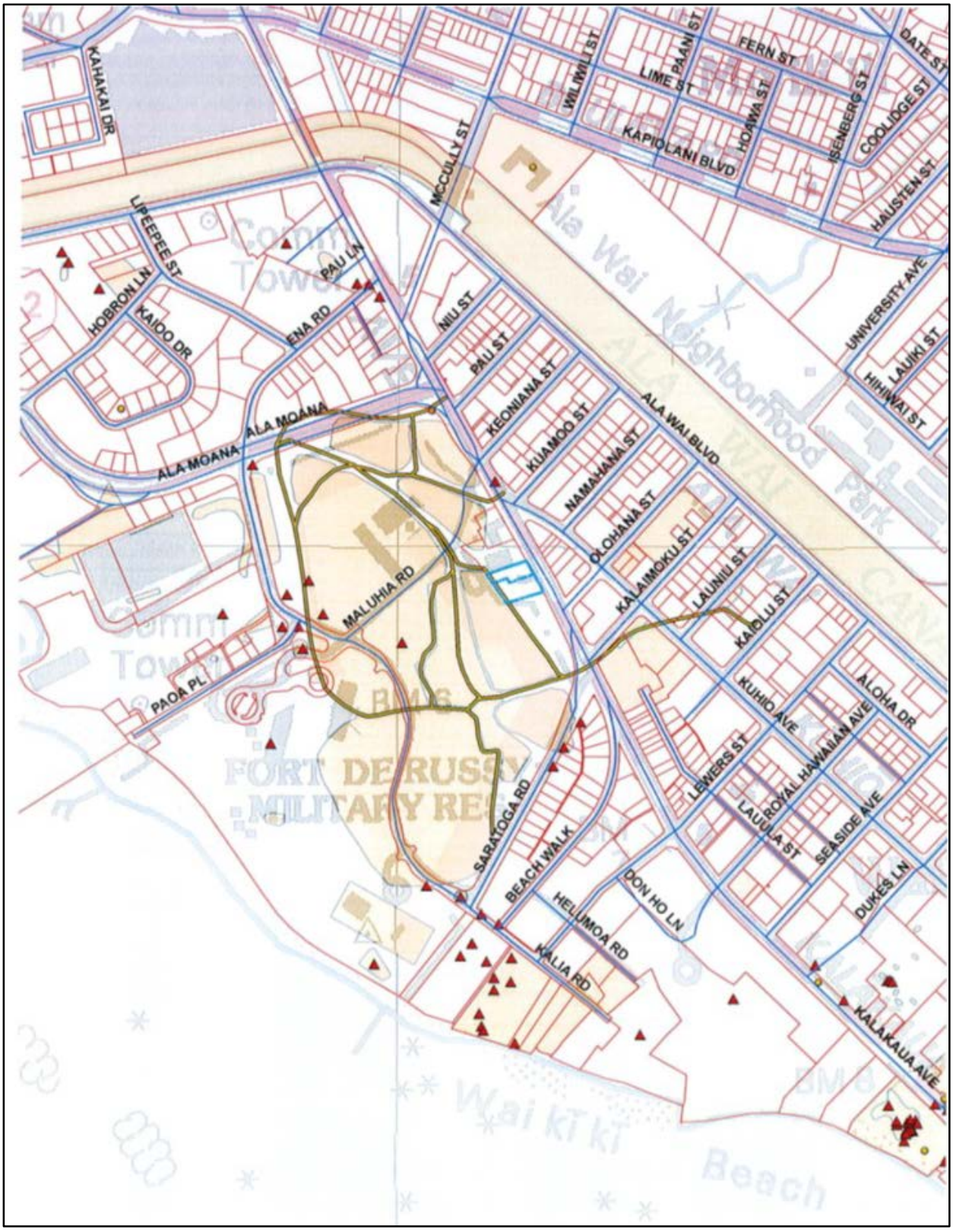

Figure 26. Locations of previously reported burials in the vicinity of the project area

traditional Hawaiian artifact to the post-Contact period. The third documented pit feature consisted of a trash pit containing refuse (ceramic and glass artifacts) dated to the late 1890s.

The general stratigraphy observed in this southeastern corner of the Hilton Hawaiian Village consisted of several layers of fill overlying several natural strata: an A horizon containing charcoal and basalt and a stratum of pale brown Jaucas sand shading into coarser grained gray sand overlying coral limestone.

5.1.4 Davis 1984

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 fire pits, and a large collection of bottles, ceramics, and other materials from trash pits and privies dating to the late 19th century" (Davis 1984:i). The report also includes additional information on the four human burials found by Earl Neller in 1981 (Neller 1981). The site, including all cultural deposits and burials, was designated in the report as Site Oa-A4-26, but was subsequently designated SIHP # -9957.

5.1.5 Davis 1989

In 1989, the International Archaeological Research Institute, Inc. conducted a reconnaissance survey at Fort DeRussy. Eleven test trenches were excavated in widespread locations of inland Fort DeRussy and nine trenches were excavated in the south coastal portion. Subsurface testing within the northern portion of Fort DeRussy in the vicinity of the current study area documented buried fishpond sediments and *‘auwai* (irrigation ditch/canal) features. No SIHP numbers were reported by Davis (1989), although the test excavation locations are within SIHP # -4570, a remnant cultural deposit in the south coastal portion, and in SIHP #s -4573 through -4577, the Kālia fishponds.

5.1.6 Rosendahl 1989

PHRI carried out an archaeological subsurface inventory survey for a new pool location at the Hale Koa Hotel. Finds were minimal and no human skeletal remains were encountered. A later study for a Hale Koa Hotel luau facility encountered a disturbed buried cultural layer with associated historic artifacts (Rosendahl 1989).

5.1.7 Hurlbett et al. 1992

From 1985 to 1987, Paul H. Rosendahl, Ph.D. Inc. (PHRI) conducted archaeological monitoring of mechanical loop excavations at the Hilton Hawaiian Village. During the course of monitoring, 15 horizontal pit features were observed. Eleven of the pit features consisted of post-Contact trash pits, while one pit feature was of indeterminate function, and the remaining three features were historic to modern filled-in trenches. All of the artifacts collected from the trash pits were dated to the late nineteenth and early twentieth centuries (Hurlbett et al. 1992). The pit features were incorporated into SIHP # -2870, previously identified by Neller (1980).

A total of 3,819 artifacts were collected within the study area. All artifacts, with the exception of those collected from the pit features, were situated within disturbed sediments. It was determined that all the artifacts originated from either household refuse or from construction debris

from successive periods of demolition and construction conducted within the study area. The artifact assemblage primarily consisted of late nineteenth to early twentieth century luxury items associated with health (medicine bottles) and diet (beverage and sauce bottles).

In general, the documented stratigraphy for the Hilton Hawaiian Village property consisted of multiple fill layers (predominantly disturbed sand with smaller portions of Ala Wai dredge material and crushed coral) overlying a culturally sterile sand layer determined to be associated with the historic filling of the coral reef for artificial shoreline/beach expansion. Naturally deposited sediments were observed near the eastern edge of the study area. Limestone bedrock, possibly associated with formerly exposed tidal flats, was observed in the western half of the study area.

5.1.8 Davis 1991

In 1991, the International Archaeological Research Institute, Inc. monitored an environmental baseline survey for a Fort DeRussy Military Reservation. Twelve bore holes were monitored in two general areas, and no archaeological remains were recovered from the coring process. However, based on the excavations conducted in the extreme southern tip of Fort DeRussy lands where intact deposits and features (dating to the fifteenth century) were previously noted, it was concluded that nearly continuous, intact prehistoric and early historic cultural deposits underlie the entire area between Battery Randolph and the beach. Davis (1989:33) reports one burial find, seemingly from his “Burial Pit R” in “Grid 7” located in LCA 1515:2 which appears to have been located just south (*makai*/Diamond Head) of the Battery Randolph Army Museum. Davis (1991) thought this burial dated to ca. 1840s-1850s.

5.1.9 Streck 1992

In 1992, BioSystems Analysis, Inc. discovered the remains of one post-Contact individual (SIHP # -9550) between a probable late pre-Contact burial at the *mauka* end of the Kuroda Parade Ground at Fort DeRussy. Streck (1992:3) notes, “the location of the burial is somewhat unusual for the Waikiki area” in being so far inland (well *mauka* of Kālia Road).

5.1.10 Carlson et al. 1994

In 1993, BioSystems Analysis excavated human remains found during realignment of Kālia Road. Burial Area 6 included 27–34 individuals in a common pit feature located just southeast of the intersection of Paoa Place and Kālia Road, approximately 20 to 25 m east of the east corner of the Hilton Hawaiian Village campus. Denham and Pantaleo (1997a) provide an SIHP citation of -4570:8 for what Carlson et al. (1994) call “Burial Area 6.” The study concluded that Burial Area 6 was a hasty, mass interment and “may well represent the remains of Hawaiian warriors who died in one of the battles of the interisland wars of conquest which occurred during the reign of King Kamehameha I” (Carlson et al. 1994:70). Burial Area 7 included four individuals in association with a cultural layer located in the vicinity of the Army Museum just southwest of the intersection of Kālia Road and Saratoga Road. Sediments associated with Loko Paweo I Fishpond (SIHP # -4574) also were encountered.

5.1.11 McMahon 1994

On 28 April 1994, an inadvertent discovery of human skeletal remains was uncovered in a back dirt pile during excavation for a water line at the intersection of Kalākaua Avenue and Kuamo‘o

Street just *mauka* (inland) of the current study area. These remains represented a single individual of indeterminate ethnicity.

5.1.12 Simons et al. 1995

In 1992, BioSystems Analysis, Inc. conducted data recovery excavations at Fort DeRussy in anticipation of new building construction. Three previously identified historic properties were encountered: Loko Paweo I (SIHP # -4574), Loko Paweo II (SIHP # -4576), and SIHP # -4579, a subsurface cultural layer associated with LCA 1785 and containing one set of fragmented skeletal remains. In addition, a newly identified *‘auwai* system was discovered (SIHP # -4970). Prior to final submittal, there was a restructuring of BioSystems Analysis, Inc. and Garcia and Associates obtained the contract (Denham and Pantaleo 1997b).

5.1.13 Cleghorn 1996

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).

5.1.14 Denham and Pantaleo 1997a

In 1993, BioSystems Analysis, Inc. conducted archaeological monitoring along the Kālia Road Realignment project at Fort DeRussy Military Reservation. These results were written up by Garcia and Associates nearly four years later (Denham and Pantaleo 1997a). Given the passage of time and the different companies involved, it is perhaps no surprise that the data provided is incomplete. It appears clear, however, that descriptions of “Burial” designations in Denham and Pantaleo (1997a) correspond directly with locations provided in Carlson et al. (1994:72). During the monitoring of utility trenches, ten subsurface features and nine burials and burial areas were recorded. These were grouped into three sites according to Denham and Pantaleo (1997a). The sites are discussed below in the order presented.

SIHP # -4574 consisted of fishpond sediments (Loko Paweo I), three historic trash pits, and two burials (authors did not determine the age of the burials). The two burials (designated as Feature 5) appear to have been north of the intersection of Kālia and Saratoga Roads and not in the immediate vicinity of the current study area (Denham and Pantaleo 1997a:19-20).

SIHP # -4570 consisted of a historic trash pit (Feature 1) dating to the late nineteenth to early twentieth century, four fire pits (Feature 2 and Features 4–6), an ash lens (Feature 3), and an

unknown number of human burials (in six distinct features) found in the sand dunes on the *makai* side of Loko Paweo I in the vicinity of the current study area (Features 7–12). The burials were previously disturbed, incomplete, and some appeared to contain multiple burials. One of these six burial features (Feature 8; aka “Burial Area 6”) was the focus of the Carlson et al. (1994) study. No information was provided regarding SIHP # -4570:7 “Burials 3 & 4,” but these are shown as just *mauka* of the Hilton Hawaiian Village complex across Kālia Road. SIHP # -4570:9 “Burial 8” is a pre-Contact or early historic interment which was left in situ and described as “just west of the newly constructed entrance driveway to the Hilton Hawaiian Village” (Denham and Pantaleo 1997a:36). SIHP # -4570:10 “Burial 9” is another pre-Contact or early historic interment also left in situ seemingly located on the other side of a trench profile “across from Feature 4570:9” (Denham and Pantaleo 1997a:38). SIHP # -4570:11 is another pre-Contact or early historic burial described as within “the west face of the trench” presumably within the same trench as SIHP # -4570:9 and 10. SIHP # -4570:12 “Burial 11” consisted of two long bones and a cranial fragment located in “the landscaped area between the new Paoa Place extension and the driveway for the Hilton Hawaiian Hotel” (Denham and Pantaleo 1997a:38). This burial discovery area presumably is located within the current study area and within the pathway of Kālia Road prior to its realignment in 1995. The disturbed remains of Burial 11 were reinterred in the base of the excavation.

5.1.15 Denham and Pantaleo 1997b

In 1992, Garcia and Associates conducted an archaeological data recovery at Fort DeRussy. Five previously identified sites were investigated. One site (SIHP # -4570) was characterized by features such as a fire pit, coral rock concentration, and postholes. An *‘auwai* and bund system (SIHP # -4970) revealed two channels, three bunds, and a charcoal stain. Another site (SIHP # -4579) revealed a number of features related to permanent historic occupation and possible intermittent prehistoric use, such as five fire pits, two historic midden deposits, and a human burial (the burial encountered in “Area A” well inland of Kālia Road was designated site 4579:4). In addition, three fishponds, Loko Paweo I (SIHP # -4574), Loko Ka‘ihikapu (SIHP # -4575), and Loko Paweo II (SIHP # -4576) were identified.

5.1.16 Asbury-Smith and Dega 1998

Scientific Consultant Services conducted monitoring for a shallow water-sprinkler line (30 cmbs), concrete curbing (20 cmbs), and 19 tree holes (120-140 cmbs) within the northern portion of Fort DeRussy just south of Ala Moana Boulevard. Only varying fill layers were encountered within the tree hole excavations.

5.1.17 Perzinski et al. 1999

In 1999, two human burials were inadvertently encountered near the intersection of ‘Ena Road and Kalākaua Avenue during excavation for Phase I of the Waikīkī Anti-Crime Lighting Improvements project. Both appeared to be pre-Contact (possibly early post-Contact) Native Hawaiian burials. These burials (SIHP # -5744) were not associated with any cultural remains.

5.1.18 Hammatt and McDermott 1999

In 1999, CSH completed a burial disinterment plan and report addressing the documentation and disinterment of the two burials encountered during the Waikīkī Anti-Crime Lighting Improvements project (SIHP # -5744).

5.1.19 LeSuer et al. 2000

In 2000, CSH conducted an archaeological inventory survey consisting of archival research and subsurface investigations (LeSuer et al. 2000). Subsurface testing located the ‘Auwai o Pau, and areas of possible fishpond and agricultural cultivation. No habitation areas or human burials were identified during excavation. The prehistoric to early twentieth century wetland ground surface, which runs throughout the project parcel, was assigned SIHP # -5796.

5.1.20 Corbin 2001

In 2001, PHRI completed a subsurface archaeological inventory survey for the northern strip of the Hilton Hawaiian Village complex. The investigation consisted of excavation of 21 backhoe trenches. In general, the stratigraphic sequence consisted of imported fill layers (i.e., asphalt, clay loam, and crushed coral fill) overlying disturbed sand deposits. The observed disturbances were associated with prior development of the area (i.e., subsurface utilities and prior building demolition and construction). No historic properties or significant cultural deposits were observed.

5.1.21 Roberts and Bower 2001

In 2000, Garcia and Associates monitored excavation associated with installation of a security fence for the Asia-Pacific Center of Fort DeRussy. Seventeen fence postholes (12 inches in diameter and 24 to 36 inches in depth) were excavated. No archaeological resources were identified.

5.1.22 Borthwick et al. 2002

In 2002, CSH (Borthwick et al. 2002) conducted an archaeological inventory survey of a roughly 71,000-sq ft project area bounded by Olohana Street, Kūhiō Avenue, Kalaimoku Street, and Ala Wai Boulevard. Ten backhoe trenches were excavated and documented. A single new historic property (SIHP # -6407), a subsurface cultural layer, was documented. Radiocarbon analysis of recovered charcoal samples yielded a calibrated date range of ca. AD 1400-1660.

5.1.23 Bush et al. 2002

Between July 1999 and October 2000, an archaeological monitoring program for Phase II of the Waikīkī Anti-Crime Lighting Improvements project, located between Ala Moana Boulevard and the Honolulu Zoo, documented several burials as well as pond sediments, *muliwai* sediments, an *imu* pit, and various pockets of trash and trash pits. Within the vicinity of the current project, archaeological monitoring documented a trash pit containing historic and modern trash at the intersection of Kalākaua Avenue and Ala Moana Boulevard (at the *makai*/Diamond Head corner), several basalt boulders in the vicinity of the trash pit believed to be associated with the in-filling of the Fort DeRussy wetlands, and pond sediment (likely Loko Kaipuni) on the *mauka* side of Kalākaua Avenue between Pau and Kuamo‘o Streets.

5.1.24 Elmore and Kennedy 2002

In 2002, Archaeological Consultants of the Pacific, Inc. conducted archaeological monitoring for the installation of a security fence at the Asia-Pacific Center at Fort DeRussy. Construction activities requiring monitoring consisted of the excavation of 90 postholes. The maximum depth of posthole excavation ranged between 41-90 cmbs. No natural sediments or historic properties were encountered during the project.

5.1.25 Putzi and Cleghorn 2002

From October 2000 to June 2001, Pacific Legacy, Inc. completed archaeological monitoring of sewer connections associated with Hilton Hawaiian Village improvements. Excavations were monitored within the northern portion of the Hilton Hawaiian Village complex for a force drain line and along Ala Moana Boulevard and Kalākaua Avenue for a 24-inch sewer relief line. The changing stratigraphy along the sewer line excavation was extensively documented. Along the Ala Moana Boulevard portion of the sewer line, varying layers of fill deposits overlay extensive, but discontinuous, areas of fishpond sediments. Along the Kalākaua Avenue portion of the sewer line, an area of fishpond sediment (Feature 1) was documented in the central section (in the area of Manhole 6) (SIHP # -4573) as well as extensive areas of sand and a section of black organic silty clay containing ash and charcoal. A basalt cobble and boulder alignment of indeterminate age (Feature 2) was documented midway between Manholes 5 and 6. In addition to the sewer line excavation, a sump pit was excavated approximately 10 m south of the sewer line excavation near Manhole 1 and the intersection of Kālia Road and Ala Moana Boulevard in what was thought to be the interior of Loko Paweo I. The sump pit exposed a thick layer of fishpond sediment over coral bedrock. Significantly, the sump pit strata documented the complete absence of the varied layers evident within the sewer line excavation. This was believed to indicate the likelihood that the area excavated along Ala Moana Boulevard and Kalākaua Avenue represented the border of the Kaipuni Fishpond complex and/or the area between Loko Kaipuni and Auwai Alanaio. The report authors also surmised that as the excavations appeared to be along the stream bank walls of the Loko Kaipuni complex, the area likely would not have been utilized for human burials. The areas of sand deposits and other soils were interpreted as representative of the ends of *‘auwai* dikes and beds that flowed into Kahawai Alanaio.

5.1.26 Kailihiwa and Cleghorn 2003

In 2003, Pacific Legacy, Inc. (Kailihiwa and Cleghorn 2003), under contract to the Honolulu Board of Water Supply, conducted archaeological monitoring services for the Waikīkī Water System Improvements project. No archaeological sites or features were recorded in the area and no human remains were encountered.

5.1.27 Esh and Hammatt 2004

In 2004, CSH conducted archaeological monitoring for Ala Wai Boulevard improvements (Esh and Hammatt 2004). There were no significant finds.

5.1.28 Jones and Hammatt 2004

In 2004, CSH completed monitoring for the Waikīkī Anti-Crime Street Lighting Improvement project on the *mauka* side of Kalākaua Avenue from Ala Wai Boulevard to Pau Street. No significant cultural deposits were located, and much of the project area was dominated by fill. Some pond or *lo‘i* sediments were noted near the intersection of Kalākaua Avenue and McCully Street, and a pre-1920 base course for an older McCully Road was also documented (Jones and Hammatt 2004).

5.1.29 McIntosh and Cleghorn 2004

In 2004, Pacific Legacy, Inc. (McIntosh and Cleghorn 2004) conducted an archaeological inventory survey for the proposed development of a 0.687-acre parcel at Launiu Street. Evidence

of pond field agriculture, in the form of gleyed silts and fine sands, was found in the central western portion of the project area. Archaeological investigations resulted in identification of a single archaeological resource, SIHP # -6680, a buried *lo‘i*, or pond field. No other significant finds or human remains were documented.

5.1.30 Tulchin et al. 2004

In 2004, CSH (Tulchin et al. 2004) carried out data recovery work on the Olohana Street/Kālaimoku Street lands with work focused on research questions pertaining to paleo-environmental change at Waikīkī, establishment of a chronology of occupation at Waikīkī, and Hawaiian use of the project area. Pollen and carbon dating results and the Hawaiian use of *kuāuna* (berms) and *paukū* (agricultural land) features are discussed.

5.1.31 Freeman et al. 2005

In 2005, CSH completed an inventory survey for the Ala Wai Gateway bounded by Ala Wai and Ala Moana boulevards, Hobron Lane, and Līpe‘epe‘e Street. Four historic properties were identified during subsurface testing: 1) SIHP # -6700, a set of previously disturbed human skeletal remains observed within fill sediments (due to the fragmentary nature of the remains ethnicity could not be determined); 2) SIHP # -6701, a historic coffin burial; 3) SIHP # -6702, a culturally enriched buried A horizon containing evidence of both pre- and post-Contact habitation; and 4) SIHP # -6703, buried alluvial sediment associated with a buried fishpond.

5.1.32 Rasmussen 2005

In 2005, the International Archaeological Research Institute, Inc. conducted an archaeological monitoring program for the Asia-Pacific Center for Security Studies Perimeter Barrier Wall project. No significant finds were documented. Stratigraphy observed within the deeper auger excavations for bollard installation consisted mostly of coralline fill overlying either clay (pond sediment) or sand deposits.

5.1.33 Esh and Hammatt 2006

In 2004 CSH conducted archaeological monitoring along Kūhiō Avenue during excavations related to the installation of a new median. This project area overlaps the Kūhiō Avenue portion of the current project area from beginning to end. The first phase of archaeological monitoring along Kūhiō Avenue was conducted between Ka‘ilulani and Kapahulu avenues (Esh and Hammatt 2006). Twenty-nine tree holes and six landscaping holes were excavated during the installation of the new Kūhiō Avenue median. Landscaping holes were excavated on the *mauka* side of Kūhiō Avenue and ranged from 70 to 85 cm maximum depth. There were no significant finds and the stratigraphy varied minimally. The excavations were capped by approximately 30 cm of asphalt/concrete. Stratum I was typically a sandy loam with 30% gravel fill and ranged in depth to a maximum of 40 to 80 cm below surface. Stratum II, when present, was natural sand, Jaucas Sand (JaC).

5.1.34 Jourdane and Dye 2006

In 2006, T.S. Dye & Colleagues, Archaeologists, Inc. completed archaeological monitoring for the construction of the Best Bridal Wedding Chapel at the Hilton Hawaiian Village. No historic properties were observed. Documented stratigraphy consisted of fill deposits associated with previous development of the area.

5.1.35 O’Hare et al. 2006

In 2005, CSH conducted an archaeological inventory survey for the Kaio‘o Multifamily Condominium Project on Kaio‘o Drive (O’Hare et al. 2006). Twenty backhoe test trenches were excavated. One new site, SIHP # -6848, a pre-Contact fire pit dated to AD 1470-1660, was designated as a result of the archaeological inventory survey. The presence of the fire pit is evidence of temporary habitation and possible resource utilization in this area in the pre-Contact period. This fire pit is contemporaneous with Stratum II, which represents the high, sandy ground surface surrounding two former unmodified ponds that remained in the project area up until at least 1927.

5.1.36 O’Leary et al. 2006

In 2006, CSH conducted an archaeological assessment of a 0.5-acre property for the Royal Kahili Condo project (O’Leary et al. 2006). No significant sites, human remains, or Hawaiian artifacts were discovered during the survey.

5.1.37 Bell and McDermott 2007a

In 2006, CSH conducted an assessment of a 30,000 sq ft property on Kālia Road and Beach Walk. Eleven test trenches were excavated (Bell and McDermott 2007a). Most of the sediments in the project area were disturbed by a number of episodes of late historic and modern construction, including the placement of large concrete footing and utility jackets. Some pond/marsh sediments were noted; a basalt flake was found within this layer. No historic properties were designated.

5.1.38 Bell and McDermott 2007b

In 2006, CSH conducted an archaeological inventory survey for the Allure Waikiki Development project between Ala Wai Boulevard, Kalākaua Avenue, and ‘Ena Road (Bell and McDermott 2006). After a pedestrian inspection was conducted and 35 backhoe assisted trenches were excavated, three historic properties were documented: SIHP #s -6873 and -6875, consisting of isolated traditional Hawaiian burials found in sand deposits, and SIHP # -6874, a subsurface cultural layer of pre- and post-Contact origin.

5.1.39 Dye 2007

In March 2007, T.S. Dye and Colleagues (Dye 2007) conducted an archaeological inventory survey for new utility connections for the Waikīkī Beach Walk project (TMK: [1] 2-6-002, 003, 004). No significant sites, human remains, or Hawaiian artifacts were discovered during the survey.

5.1.40 Tulchin and Hammatt 2007

In 2007, CSH conducted an archaeological inventory survey for the 1944 Kalākaua Avenue project on the *mauka* side of the intersection of Ala Moana Boulevard and Kalākaua Avenue (Tulchin and Hammatt 2007). A total of 17 backhoe trenches were excavated to the water table. 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 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 wet clays containing abundant micro-striations. No subsurface historic properties were observed.

5.1.41 Tulchin and Hammatt 2008

In 2007, CSH conducted an AIS for the 1944 Kalākaua Avenue project on the *mauka* side of the intersection of Ala Moana Boulevard and Kalākaua Avenue (Tulchin and Hammatt 2008). A total of 17 backhoe trenches were excavated down to the water table. The stratigraphy consisted of varying fill layers, including historic fill associated with the draining and filling of Waikīkī, overlying naturally occurring alluvial sediment. The historic fill layers consisted 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 indicative of pump dredge deposits. No subsurface historic properties were observed.

5.1.42 Petrey et al. 2008

CSH conducted monitoring from 2006 to 2007 for the City and County emergency sewer bypass project consisting of the installation of permanent and temporary sewer lines (Petrey et al. 2008). There were no significant finds.

5.1.43 Mooney et al. 2009

Between 2005 and 2008, Pacific Legacy, Inc. conducted an archaeological monitoring program for the Hilton Hawaiian Village Grand Waikīkīan Development project, including the construction of a new Grand Waikīkīan Tower, improvements to the Rainbow Tower loading dock and Lagoon Tower entrance, and excavations for utilities. A previously disturbed human burial, consisting of a near complete cranium and cranial fragments—designated SIHP # -7087—was encountered on the *mauka* side of the intersection of Ala Moana Boulevard and Kālia Road. The remains were sealed and left in situ. Additionally, a large historic trash feature complex, SIHP # -7086, was found dating from the mid-1800s to mid-1900s, yielding nearly 800 artifacts. This complex extended into the *makai* portion of the elbow turn of Ala Moana Boulevard within the current project area. A large number of features contained historic East Asian ceramic fragments, which were speculated to have been associated with the Japanese Tea House of the early 1900s.

An analysis of observed stratigraphy and archival records led to the conclusion that the pre-1880 shoreline was approximately 10 to 20 m *makai* of the present-day Lagoon Drive. This places the pre-1800 shoreline 60 to 80 m closer to the present shoreline than was postulated by Neller (1980). Further archaeological monitoring was recommended for all future ground disturbing activities in areas *mauka* of Lagoon Drive, where the pre-Contact shoreline is believed to have been located.

5.1.44 Tulchin and Hammatt 2009

In 2009, CSH completed monitoring for the Ala Wai Gateway project. During the course of monitoring, two sets of previously disturbed human skeletal remains were inadvertently encountered. The first set consisted of additional skeletal fragments associated with SIHP # -6700, a site previously identified by Freeman et al. (2005). The second set (SIHP # -7057) was newly identified. Due to the fragmentary nature of both sets of remains, age and ethnicity could not be determined.

In general, the observed and documented stratigraphy consisted of varying layers of imported fill associated with historic and modern development overlying naturally deposited marine sand and clays indicative of the marsh environment that preceded the land reclamation and subsequent development of the area.

5.1.45 O'Hare et al. 2010

In 2010, a cultural resources and ethnographic study was conducted for the Ala Wai Watershed project. The study expanded on a previous 2004 study (O'Hare et al. 2004) and contained research on the Ala Wai Canal and field reconnaissance of open spaces within the vicinity of the current study area, including Fort DeRussy, Ala Wai Park, and both banks of the Ala Wai Canal. No surface features were found.

5.1.46 Park and Collins 2010

Between 16 April 2008 and 11 March 2009 Pacific consulting Services, Inc., conducted archaeological monitoring for the Ala Wai Garden Plaza project (Park and Collins 2010). No subsurface human burials or historic properties were observed.

5.1.47 Tulchin et al. 2011

In 2010, CSH conducted an archaeological inventory survey for the Hilton Hawaiian Village Master Plan Improvements project. Subsurface test excavations consisted of 20 linear trenches, clustered primarily in the southeastern corner of the bus depot lot and centrally along Rainbow Drive. In general, stratigraphy within the project area consisted of the present resort infrastructure-related ground surface overlying a variable series of relatively thick, often compacted fill layers, a discontinuous, previously disturbed A horizon, and a previously disturbed or in situ sand and sandy loam to the water table.

Within the southeastern corner of the Hilton Hawaiian Village, just *makai* of the current study area at the intersection of Kālia Road and Paoa Place, thick layers of fill and a high water table sandwiched natural sediments. An A horizon was encountered in five of the 11 trenches excavated in this area. Bulk sediment samples collected from the A horizon documented the presence of fragmentary historic and modern debris. This buried A horizon (SIHP # -2870) was found discontinuously within the project area and determined to be the remnants of a stable post-Contact historic land surface that has been significantly disturbed by modern development.

5.1.48 Yucha et al. 2011

Between 2007 and 2009, CSH conducted monitoring for the proposed Trump Tower in Waikīkī. Monitoring took place not only on the tower lot, but on adjacent streets for utility and electrical lines along Saratoga and Kālia Roads, adjacent to the construction lots (Yucha et al. 2011). During monitoring, four human burials were found, SIHP #s -7015, -7016, -7017, and -7018. Two burials had skeleton elements placed within small wooden boxes and two were within disturbed sand layers. The archaeologists suggested the burials had been previously disturbed during excavation of culverts and utility lines, and reburied by construction workers during earlier utility/road work.

5.1.49 Yucha and McDermott 2013

In 2012 CSH conducted a surface survey, a ground penetrating radar survey, monitoring of geotechinical borings, and limited subsurface excavations for the Kālia-Fort DeRussy Wastewater System Improvements project on Kālia Road (Yucha and McDermott 2013). Five historic properties were located within or immediately adjacent to the study area, comprised of SIHP #s -4570, a pre- and post-Contact subsurface cultural deposit with human burials; -2870, a subsurface cultural deposit with historic pit features and human burials; -7087, an inadvertent find of human skeletal remains preserved in place; -4573, remnants of the Loko Kaipuni complex of fishponds; and -4970, the *‘auwai* and bund system associated with Loko Kaipuni and Loko Paweo Fishponds.

Section 6 Traditional Cultural Practices

6.1 Gathering of Plant and Water Resources

According to traditional and historical research, the *ahupua‘a* once flourished in agriculture and aquaculture. However, the *ahupua‘a* has experienced many changes throughout the centuries, from abandoning *lo‘i* to filling in fishponds. Based on research, the gathering of plant and fresh water resources within Waikīkī today is most likely null.

6.2 Burials

According to the *Soil Survey of the State of Hawaii* (Foote et al. 1972), the project area is located on Fill land. Slightly *makai* of the project area is a large pocket of Jaucas sand, the preferred sediment of Native Hawaiians for burying the deceased. Many burials have been encountered in the *makai* portion of Fort DeRussy and along Saratoga Road (see Figure 26. Locations of previously reported burials in the vicinity of the project area. It appears that lands further Makai and further to the east were preferred for human burials. Based on cultural and historic background detailed in this CIA report, however, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers.

6.3 Cultural Sites

Waikīkī Ahupua‘a was once the epicenter for Native Hawaiian life. Several *heiau* and *wahi pana* were once located in Waikīkī. The Nā Pōhaku ‘Ola Kapaemāhū a Kapuni, also known as Wizard Stones, are still located east of the project area. However, the *heiau* that once stood in Waikīkī Ahupua‘a are now gone. While a number of traditional Hawaiian historic properties (SIHP #s -4573 Loko Kaipuni fishpond, -4574 Loko Paweo I fishpond, -4576 Loko Paweo II fishpond, and -4579 subsurface cultural deposit (see Figure 25 and Table 3) were located in the immediate vicinity, non of these previously identified cultural properties appear likely to extend into the present project area.

Section 7 Summary and Recommendations

Based on information gathered from the cultural and historic background detailed in this CIA report, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers. CSH summarizes the potential impacts and recommendations:

1. Community consultation should be conducted to inform *kama‘āina*, *kūpuna*, and lineal and cultural descendants of the proposed project and to collect information on traditional cultural practices (past and present) within Waikīkī Ahupua‘a. A proposed community contact outreach list is available in Appendix B
2. There is a significant possibility that *iwi kūpuna*, ancestral bones, may be present within the project area and that land-disturbing activities during construction may uncover presently undetected burials or other cultural materials.
3. Personnel involved in the project construction activities should be informed of the possibility of inadvertent cultural finds, including human remains. Should burials or other cultural finds be identified during ground disturbance, the construction contractor should immediately cease all work and the appropriate agencies be notified pursuant to applicable law, HRS §6E.
4. Project proponents should consult with lineal and cultural descendants of Waikīkī to develop a reinterment plan and cultural preservation plan in the event that any human remains or cultural sites or artifacts are uncovered during construction or long-term maintenance for this project.

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Appendix A LCA 8559B for Lunalilo

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 Kekauluohe 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 "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 Lunalilo 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. Lunalilo requesting him to allow Mahuka to retain charge of this lot under Lunalilo. 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. Lunalilo

Polea, sworn says, he knows the lots claimed by William C. Lunalilo, 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. Nouliau [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 Hawaikaekea is also bounded as follows:
Mauka by Kalaleikio's land
Olowalu by Public road
Makai by Alaloa 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 Keaweiheuhu'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. 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 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. 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.
Kawanui ahupuaa, Kona, Hawaii.
Lanihaunui ahupuaa, Kona, Hawaii.
Pakiniili ahupuaa, Kau, Hawaii.
Hanuapo ahupuaa, Kau, Hawaii.
Kahanalea ahupuaa, Puna, Hawaii.
Keahialaka ahupuaa, Puna, Hawaii.
Keaau ahupuaa, Puna, Hawaii.
Makahanaloa ahupuaa, Hilo, Hawaii.
Pepekeo ahupuaa, Hilo, Hawaii.

Kaapuhu ahupuaa, Kipahulu, Maui.
2 Waiehu, Puali, West Maui.
Ahipuli ili for Waiehu, West Maui.
Pepee ili for Wailuku, West Maui.
Honolua ahupuaa, Kaanapali, Maui.
Kalimaohe 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.
Pilauwai, 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.
Keopuhuikahi ahupuaa, Kona, Hawaii.
Papaakoko ili of Honokohau, Kona, Hawaii.
Ninole ahupuaa, Kau Hawaii.
Laepaoo ahupuaa, Puna, Hawaii.
Koae 1 ahupuaa, Puna, Hawaii.
Koae 2 ahupuaa, Puna, Hawaii.
Laeapuki ahupuaa, Puna, Hawaii.
Kaiuiiki ahupuaa, Hilo, Hawaii.
Kahuku ahupuaa, Hilo, Hawaii.

Waiakoa ahupuaa, Kula, Maui.
Kou ili of Waiehu Puali, Komohana Maui.
Kapoino ili of Waiehu Puali, Komohana, Maui.
Halelena ili of Waiehu Puali, Komohana, Maui.
Keokamu ili of Waiehu Puali, 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 Lunalilo, Charles Kanaina (child guardian)
Department of Interior, 6 April 1852.

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

N.T. 450v10
No. 8559B, William C. Lunalilo, 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; Honolua 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; Kuholilea 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; Makanaloa Hilo; 2 ap.; 7600 Acs; R.P. 7049; Honuapo Kau; 1 ap.; ahupuaa 2200 Acs; Honuaino nui; 1 ap.; 262 Acs; R.P. 7454; Kawanui 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 Makanaloa 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]

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Helu 8559 B Wm C. Lunalilo

Apana 29

Ua koi mai oia no kona Ili aina o Pau iloko o Waikiki ma Kona, ma ka Mokupuni o Oahu, no ka mea ua loaa iaia keia aina no ka Moi Kamehameha III mai i ka Mahele aina ana i ka M. H. 1848, a ua noho keakea oleia a hiki i keia manawa.

Oia ka makou e hooko nei no Wm C. Lunalilo, he kuleana koi kona malalo iho o ke Ano Alodio. Ina e uku mai oia i ko ke Aupuni hapa alaila, ua kupono iaia ka Palapala Sila Alodio. Aka, koe nae na kuleana o na Kanaka maloko.

Pono nae iaia ke uku no ka hookolokolo a me ka hooholo ana i ka olelo, Penei; –

W. L. Lee
G. M. Robertson
I. Kekaulahao
J. H. Smith

No ka rumi a me ke pai ana i ka olelo ma ka Nupepa
No ke kope ana i ka olelo koina
No ka palapala kii
No ka hana ana i ka la
No ke kope ana i na olelo ana hoike
No ke ana ana i ka la
No ke kope ana
No ka hooholo ana i ka olelo i ka la 26 o Mei 1854.

Ua hooko aku makou i keia kuleana mamuli o na olelo o na Kanawai i hooholoia ma ka la 19 o June M. H. 1852 e pili ana i na Konohiki.

Helu 8559 B Wm C. Lunalilo

Apana 30.

Ua koi mai oia no kona Ili aina o Kaluokau iloko o Waikiki ma Kona, ma ka Mokupuni o Oahu: no ka mea, ua loaa iaia keia aina no ka Moi Kamehameha III mai i ka M. H. 1848 mai ma ka Mahele aina ana, a ua noho keakea oleia a hiki i keia manawa.

Oia ka makou e hooko nei no Wm C. Lunalilo, he kuleana koi kona malalo iho o ke Ano Alodio. Ina e uku mai oia i ko ke Aupuni hapa alaila, ua kupono iaia ka palapala Sila Alodio. Aka, koe nae na Kuleana o na Kanaka maloko.

Pono nae iaia ke uku no ka hookolokolo a me ka hooholo ana i ka olelo Penei; –

W. L. Lee
G. M. Robertson
I. Kekaulahao
J. H. Smith

No ka rumi a me ke pai ana i ka olelo ma ka Nupepa.
No ke kope ana i ka olelo koina
No ka palapala kii
No ka hana ana i ka la
No ke kope ana i na olelo ana hoike
No ke ana ana i ka la
No ke kope ana
No ka hooholo ana i ka olelo i ka la 26 o Mei 1854.

$ 5 . c

Ua hooko aku makou i keia kuleana mamuli o na olelo o na Kanawai i hooholoia ma ka la 19 o June M. H. 1852 e pili ana i na Konohiki.

Helu 8559 B Wm C. Lunalilo. –

Apana 31.

Ua koi mai oia no kona Ili aina o Kalakaua iloko o Waikiki ma Kona, ma ka Mokupuni o Oahu, no ka mea, ua loaa iaia keia aina no ka Moi Kamehameha III mai i ka Mahele aina ana i ka M. H. 1848, a ua noho keakea oleia a hiki i keia manawa.

Oia ka makou e hooko nei no Wm C. Lunalilo, he kuleana koi kona malalo iho o ke Ano Alodio. Ina e uku mai oia i ko ke Aupuni hapa alaila, ua kupono iaia ka Palapala Sila Alodio. Aka, koe nae na kuleana o na Kanaka maloko.

Pono nae iaia ke uku no ka hookolokolo a me ka hooholo ana i ka olelo. Penei,

W. L. Lee
G. M. Robertson
I. Kekaulahao
J. H. Smith

No ka rumi a me ke pai ana i ka olelo ma ka Nupepa.
No ke kope ana i ka olelo koina
No ka palapala kii
No ka hana ana i ka la
No ke kope ana i na olele ana hoike
No ka ana ana i ka la
No ke kope ana
No ka hooholo ana i ka olelo i ka la 26 o Mei 1854.

$ 5

PAPAKILO

Appendix B Proposed Community Contact Outreach List

Table 4. Suggested Community Contacts for Consultation

Name	Affiliation
Abordo, Chelsea	Cultural Descendant
Arcalas, Cara	Cultural Descendant
Bates, Cline	Cultural Descendant
Bates, Ke‘ala	Cultural Descendant
Battle, Cherie Kahealani Keohokālole	Cultural Descendant
Becket, Jan	Author, photographer, retired teacher from Kamehameha Schools Knowledgeable in cultural sites Kona Moku Representative for the Committee on the Preservation of Historic Sites and Cultural Properties
Boyd, Manu	Cultural Director at Royal Hawaiian Center
Caceres, Mana	Cultural Descendant, O‘ahu Island Burial Council Representative
Crabbe, Kamana‘opono	Ka Pouhana of OHA
DaMate, Leimana	Executive Director, Aha Moku Advisory Committee for DLNR
Del Toro, Benjamin	Cultural Descendant
Del Toro, Daniel	Cultural Descendant
Del Toro, Rachel	Cultural Descendant
Del Toro, Samuel	Cultural Descendant
Finley, Robert J.	Chair, Waikīkī Neighborhood Board No. 9
Gomes, Jeffrey	Cultural Descendant
Gomes, Phoebe	Cultural Descendant
Gomes, Robin	Cultural Descendant
Gora, Amelia	Cultural Descendant
Harris, Cy K.	Cultural Descendant

Name	Affiliation
Hilo, Regina	SHPD, Burial Sites Specialist
Joto, Lorelei	Cultural Descendant
Ka‘awakauo, Lorelei	Cultural Descendant
Kaleikini, Ali‘ikaua	Lineal Descendant
Kaleikini, Haloa	Lineal Descendant
Kaleikini, Kala	Lineal Descendant
Kaleikini, No‘eau	Lineal Descendant
Kaleikini, Paulette Ka‘anohi	Lineal Descendant
Kaleikini, Tuahine	Lineal Descendant
Kamai, Dwynn	Secretary, Waikīkī Hawaiian Civic Club
Kamai, Winona	Director, Waikīkī Hawaiian Civic Club
Keana‘āina, Betty	Cultural Descendant
Keana‘āina, Kīhei	Cultural Descendant
Keana‘āina, Luther	Cultural Descendant
Keana‘āina, Michelle	Cultural Descendant
Keana‘āina, Noelani	Cultural Descendant
Keana‘āina, Regina	Cultural Descendant
Keana‘āina, Vicky	Cultural Descendant
Keana‘āina, Wilsam	Cultural Descendant
Kekaula, Ashford	Cultural Descendant
Kekaula, Mary K.	Cultural Descendant
Keli‘inoi, Kalahikiola	Cultural Descendant
Keli‘inoi, Kilinahe	Cultural Descendant
Keli‘inoi, Moani	Cultural Descendant
Keli‘ipa‘akaua, Chase	Cultural Descendant
Keli‘ipa‘akaua, Justin	Cultural Descendant
Keohokālole, Adrian K.	Cultural Descendant
Keohokālole, Dennis K‘imina‘auao	Cultural Descendant
Keohokālole, Emalia E.	Cultural Descendant
Keohokālole, James Hoapili	Cultural Descendant

Name	Affiliation
Keohokālole, Jeanine Leikeonaona	Cultural Descendant
Keohokālole, Joseph Mooses Keaweaheulu	Cultural Descendant
Keohokālole, Lori Lani	Cultural Descendant
Kini, Debbie (Norman)	Cultural Descendant
Kini, Nalani	Cultural Descendant
Koko, Kanaloa	Cultural Descendant
Kuhia, Glenn Kealoha	Cultural Descendant
Kululoio, Manuel	Cultural Descendant
Lew, Haumea	Cultural Descendant
Lopes, Darren	Cultural Descendant
Lopes, Kamaha‘o	Cultural Descendant
Lopes, Leina‘ala, (Moses-Hukiku)	Cultural Descendant
Lopes, Po‘ohui	Cultural Descendant
Lopes, Puahone Kini	Cultural Descendant
Lopes, Wilfred	Cultural Descendant
Luka, Alika	Cultural Descendant
Mahuna, Loke	Cultural Descendant
Mamac, Violet L. Medeiros	Cultural Descendant
Medeiros Jr., Clarence	Cultural Descendant
Medeiros, David	Cultural Descendant
Nobrega-Olivera, Malia	President, Waikīkī Hawaiian Civic Club
Norman, Carolyn	Cultural Descendant
Norman, Eileen	Cultural Descendant
Norman, Kaleo	Cultural Descendant
Norman, Keli‘inui	Cultural Descendant
Norman, Theodore	Cultural Descendant
Olds, Nalani	Cultural Descendant
Papa Jr., Richard Likeke	Cultural Descendant
Pascua, Bruce H.	Cultural Descendant
Rash, Regina	Cultural Descendant

Name	Affiliation
Roy, Corbett	Cultural Descendant
Silva, Lisa Gomes	Cultural Descendant
Spinney, Charles	Cultural Descendant
Suzuki, Ashley	Cultural Descendant
Suzuki, Kimberly	Cultural Descendant
Takaki, Miles	Cultural Descendant
Takaki, Moses	Cultural Descendant
Takaki, Tracy	Cultural Descendant
Takizawa, Lorna Medeiros	Cultural Descendant
Theone, Nicole Gulia	Cultural Descendant
Waikīkī Community Center	Contact: Jeff Apaka
Wong-Kalu, Hinalei	Kona Representative and Chair for the O‘ahu Island Burial Council
Yokooji, Dayleen	Cultural Descendant

Appendix C Draft Community Contact Outreach Letter

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

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

Job code: WAIKIKI 167 nishihara@culturalsurveys.com www.culturalsurveys.com

July 2015

Aloha mai,

At the request of Rider Levett and Bucknall Ltd., Cultural Surveys Hawai‘i, Inc. (CSH) is conducting a cultural impact assessment (CIA) report as a due diligence study for the former Kyo-Ya Restaurant Property, Waikīkī Ahupua‘a, Honolulu (Kona) District, O‘ahu, Tax Map Keys (TMK): [1] 2-6-006:001 and 004. The property evaluated here consists of two adjacent parcels, the southeastern parcel 001 of 17,257 sq ft at 2045 Kalākaua Avenue and the northwestern parcel 004 of 11,504 sq ft at 2051 Kalākaua Avenue for a total area of 28,761 sq ft (0.66 acres or 0.27 ha or 2672.0 sq m). The project area is depicted on a portion of the 1998 U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle, tax map plat, and a 2013 aerial photograph (see attachments). The project area is located on the northwest end of central Waikīkī adjacent to the west (makai) side of Kalākaua Avenue The project area is bounded to the west by Kalākaua Avenue, to the south and east by federal Fort DeRussy lands, and to the north by the grounds and the buildings of the Luana Waikiki Condominium/Hotel (TMK: [1] 2-6-006:002).

The purpose of the CIA is to gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about this area. The research and interviews assist us when assessing potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the planned project. We are seeking your *kōkua* (assistance) and guidance regarding the following aspects of our study:

- **General history and present and past land use of the project area.**
- **Knowledge of cultural sites- for example, historic sites, archaeological sites, and burials.**
- **Knowledge of traditional gathering practices in the project area, both past and ongoing.**
- **Cultural associations of the project area, such as 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.**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.**

In advance, we appreciate your assistance in our research effort. Nicole Ishihara is available at your convenience by email at nishihara@culturalsurveys.com or by phone at (808) 262-9972.

Me ka ha‘aha‘a,

Nicole Ann Nāhōkūlaniahiahi Ishihara
CSH Supervising Cultural Researcher

Due Diligence Report

Park Kalia - Waikiki

Prepared for:
Rider Levett Bucknall

Prepared by:
Wilson Okamoto Corporation

November 2015

DUE DILIGENCE REPORT
Park Kalia - Waikiki

Honolulu, Oahu, Hawaii
TMK 2-6-006: 001 & 004

Prepared For:

Rider Levett Bucknall
1001 Bishop Street #1340
Honolulu, Hawaii 96813

Prepared By:

Wilson Okamoto Corporation
Engineers and Planners
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
WOC Job No. 10116-01

November 2015

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APPENDIX

Appendix A – Sewer System Information

Sewer Connection Application, submitted June 2015

Sewer Connection Application, submitted April 2014

Email 1 – Correspondence with C&C Wastewater Branch and Department of Environmental Services

Email 2 – Inquiry with C&C Wastewater Branch

Email 3 – Inquiry with C&C Wastewater Branch with Response, November 2015

C&C of Honolulu GIS Map of Sewer System in Project Vicinity

Appendix B – Water System Information

Request For Flow and Pressure Data Letter to Mr. Robert Chun, BWS

Response Letter To Request For Flow and Pressure Data Letter, provided by BWS

Existing Water Meter and Lateral Information, provided by BWS

Water Facility Map In Project Vicinity

Appendix C – Site Grading, Runoff, and Storm Drainage System Information

Site Reconnaissance Photos

Appendix D –Traffic Information

Email Correspondence with Mel Hirayama, DPP, TRB

1. EXECUTIVE SUMMARY

Project Description: Based on the latest design concept, the proposed project consists of a 26 floor, 170 unit, condo-hotel on a 0.66-acre joint developed/consolidated property that is currently occupied by the closed Kyo-ya restaurant and two-level parking garage. The site is bounded by Luana Waikiki hotel to the north, Kalakaua Avenue to the east, Fort DeRussy park to the south, and Maluhia Road/Fort Derussy chapel to the west (See Figure 1 – Location Map and Figure 2 – TMK Map).

Sanitary Sewer System: A sewer connection application for the property was submitted to the C&C of Honolulu, Department of Planning and Permitting, Wastewater Branch in April 2014. The City has not decided on its position regarding the application as they are waiting for a response from the Environmental Protection Agency (EPA) and State of Hawaii Department of Health (DOH) on the adequacy of previous Fort DeRussy waste water pump station upgrades to support new sewer connections. To notify the City that the project program values have been updated and to incorporate the updated values into the sewer connection application, a new application was submitted on June 26, 2015. As of November 2015, the updated application is still in review with the City Environmental Services Department.

Water System: The request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on June 16, 2015. A BWS response letter to the request letter was received on June 29, 2015. The BWS response letter stated that the existing water system cannot provide adequate fire protection to the proposed development. The system is inadequate as the distance from the development to the nearest existing fire hydrant, approximately 295 linear feet, exceeds the standard 125 linear feet required for a high-rise hotel development. BWS will require the developer to install a fire hydrant on Kalakaua Ave within 125 linear feet of the development. During the design process, construction drawings should be submitted to BWS for review and approval. Also, BWS will require the implementation of water conservation measures. Based on the existing water meter and lateral information provided by BWS there is an 8-inch DI main and 8-inch DC meter that currently serves TMK 2-6-006:004 and a 2-inch copper lateral and 2-inch domestic meter serves TMK 2-6-006:001. BWS system facilities map indicated there is an existing 8-inch water main located along the makai side of Kalakaua Avenue fronting the project site that the laterals are connected to.

Site Grading, Runoff, and Storm Drainage System: On the Kalakaua Ave frontage, the site generally slopes towards the property boundary and on the Maluhia Road/Fort DeRussy park, and Luana Waikiki hotel faces the building straddles the property line.

The project site is located in Flood Hazard Zone AO (Depth 2'). Zone AO represents "flood depths of 1 to 3 feet (usually sheet flow on sloping terrain)". Due to the AO (Depth 2') Flood Hazard Area Designation, the lowest ground floor finished floor elevation for any proposed building should be established a minimum 2-feet above the highest existing grades on-site.

Based on site reconnaissance, a portion of the existing sidewalk along Kalakaua Ave fronting the project appeared to be depressed with trench drains installed at the low spots to mitigate ponding. If improvements include mitigation of the depressed sidewalk areas, it may be a factor in determining the finished elevations of the proposed project site.

Roadway System and Traffic: Vehicular and pedestrian access is proposed along Kalakaua Ave. The proposed improvements consist of a one-way onsite driveway leading to the site porte cochere. A multi-story parking garage with access by two autolifts will be provided.

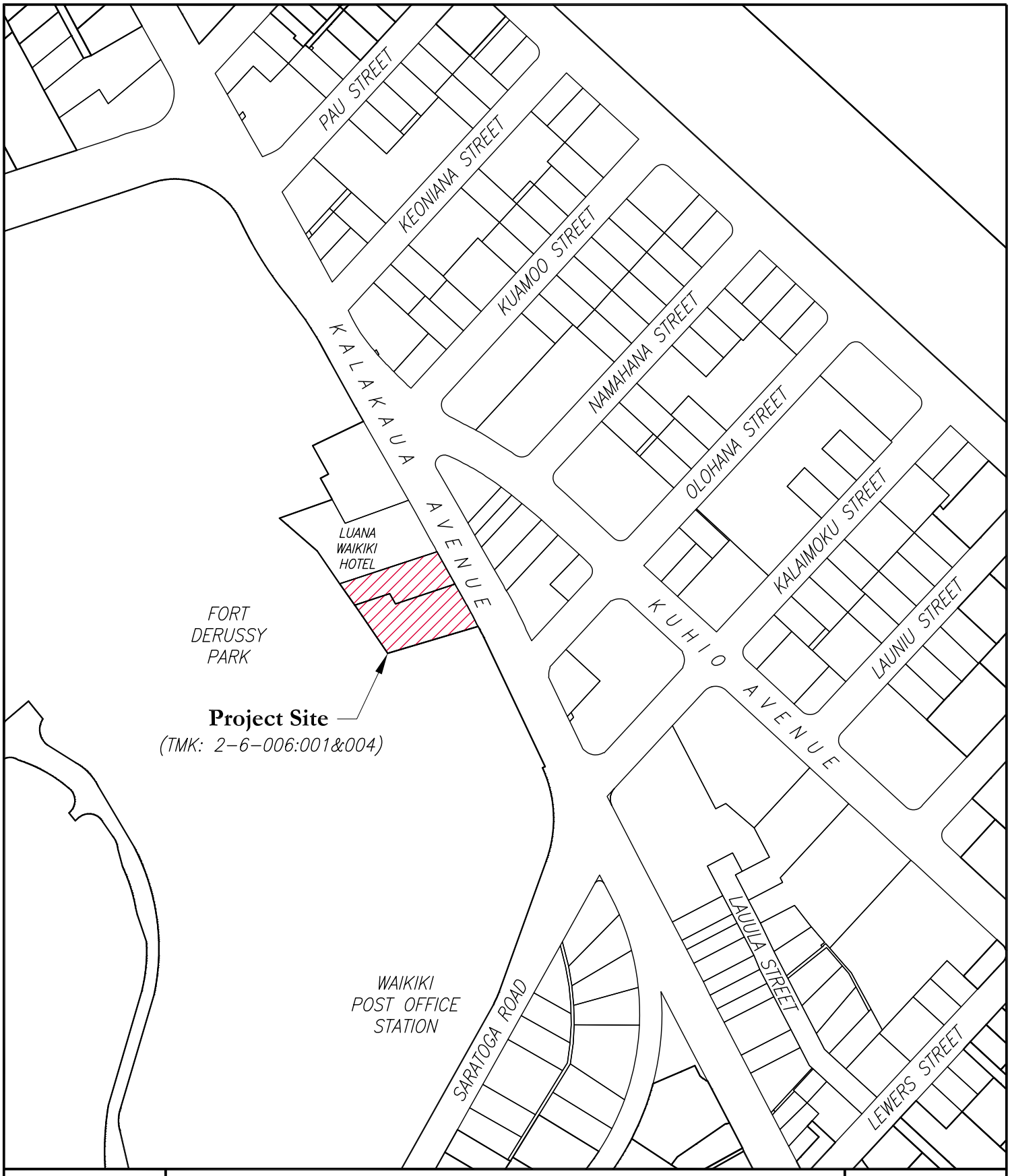
An inquiry was sent to the C&C of Honolulu, Department of Planning and Permitting, Traffic Review Branch to preliminarily determine any comments they may have or improvements that will be required in the City maintained Kalakaua Ave ROW due to the proposed project. The response indicated the following items to be considered as the project moves forward:

- In addition to the TIAR, the Waikiki Special District zoning ordinance has conditions that require construction and traffic management plans (TMP) to be prepared for the project and submitted to the City for review.

- Pedestrian access to the rear of the property, likely controlled by gate and card, may be required.

- Bicycle parking, primarily for employees, located on the property, may be required.

- Sight distance and driveway design standards should be adhered to. If gates are installed at driveway entrances, they should be recessed from the main roadway.



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PARK KALIA - WAIKIKI DUE DILIGENCE
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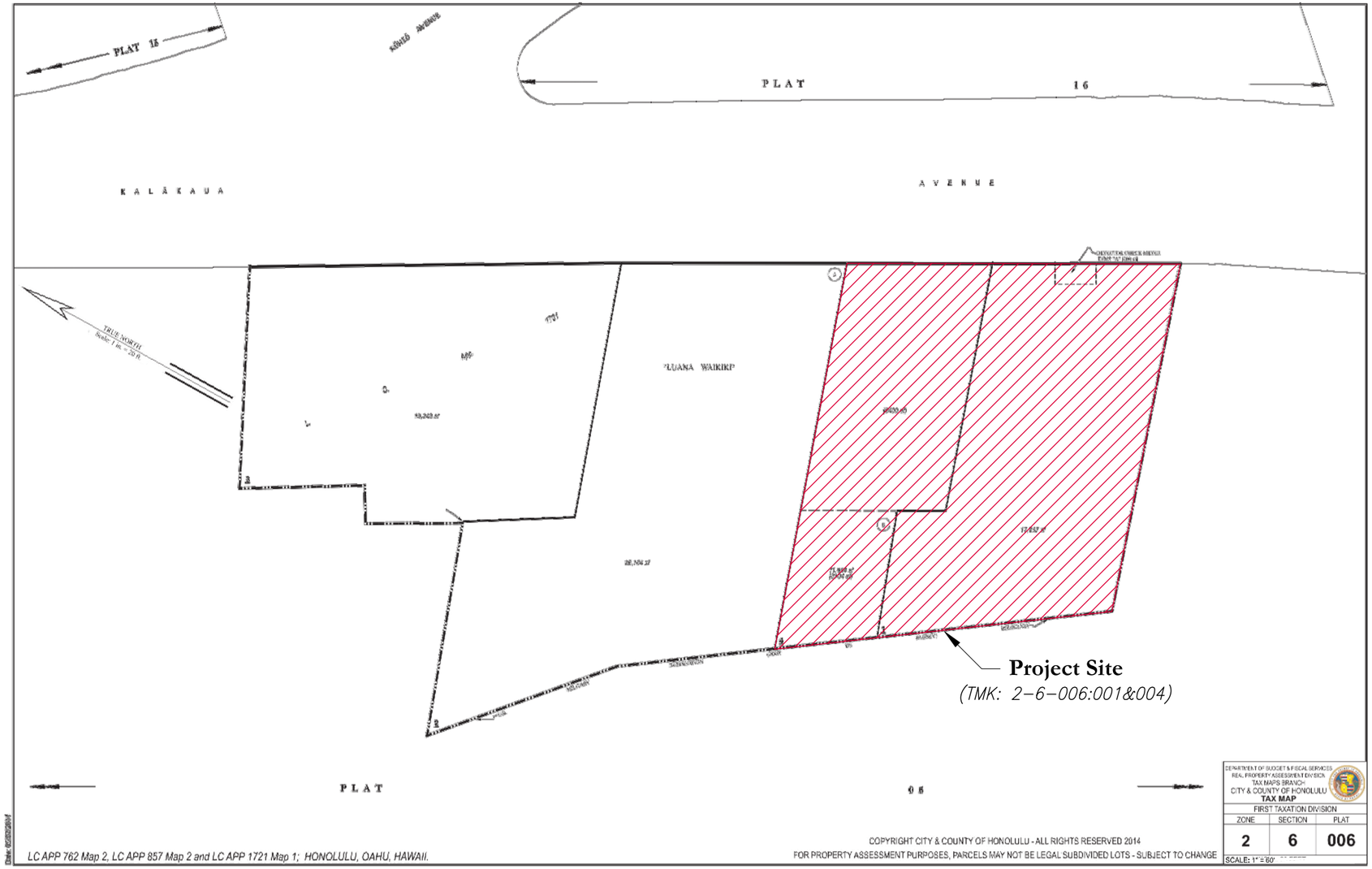
LOCATION MAP

Figure 1



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PARK KALIA - WAIKIKI DUE DILIGENCE
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TMK MAP KEY 2-6-006: 001, 004

Figure
2

2. PROJECT DESCRIPTION

2.1 Existing Conditions

The proposed project site is comprised of two existing parcels adjacent to each other, TMKs 2-6-006: 001 & 004, located at 2055/2057A Kalakaua Avenue in Honolulu. The property identified by TMK 2-6-006: 001 will be referred to as Parcel 1 and the property identified by TMK 2-6-006: 004 will be referred to as Parcel 4. The areas of Parcel 1 and 4 are approximately 0.40-acres and 0.26-acres, respectively. The total area of the two parcels is approximately 0.66-acres. The project site is bounded by Luana Waikiki hotel to the north, Kalakaua Avenue to the east, Fort DeRussy Park to the south, and Maluhia Road/Fort Derussy chapel to the west. The portion of Kalakaua Avenue fronting the project is owned by various owners and maintained by the City and County of Honolulu and the other frontages are owned by Luana Waikiki and the United States Federal government.

The property is currently occupied by the closed 630 seat Kyo-ya restaurant building and two-level parking garage.

2.2 Proposed Project

Based on the latest design concept, the proposed development will consist of the 26 floor Park Kalia - Waikiki condo-hotel that includes 170 units, a pool, a fitness center/spa, a bar area, a restaurant, and a wedding chapel. A multi-level parking garage will also be provided for the development. Various landscaping and water features will be installed around the site. The development plan spans Parcels 1 and 4 and will require a joint development agreement or parcel consolidation to be completed in the future.

3. SANITARY SEWER SYSTEM

3.1 Existing Conditions

Information obtained from the City and County of Honolulu GIS map system indicates each parcel has a sewer lateral that connects to an existing 8-inch gravity sewerline that runs within the sidewalk fronting the project site along Kalakaua Avenue. The existing sewer main connects to the Fort DeRussy pump station located along Kalakaua Avenue, north of the project site (See Appendix A for C&C of Honolulu GIS Map of Sewer System in Project Vicinity).

3.2 Connection to the City and County Sewer System

A sewer connection application was submitted to the City and County of Honolulu, Department of Planning and Permitting, Wastewater Branch in April 2014 (See Appendix A – Sewer Connection Application, submitted April 2014). The City has not provided any preliminary opinion regarding the connection application. Correspondence between the City and Wilson Okamoto Corporation has clarified the reason for delay in response (See Appendix A - Email Correspondence 1). In summary, a 2010 consent decree between the City and the EPA required the City to either upgrade the Fort DeRussy wastewater pump station or construct an alternative project that would result in the decommissioning of the station. The City responded to the EPA in August 2014 stating that the requirement to upgrade the wastewater pump station was already completed in 2009. The EPA and DOH have not responded to the City's August 2014 response, therefore, the City is not able to approve new sewer connection applications served by the Fort DeRussy waste water pump station until a response is received.

Since the original connection application was submitted, the project program values and concept has been revised. Inquiry emails were sent to the City on June 24, 2015 for direction on how to update the original values. A response has not been received to date (See Appendix A - Email Correspondence 2). In anticipation of the City requiring the submittal of a new application, a new sewer connection application that included the latest design concept program values was submitted to the City on June 26, 2015 (See Appendix A – Sewer Connection Application, submitted June 2015). WOC inquired with the City in November 2015 to follow up with the status of the sewer connection application review. The City responded the application is still in review at DPP, Environmental Services Department (See Appendix A – Email Correspondence 3).

It is anticipated that the proposed project will utilize one or more of the existing sewer laterals. Locations of the existing laterals and its ability to be utilized in the proposed project should be verified during the design process.

3.3 Design Criteria and Facility Charges

Average daily sanitary sewer rates are based on the City and County of Honolulu, Design Standards of the Department of Wastewater Management. The quantity of wastewater was determined as follows:

Flow Criteria:

- Based on 170 units and 2.8 capita per unit = 476 capita
- Plus, Commercial Use Area of 0.47 acre and 300 capita per acre = 141 capita
- Average per capita flow = 80 gallons per day

Based on the above criteria the estimated average daily flow for the project is calculated as:

617 capita x 80 gallons per day = 49,360 gallons per day

3.4 Facility Charges

The C&C collects a one-time wastewater facility charge from all new developments and redevelopments connecting to its wastewater system. The charges are collected with the intent of funding for future upgrades to the system. Typically, the C&C will credit a development for existing uses on the property and adjust the number of ESDUs that need to be purchased, accordingly. Any adjustments will be determined when the C&C provides an estimated wastewater facility charge on the awaited response to the sewer connection application. The actual sewer facility charge, however, will be finalized during the building permit process.

The current non-residential wastewater facility charge is $6,424 per ESDU. This rate is reviewed annually and generally increases after the end of the fiscal year on June 30. The presently proposed rate beginning July 1, 2016 is $6,616 per ESDU.

Non-residential ESDUs are calculated based on equivalent water meter size, which factors in plumbing fixture units. A chart showing equivalent water meter size to number of ESDUs is shown below:

Meter size	Equivalent Single Family Dwelling Unit (ESDUs)
5/8-inch	1.0
¾-inch	1.0
1-inches	2.4
1-1/2-inch	5.8

2-inches	13
3-inches	33
4-inches	57
6-inches	87

Based on the Board of Water Supply, Water System Standard, Peak Daily Water Demand calculations and General Meter and Lateral Information sizing chart, and assumed/estimated plumbing fixture unit count, a 3-inch meter is anticipated to be sized for the domestic flow of this project. Using the table above, a 3-inch meter equates to 33 ESDUs. The estimated sewer facilities charges payable to the City based the rate is calculated as:

33 ESDUs x $6,424 = $211,992

The actual sewer facility charges will be finalized during the building permit process.

4. WATER SYSTEM

4.1 Background

Water supply for the project will be provided through the municipal water system of the City and County of Honolulu's Board of Water Supply (BWS).

4.2 Existing Conditions

The BWS water system in the vicinity of the project site consists of a system of distribution mains and fire hydrants. BWS facility map indicates an existing 8-inch waterline that runs within the makai side of Kalakaua Ave roadway. Based on BWS facility maps, the closest existing fire hydrant to the project site is located on the mauka side of Kalakaua Ave near the intersection of Kalakaua Ave and Kalaimoku Street (See Appendix B - Water System Facility Map).

A request letter for water availability for the project and pressure information for fire hydrants in the vicinity of the project was submitted to the Board of Water Supply (BWS) on June 16, 2015 (See Appendix B – Request For Flow and Pressure Data Letter). A response letter to the request for water availability for the project and pressure information for fire hydrants was received on June 29, 2015. The letter stated that the existing water system cannot provide adequate fire protection to the proposed development. The system is inadequate as the distance from the development to the nearest existing fire hydrant (approximately 295 linear feet) exceeds the standard 125 linear feet required for a high-rise hotel development. BWS will require the developer to install a fire hydrant on Kalakaua Ave within 125 linear feet of the development. During the design process, construction drawings should be submitted to BWS for review approval and on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department. BWS will require the implementation of water conservation measures. The letter also provided following data for the existing fire hydrants in the vicinity of the site:

M-01057
Static Pressure: 76 psi
Residual Pressure: 26 psi
Flow: 4000 gallons per minute

M-01048
Static Pressure: 76 psi
Residual Pressure: 36 psi
Flow: 4000 gallons per minute

See Appendix B - Response Letter To Request For Flow and Pressure Data Letter, BWS)

BWS records show an existing 2-inch copper lateral and 2-inch water meter servicing Parcel 1 and an 8-inch ductile iron main and 8-inch DC meter servicing Parcel 4. (See Appendix B – Existing Water Meter and Lateral Information).

4.3 Connection to Board of Water Supply System

Water connection(s) to the existing Board of Water Supply system will be determined during the design process and when construction plans for the proposed project are submitted for review and approval. If the existing laterals are not utilized, connection will likely occur to the existing 8-inch main along the makai side of the Kalakaua Ave roadway.

The locations of the existing water laterals and meters and its ability to be utilized in the proposed project should be verified during the design process.

4.4 Design Standards

Average daily water demand is based on BWS Water System standards, Domestic Consumption Guidelines. The zoning designations of the proposed site was determined to be Resort with an associated demand of 350 gals/unit and Commercial/Residential Use with an associated demand of 120 gals/1,000 sf. The average daily water demand is as follows:

<u>Average Daily Water Demand:</u>

- Number Of Units – 170
- Commercial/Residential Mix Use – 20,353 sf
- Average Daily Demand For Resort – 350 gallons per unit per day
- Average Daily Demand For Commercial/Residential Use – 120 gals per 1,000 sf per day

Based on the above criteria the estimated average daily water demand for the project is calculated as:

170 units x 350 gallons per unit per day = 59,500 gallons per day

20,353 sf x 120 gallons per 1,000 sf per day = 2,443 gallons per day

Total average daily water demand = 61,943 gallons per day

4.5 Facility Charges

The BWS assesses a one-time water system facility charge from all new developments and redevelopments connecting to and increasing demand on its system. The charges are collected with the intent of funding for future upgrades to

the water system. The amount charged is determined based on the anticipated fixture unit (FU) count of the proposed project. To determine the fixture unit count, the project appliances and appurtenances count was assumed based on the November 10, 2015 development plan and this count was converted to fixture units. Floors that are not included in the calculation below were assumed to have no appliances and appurtenances. See Figures 3-1 to 3-7 for assumed appliance and appurtenance count per floor.

The breakdown of assumed appliances, appurtenances, fixtures per floor is:

- Pool Level – Number of Sinks – 16
  Number of Water Closets – 4
  Number of Bathtubs – 4
- Restaurant Level – Number of Sinks – 14
  Number of Water Closets – 8
  Number of Dishwashers – 4
- Lower Tower Level (8 Floors) Per Floor – Number of Sinks – 18
  Number of Water Closets – 10
  Number of Bathtubs – 16
- Upper Tower Level (9 Floors) Per Floor – Number of Sinks – 17
  Number of Water Closets – 8
  Number of Bathtubs – 15
- Penthouse Level – Number of Sinks – 13
  Number of Water Closets – 4
  Number of Bathtubs – 8
- Chapel + Penthouse Level (No Wedding or Wedding) – Number of Sinks – 10
  Number of Water Closets – 4
  Number of Bathtub – 4

To convert the appliances and appurtenances count to water supply fixture units (FU), Uniform Plumbing Code, Table A-2, Estimate Curves for Demand Load was used:

- Sink (Lavatories) = 1.0 FU
- Water Closet = 2.5 FU
- Bathtub = 4.0 FU
- Dishwasher = 1.5 FU

Based on the above, the total fixture units (FU) per level:

- Pool Level = 42 FU
- Restaurant Level = 40 FU
- Lower Tower Level Total (8 Floors) = 856 FU
- Upper Tower Level Total (8 Floor) = 873 FU

- Penthouse Level = 55 FU
- Chapel + Penthouse Level (No Wedding or Wedding) = 36 FU

Total FU = 1902 FU

Based on BWS water system facilities charges, the rates of non-residential fixture units, as of July 1, 2015, are:

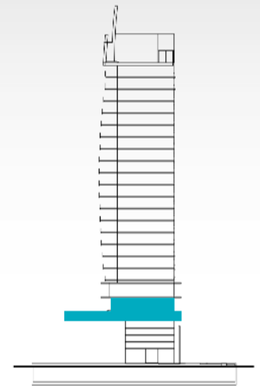
Non-Residential	Water System Facility Charge
First 50 Fixture Units	$620.85 per Fixture Unit
Additional Fixture Units	$220.29 per Fixture Unit

(50 FU x $620.85) + (1852 FU x $220.29) = $439,019.58

Total Estimated Water System Facilities Charges = $439,019.58

The actual water system facilities charges will be finalized during the building permit process based on the actual fixture unit count from the proposed project.

Pool Level Plan



TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
16 - SINK
4 - WATER CLOSET
4 - BATHTUB

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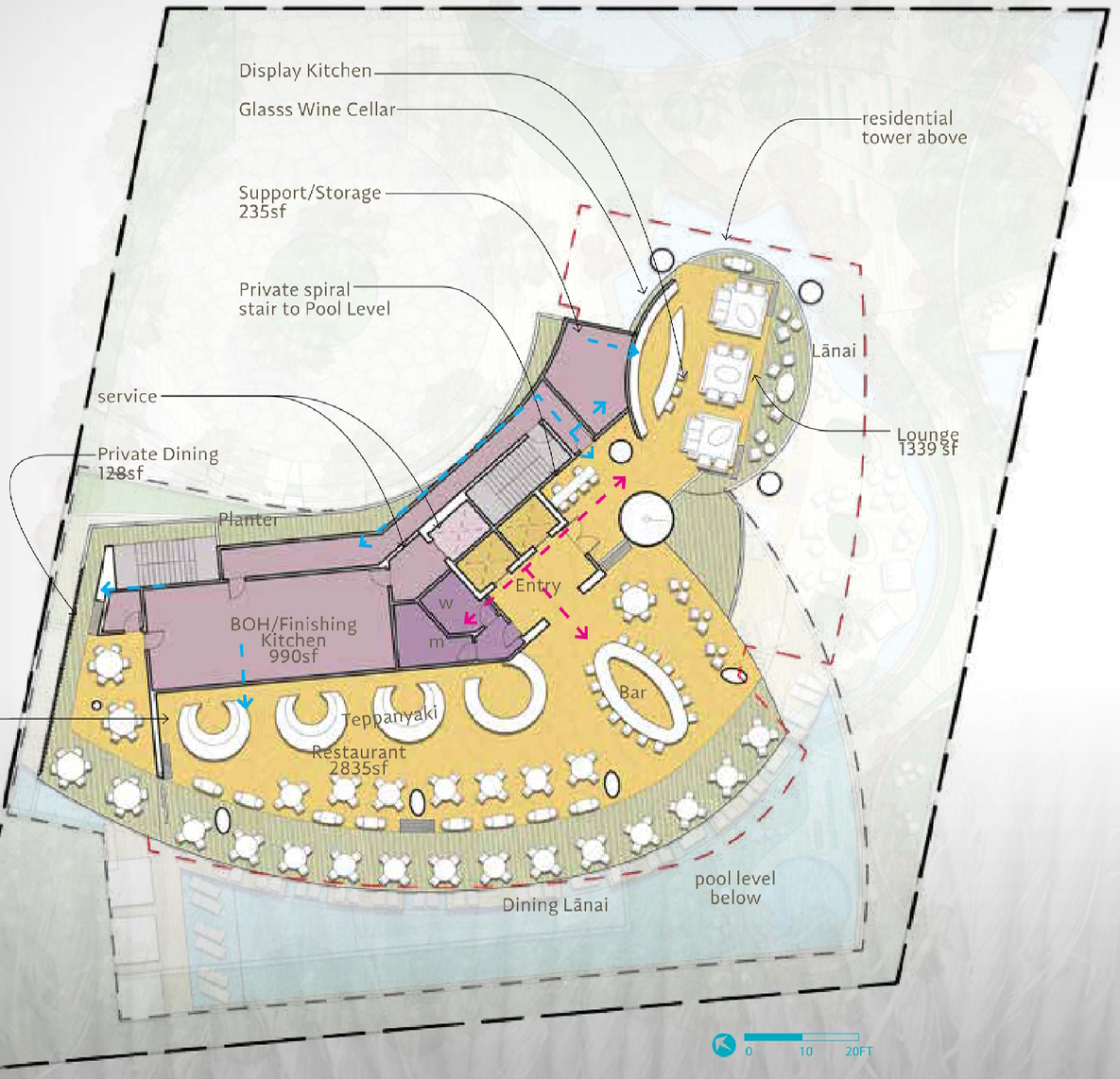
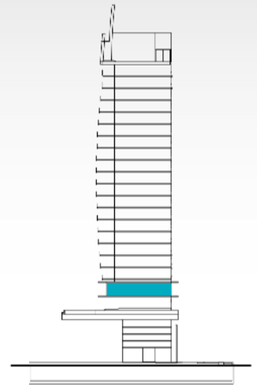
DEVELOPMENT PLAN - POOL LEVEL PLAN

Figure
3-1

Restaurant Level Plan





TOTAL ASSUMED FIXTURE COUNT FOR RESTAURANT LEVEL:
14 - SINK
8 - WATER CLOSET
4 - DISHWASHER

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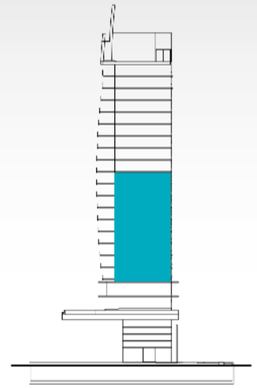
DEVELOPMENT PLAN - RESTAURANT LEVEL PLAN

Figure
3-2

Lower Tower Level Plan - 4-11 (10 Units)



TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
18 - SINK
10 - WATER CLOSET
16 - BATHTUB

Unit Type Legend
- Type One Bedroom A
- Type Studio B
- Type Studio C
- Type Studio D
- Type Studio E
- Type Studio F
- Type Studio G

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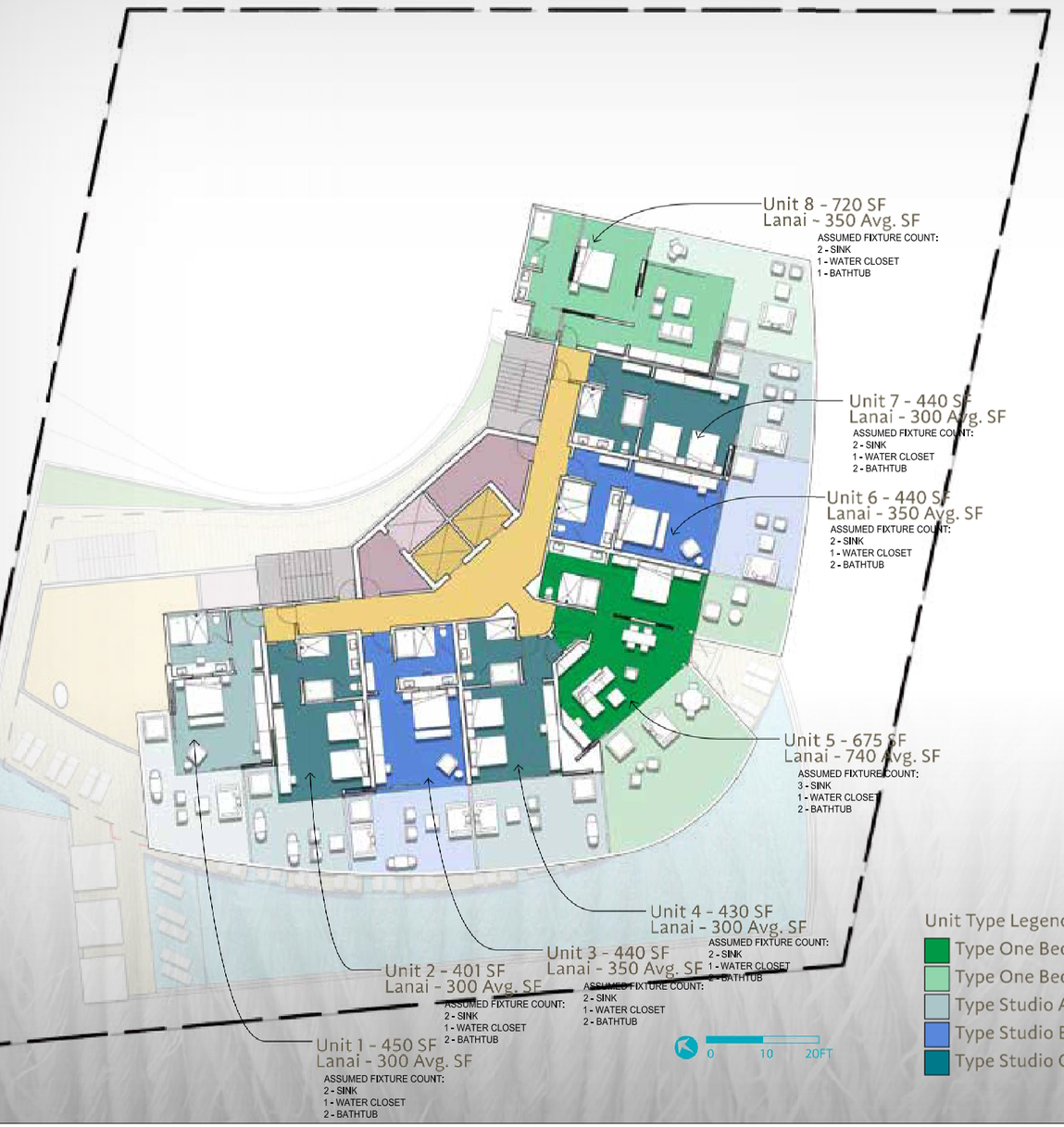
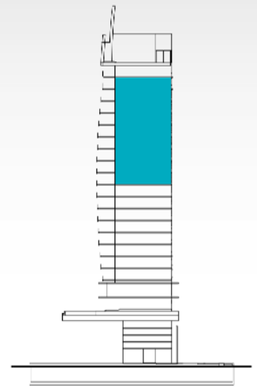
DEVELOPMENT PLAN - LOWER TOWER LEVEL PLAN

Figure
3-3

Upper Tower Level Plan - 12 -20 (8 Units)





TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
17 - SINK
8 - WATER CLOSET
15 - BATHTUB

Unit Type Legend
- Type One Bedroom A
- Type One Bedroom B
- Type Studio A
- Type Studio B
- Type Studio C

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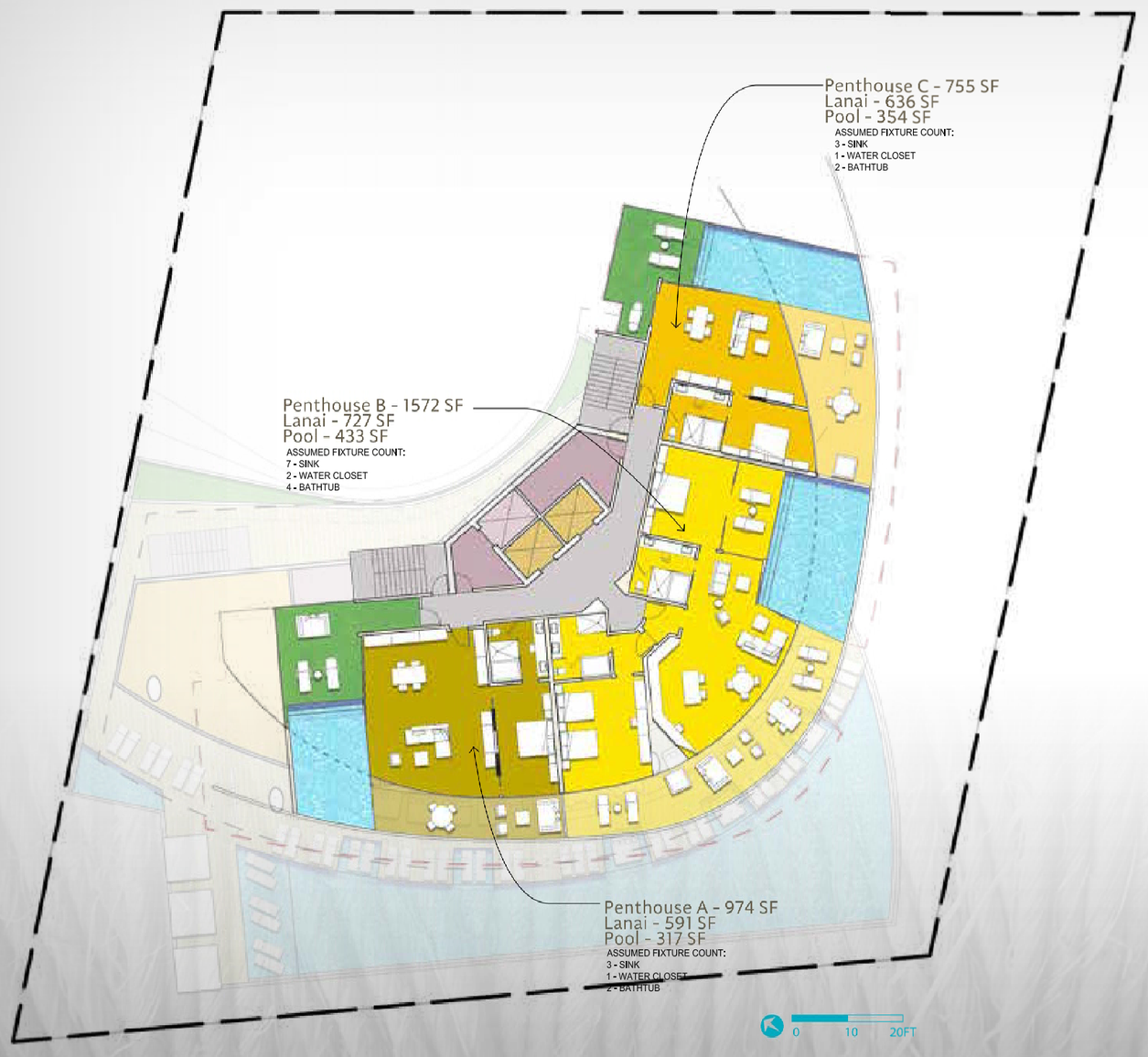
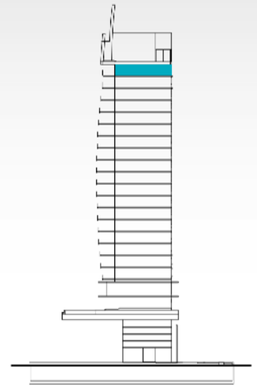
DEVELOPMENT PLAN - UPPER TOWER LEVEL PLAN

Figure
3-4

Penthouse Level Plan - (3 Units)





TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
13 - SINK
4 - WATER CLOSET
8 - BATHTUB

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PARK KALIA - WAIKIKI DUE DILIGENCE
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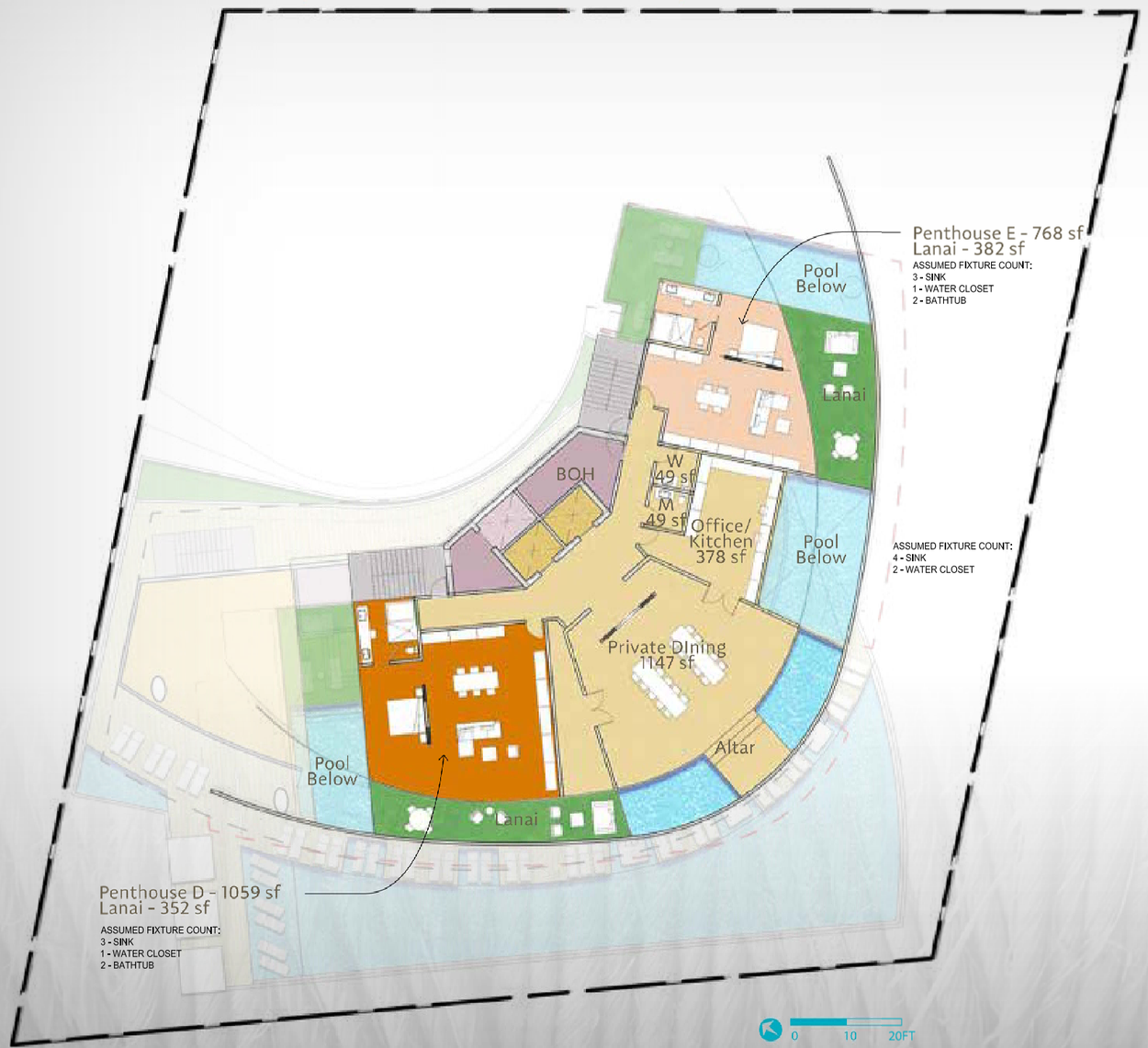
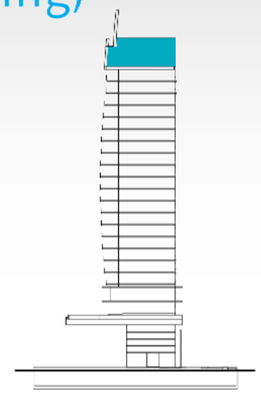
DEVELOPMENT PLAN - PENTHOUSE LEVEL PLAN

Figure
3-5

Chapel + Penthouse Hybrid Level Plan (no wedding)





TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
10 - SINK
4 - WATER CLOSET
4 - BATHTUB

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PARK KALIA - WAIKIKI DUE DILIGENCE
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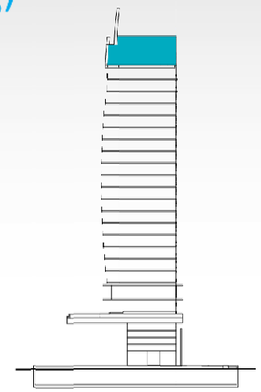
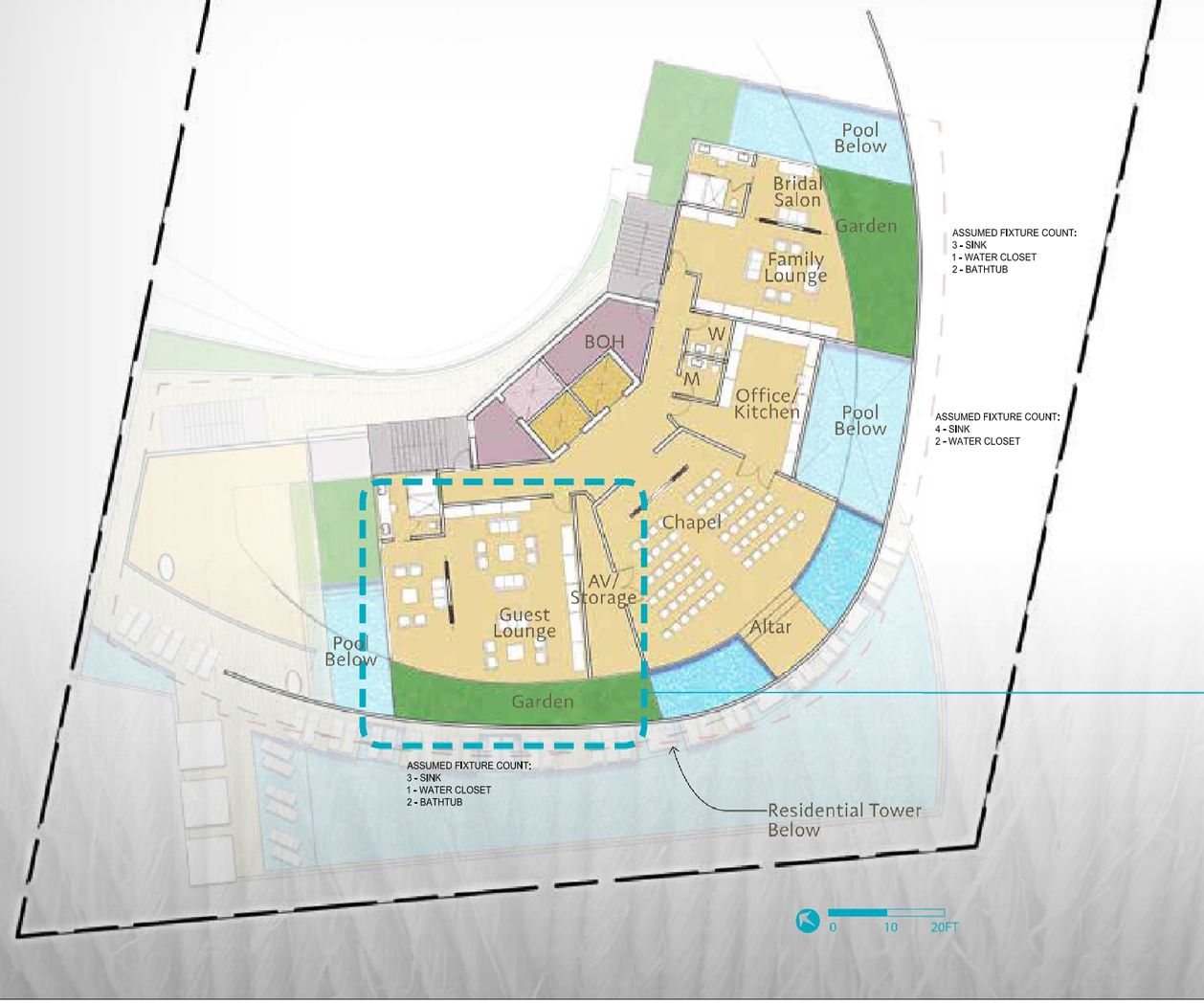
DEVELOPMENT PLAN - CHAPEL + PENTHOUSE HYBRID LEVEL PLAN (NO WEDDING)

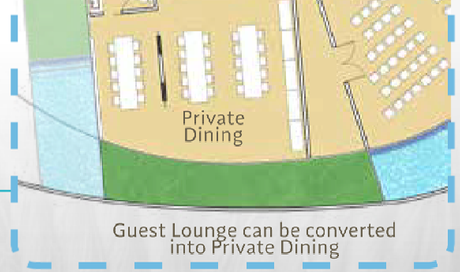
Figure
3-6

Chapel + Penthouse Hybrid Level Plan (wedding)





TOTAL ASSUMED FIXTURE COUNT PER FLOOR:
10 - SINK
4 - WATER CLOSET
4 - BATHTUB



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PARK KALIA - WAIKIKI DUE DILIGENCE
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DEVELOPMENT PLAN - CHAPEL + PENTHOUSE HYBRID LEVEL PLAN (WEDDING)

Figure
3-7

5. SITE GRADING, RUNOFF, AND STORM DRAINAGE SYSTEM

5.1 Background

Review of the site grading, flooding, and storm drainage system is based on site reconnaissance and City and County of Honolulu GIS Map Data.

5.2 Existing Conditions

The site is mainly occupied by the closed Kyo-ya restaurant building and two-level parking garage. During site reconnaissance, it was observed that on the Maluhia Road, Fort DeRussy Park, and Luana Waikiki Hotel faces of the property, the wall of the existing building straddles the property line and on the Kalakaua Ave. frontage, there is a high point at the entrance to the two-level parking garage and the site generally slopes towards the existing sidewalk. It was observed that a portion of the existing sidewalk along this frontage is depressed due to uplifting of the sidewalk by the root system of an existing tree adjacent to the curb line along Kalakaua Ave. A series of trench drains were installed in the depressed areas to mitigate the ponding in the low areas. The trench drain outlet location was undetermined. A portion of the existing gutter adjacent to the bike lane is also uplifting due to the root system causing ponding in the gutter. No mitigation measures were observed for the ponding within the gutter (See Appendix C - Site Reconnaissance Photos).

Along Kalakaua Avenue there is an existing catch basin located approximately in line with the boundary between Parcels 1 and 4. The catch basin is connected to the City underground drainage system that discharges into the Ala Wai Canal at the mauka end of Kalaimoku Street (See Figure 5 – Existing Drainage System Map).

Based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), Community Panel 15003C0366G dated January 19, 2011, the project site is located in the Zone AO (Depth 2') (See Figure 4 – FIRM Map). Zone AO (Depth 2') is the Special Flood Hazard Area defined as "Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined".

5.3 Proposed Improvements

Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation for any proposed building should be established at a minimum of 2-feet above the highest existing grades on-site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

Grading of the proposed project site should convey storm runoff offsite. Besides adhering to the flood zone requirements another factor that could dictate proposed elevations of the site is if the sidewalk fronting the site is improved to raise the

depressed area to eliminate the existing ponding condition. If the sidewalk is improved, incidental work such as raising the covers of the various utility boxes within the sidewalk to finish grade should be completed. Other modifications to improve the area would be reconstruction of the existing gutter and landscaping measures to contain the existing tree root system to prevent uplifting of the surrounding area. The City should be consulted during the design process to help determine the extent of improvements along the sidewalk.

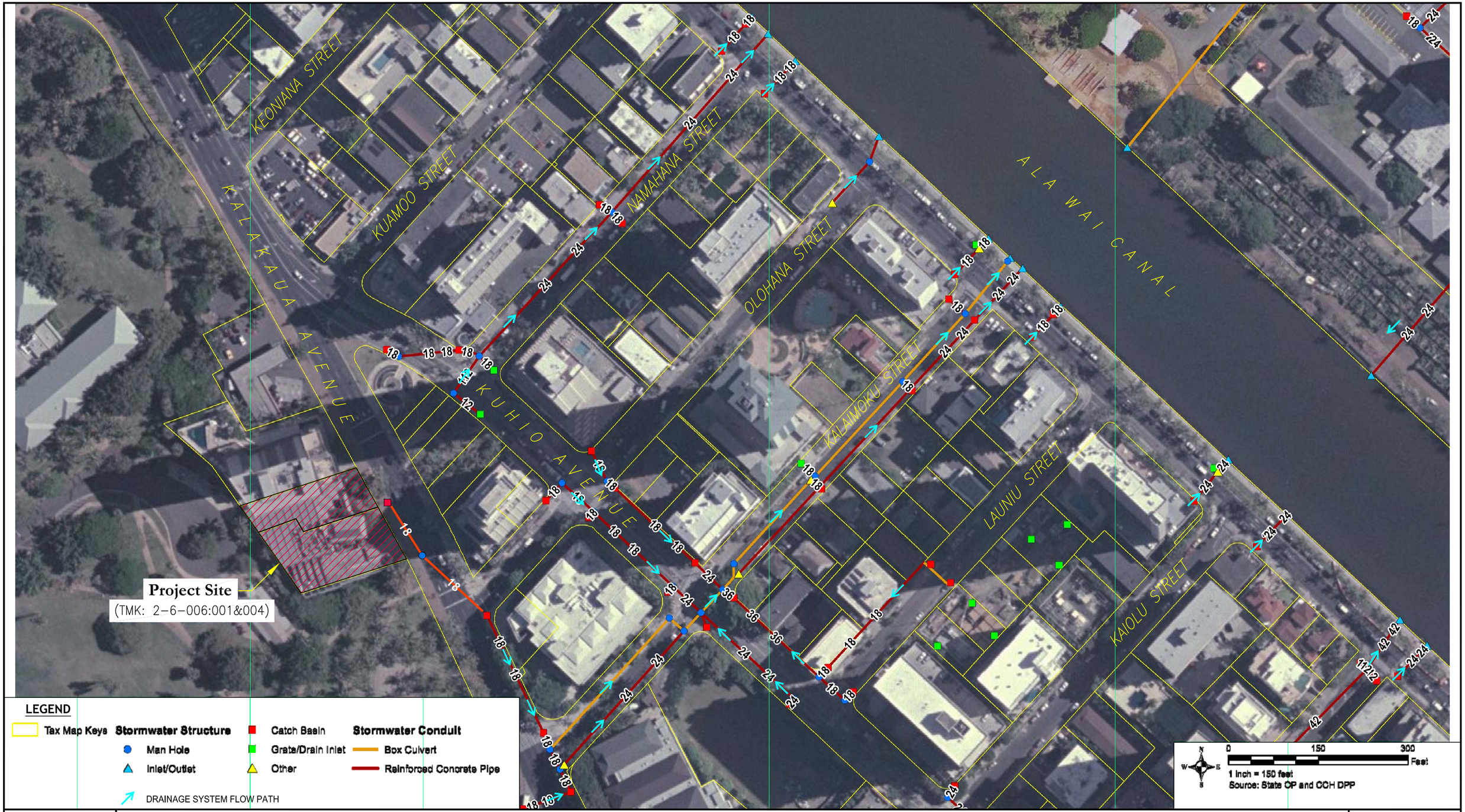
Due to the project site being less than one acre in size and not classified in the required criteria classification, storm water quality management practices may not be required for the project. The City should be consulted and confirmed on this at the time of final design for the project.

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

PARK KALIA - WAIKIKI DUE DILIGENCE
HONOLULU, OAHU, HAWAII

FLOOD INSURANCE RATE MAP

Figure
4



WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

PARK KALIA - WAIKIKI DUE DILIGENCE
HONOLULU, OAHU, HAWAII

EXISTING DRAINAGE SYSTEM MAP

Figure
5

6. ROADWAY SYSTEM AND VEHICULAR ACCESS

6.1 Existing Conditions

The project site is located on the makai side of Kalakaua Avenue between the Kalakaua Avenue/Kuhio Avenue split and Olohana Street. Kalakaua Avenue fronting the project is a one-way, four-lane road.

Existing access to the site is through an approximately 40' wide driveway apron along Kalakaua Avenue at the southeast corner of Parcel 1.

6.2 Proposed Improvements

Vehicular and Pedestrian Access is proposed along Kalakaua Avenue. It is anticipated the driveway apron will be relocated to near the northern corner of the property and will maintain a right in and out movement pattern.

The onsite driveway entering and exiting the porte cochere is one-way in and out with the direction movements separated by landscaped median island. A multi-story parking garage will be provided with access through 2 auto lifts.

A Traffic Impact Analysis Report (TIAR) has been prepared for the project to analyze the existing traffic conditions and future traffic conditions of the area due to the proposed project.

Email correspondence with the City and County of Honolulu, Department of Planning and Permitting, Traffic Review Branch, has indicated that the following items should be considered as the project design moves forward (See Appendix D – Email Correspondence):

- In addition to the TIAR, the Waikiki Special District zoning ordinance has conditions that require construction and traffic management plans (TMP) to be prepared for the project and submitted to the City for review.

- Pedestrian access to the rear of the property, likely controlled by gate and card, may be required.

- Bicycle parking, primarily for employees, located on the property, may be required.

- Sight distance and driveway design standards should be adhered to. If gates are installed at driveway entrances, they should be recessed from the main roadway.

Appendix A

Sewer System Information

Sewer Connection Application, submitted June 2015

Sewer Connection Application, submitted April 2014

Email 1 – Correspondence with C&C Wastewater Branch and Department of Environmental Services

Email 2 – Inquiry with C&C Wastewater Branch

Email 3 – Inquiry with C&C Wastewater Branch with Response, November 2015

C&C of Honolulu GIS Map of Sewer System in Project Vicinity

Sewer Connection Application,
Submitted June 2015

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING & PERMITTING
650 South King Street, Honolulu, Hawaii 96813

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

Additional data, drawings/plans, and fee requirements are listed on a separate sheet titled "Instructions for Filing" and are available at your request. All specified materials described in the "Instructions for Filing" and required fees must accompany this form. You are encouraged to consult with Site Development Division (SDD) staff in completing the application to avoid processing delays. For other applications, procedures, instructions, and a fillable version of this form, please visit www.honoluludpp.org

I. APPROVAL

Check one or more as appropriate:

PERMIT	VARIANCE	AGREEMENT/LICENSE
☐ Grading	☐ Flood Hazard District Variance	☐ Driveway Crossing Existing Retaining Wall Agreement
☐ Grubbing	☐ Slope Easement Variance	☐ Sewer Easement Agreement
☐ Stockpiling	☐ Non-Standard Driveway Variance	☐ Drainage Connection License
☐ Trenching	☐ Non-Standard Sidewalk Finish Variance	
☐ Dewatering	☐ Surface Encroachment Variance	
☑ Sewer Connection	☐ Surface Encroachment Variance for Planting Strip	

☐ Subdivision
☐ Easement(s)
☐ Lot Consolidation
☐ Park Dedication
☐ Site Development
☐ Flood Determination

NOTE: Sections II & III must be filled in completely for all applications. Please type or print legibly.

II. LOT AND LAND USE INFORMATION

TAX MAP KEY(S): 2-6-006:01 & 04 — Lot Area: 28,761.00 sq.ft./ac.

Zoning District: Resort Mixed Use — Development Plan Designation: — State Land Use District:

Street Address/Location of Property: 2045 Kalakaua Street M400

Present Use of Property/Building: Commercial

Project Name (if any): One Waikiki (Old Kyo-Ya Restaurant)

Request/Proposal (describe the nature of the request, proposed activity or project):

Proposed condo-hotel

III. APPLICANT INFORMATION

	Recorded Fee Owner/Applicant	**Engineer**/Architect/Surveyor	**Contractor**/Authorized Agent/Contact
Name (& title)	Leahi, LLC	Matthew K. Fujioka, P.E.	
Mailing Address	2045 Kalakaua Avenue #M250	1907 S. Beretania St, Suite 400	
	Honolulu, HI 96815	Honolulu HI 96826	
	City State Zip	City State Zip	City State Zip
Phone Number(s)	(808) 983-3300	(808) 946 2277	
APPLICANT	Matthew Fujioka, P.E.	Wilson Okamoto Corp.	
	Print **NAME** of applicant	Print **COMPANY NAME** and TITLE of applicant	**Signature of applicant**

IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY

Estimated Dates: Start: _____ Completion: _____ Borrow Material: _____

Area of work (sf): _____ Borrow Site: _____

Dimensions of work: Length: _____ Width: _____ Height*: _____ Disposal Material: _____

Estimated Quantity (cy): Cut: _____ Fill: _____ Disposal Site: _____

*Stockpile Only

AUTHORIZATION CLEARANCE

This statement of authorization is used in reference to the information provided for in sections I, II and III above.

I/We, _____ (Print NAME and TITLE of person **giving authority**), hereby authorize _____ (Print NAME of person **receiving authority**) to act in my/our behalf in obtaining/closing the Grading/Grubbing/Stockpiling permit for the project.

_____
Signature of Owner/Developer giving authority

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

SEE REVERSE FOR APPLICATIONS FOR TRENCHING AND SEWER CONNECTION

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

V. FOR TRENCHING INFORMATION ONLY

Work to be performed for: _____ Work to be done: ☐ Service Connection ☐ Repair

Estimated Dates: Start: _____ Completion: _____ Other: _____

Estimated Value of work: $ _____ Dimensions: _____ ft/in (length) _____ ft/in (width) _____ ft/in (depth)

AGENCY CLEARANCES	SIGNATURE	DATE	ADDRESS	PHONE NO.
DPP, Wastewater Branch			650 So. King St., FMB, 1st Flr.	768-8210
DTS, Traffic Signal			650 So. King St., FMB, 2nd Flr.	768-8388
DDC, Street Lightning			650 So. King St., FMB, 9th Flr.	768-8431
BWS, Customer Care			630 So. Beretania St., 1st Flr.	748-5460
Hawaiian Electric, Construction Installation			820 Ward Avenue, 4th Flr.	543-5654
Hawaiian Telcom, Excavation			1177 Bishop St., Security Entrance Adams Lane	546-7746
Gasco., Inc., Maps & Records			515 Kamakee St., 1st Flr.	594-5575
Oceanic Cablevision, Engineering & Constr.			200 Akamainui St.	625-8443
☐ CHECK IF REQUIRED DFM, Division of Road Maintenance			99-999 Iwaena Street, #214	768-3600

DPP: Dept. of Planning and Permitting DTS: Dept. of Transportation Services DDC: Dept. of Design and Construction BWS: Board of Water Supply DFM: Dept. of Facility Maintenance

NOTE: The utilities listed above may not represent all underground utilities located within City rights-of-ways, nor do these utility clearances relieve the permittee from complying with all other applicable codes, rules, regulations, and/or permit procedures including, but not limited to, additional clearances and requirements for other utilities (i.e. irrigation, data transmission, etc.) located within City rights-of-ways. Pursuant to ROH 1990, Section 14-17.6, the permittee shall indemnify and save harmless the city for any injuries or damages to any person or property received or sustained by any person as a consequence of any act or acts of the permittee on work done under the trenching permit.

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

VI. FOR SEWER CONNECTION INFORMATION ONLY

To receive a response via e-mail, provide email address below and check box here: ☑

☐ Residential: No. of Proposed Units _____ (Provide breakdown below)

_____ Studios _____ 1 Bedroom _____ 2 Bedrooms _____ 3 Bedrooms _____ 4 Bedrooms _____ Other

☑ Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

CATEGORY(IES)	QUANTITY(IES)	NEW WATER METER SIZE(S)
Condo-Hotel	**180 Units**	**2" Meter**
Commercial (Misc.)	**17,000 sq. ft.**	

Date of Connection: **July 2018** (approximate)

Connection Work Desired: ☑ Use Existing Lateral ☐ Other

Dimensions: _____ ft. (length) _____ in. (size) _____ ft. (depth)

Existing Structures/Dwellings on Property: (Provide breakdown below)

TYPE (i.e. Single Family)	QUANTITY(IES)	REMAIN	DEMOLISH
Restaurant (seats)	**630**	**0**	**630**

Remarks: (Provide any additional information on the lines provided). *If response box is checked above, provide email address here:* mfujioka@wilsonokamoto.com

Commercial area to include restaurant, bar, wedding chapel,and lounge. Property amenties include pool, fitness, concierge, and lobby area. The information in this application supercedes a previous application made for this property in April 2014 and is still under review.

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

Sewer Connection Application,
Submitted April 2014

CITY AND COUNTY OF HONOLULU
DEPARTMENT OF PLANNING & PERMITTING
650 South King Street, Honolulu, Hawaii 96813

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

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I. APPROVAL

Check one or more as appropriate:

PERMIT	VARIANCE	AGREEMENT/LICENSE
☐ Subdivision	☐ Flood Hazard District Variance	☐ Driveway Crossing Existing Retaining Wall Agreement
☐ Easement(s)	☐ Slope Easement Variance	☐ Sewer Easement Agreement
☐ Lot Consolidation	☐ Non-Standard Driveway Variance	☐ Drainage Connection License
☐ Park Dedication	☐ Non-Standard Sidewalk Finish Variance	
☐ Site Development	☐ Surface Encroachment Variance	
☐ Flood Determination	☐ Surface Encroachment Variance for Planting Strip	
☐ Grading		
☐ Grubbing		
☐ Stockpiling		
☐ Trenching		
☐ Dewatering		
☑ Sewer Connection		

NOTE: Sections II & III must be filled in completely for all applications. Please type or print legibly.

II. LOT AND LAND USE INFORMATION

TAX MAP KEY(S): **2-6-006:01 & 04** Lot Area: **28,761.00** sq.ft./ac.

Zoning District: **Resort Mixed Use** Development Plan Designation: _____ State Land Use District: _____

Street Address/Location of Property: **2045 Kalakaua Street M400**

Present Use of Property/Building: **Commercial**

Project Name (if any): **Kyo-ya Restaurant**

Request/Proposal (describe the nature of the request, proposed activity or project):

Proposed hotel

III. APPLICANT INFORMATION

	Recorded Fee Owner/Applicant	Engineer/Architect/Surveyor	Contractor/Authorized Agent/Contact
Name (& title)	**Leahi, LLC**	**Matthew K. Fujioka, P.E.**	
Mailing Address	**2045 Kalakaua Avenue #M250**	**1907 S. Beretania St, Suite 400**	
	Honolulu, HI 96815 (City / State / Zip)	**Honolulu HI 96826** (City / State / Zip)	(City / State / Zip)
Phone Number(s)	**(808) 983-3300**	**(808) 946 2277**	

APPLICANT: _____ (Print NAME of applicant) | **Leahi, LLC** (Print COMPANY NAME and TITLE of applicant) | _____ (Signature of applicant)

IV. FOR GRADING/GRUBBING/STOCKPILING INFORMATION ONLY

Estimated Dates: Start: _____ Completion: _____ Borrow Material: _____

Area of work (sf): _____ Borrow Site: _____

Dimensions of work: Length: _____ Width: _____ Height*: _____ Disposal Material: _____

Estimated Quantity (cy): Cut: _____ Fill: _____ (*Stockpile Only) Disposal Site: _____

AUTHORIZATION CLEARANCE

This statement of authorization is used in reference to the information provided for in sections I, II and III above.

I/We, _____ (Print NAME and TITLE of person giving authority), hereby authorize _____ (Print NAME of person receiving authority) to act in my/our behalf in obtaining/closing the Grading/Grubbing/Stockpiling permit for the project.

_____ (Signature of Owner/Developer giving authority)

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

SEE REVERSE FOR APPLICATIONS FOR TRENCHING AND SEWER CONNECTION

SITE DEVELOPMENT DIVISION MASTER APPLICATION FORM

(REVERSE SIDE)

V. FOR TRENCHING INFORMATION ONLY

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Estimated Value of work: $ _____ Dimensions: _____ ft/in (length) _____ ft/in (width) _____ ft/in (depth)

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Hawaiian Telcom, Excavation			1177 Bishop St., Security Entrance Adams Lane	546-7746
Gasco., Inc., Maps & Records			515 Kamakee St., 1st Flr.	594-5575
Oceanic Cablevision, Engineering & Constr.			200 Akamainui St.	625-8443
☐ CHECK IF REQUIRED DFM, Division of Road Maintenance			99-999 Iwaena Street, #214	768-3600

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FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

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☐ Residential: No. of Proposed Units _____ (Provide breakdown below)

_____ Studios _____ 1 Bedroom _____ 2 Bedrooms _____ 3 Bedrooms _____ 4 Bedrooms _____ Other

☑ Non-Residential: (See attached sewer table for required category and quantity and provide any additional information in the remarks)

CATEGORY(IES)	QUANTITY(IES)	NEW WATER METER SIZE(S)
Hotel	**100 Rooms**	**1.5" Meter**
Commercial (misc.)	**15,000 sq. ft.**	

Date of Connection: **July 2015** (approximate)

Connection Work Desired: ☑ Use Existing Lateral ☐ Other

Dimensions: _____ ft. (length) _____ in. (size) _____ ft. (depth)

Existing Structures/Dwellings on Property: (Provide breakdown below)

TYPE (i.e. Single Family)	QUANTITY(IES)	REMAIN	DEMOLISH
Restaurant (seats)	**630**	**0**	**630**

Remarks: (Provide any additional information on the lines provided). *If response box is checked above, provide email address here:* _____

FOR DIVISION USE ONLY:

Date of Application: _____ Received By: _____ Application No.: _____

Email 1

Lane Saito

From: Matt Fujioka
Sent: Wednesday, June 24, 2015 2:50 PM
To: 'Olaes, Marisol'
Cc: Lane Saito
Subject: RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Marisol,

I wanted to follow up on the status of this sewer connection application again and had a couple of related questions:

1. Any update on the status of EPA/DOH approvals for the Fort Derussy SPS?
2. This might be a question for DPP, but since we originally submitted the SCA in April 2014, the proposed development has changed. Is it possible to update the existing application with the new information or should we submit a new SCA?

Thanks for your help!
Matt

Matthew Fujioka, P.E.
Project Manager/Senior Engineer

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
W http://www.wilsonokamoto.com

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From: Olaes, Marisol [mailto:molaes@honolulu.gov]
Sent: Wednesday, January 14, 2015 12:53 PM
To: Matt Fujioka
Subject: RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Matt,
I really don't know if a permit application like yours will be likely to get approved once EPA/DOH responds to us. There might be a chance but we cannot really make any promises right now.

Marisol

From: Matt Fujioka [mailto:mfujioka@wilsonokamoto.com]
Sent: Wednesday, January 14, 2015 11:09 AM
To: Olaes, Marisol
Subject: RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Marisol,

Thanks for the quick response. It seemed to be an indefinite timeline to get a response from EPA/DOH, but if they do accept the City's position, would a permit application like ours be likely to get approved?

Thanks for your help,
Matt

Matthew Fujioka, P.E.
Project Manager/Senior Engineer

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From: Olaes, Marisol [mailto:molaes@honolulu.gov]
Sent: Tuesday, January 13, 2015 10:14 AM
To: Matt Fujioka
Subject: FW: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Matt,
Please see email from Lisa Kimura below.

Marisol

Marisol Olaes
City & County of Honolulu
Department of Environmental Services
1000 Uluohia St., Suite 308
Kapolei, HI 96707
T 808-768-3467

From: Kimura, Lisa T
Sent: Tuesday, January 13, 2015 9:33 AM
To: Olaes, Marisol
Subject: RE: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Marisol,

We sent a memo to DPP on this SCA review and the memo provided DPP with the following information. Basically, we are not able to make a determination on this appeal at this time. The 2010 Consent Decree requires the City to either upgrade the capacity of the Fort DeRussy Wastewater Pump Station (WWPS) to the extent recommended by the Wet Weather I/I Assessment Update; or construct an alternative project that would result in the decommissioning of the Fort DeRussy WWPS. The City sent a letter in August 2014 to the United States Environmental Protection Agency (EPA), Region IX and the State Department of Health (DOH) that the City has already satisfied the requirement to upgrade the

Fort DeRussy WWPS. The City's position is based on WWPS upgrades that were completed in 2009 and the analysis of flows completed for the Wet Weather I/I Assessment Update. After EPA and DOH have not yet responded with any comments that they may have about the City's position. Therefore, our department is not able to provide decisions on appeals for Sewer Connection Applications for projects connecting to the Fort DeRussy WWPS.

You can forward this e-mail to Matt Fujioka at Wilson Okamoto for his awareness.

Lisa

From: Olaes, Marisol
Sent: Tuesday, January 13, 2015 9:24 AM
To: Kimura, Lisa T
Subject: FW: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Lisa,
Any info on this one?

Thanks,
Marisol

From: Matt Fujioka [mailto:mfujioka@wilsonokamoto.com]
Sent: Tuesday, January 13, 2015 9:13 AM
To: Olaes, Marisol
Subject: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Marisol,

Sorry for being a bother on your first day back, but I needed some help in finding out the status of the attached sewer connection application. The attachment isn't signed, but the signed application was submitted to DPP in April 2014. In follow up discussions I had with DPP, they said that it was being reviewed by operations/ENV and they did not know the status. Would it be possible to find out what the hold up is and when a response can be expected? Please let me know if you have any questions, thanks.

Matt

Matthew Fujioka, P.E.
Project Manager/Senior Engineer

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

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Email 2

Lane Saito

From: Matt Fujioka
Sent: Wednesday, June 24, 2015 2:57 PM
To: tching@honolulu.gov
Cc: Lane Saito
Subject: Sewer Connection Application - Old Kyoya Restaurant (2-6-006: 001 and 004)

Hi Tessa,

We submitted a SCA for this parcel in April 2014 and our understanding, based on information from ENV, is that it is held up due to EPA/DOH approval issues concerning the Fort Derussy SPS. Since the time of application, our client has made changes to their development plan. Is it possible for us to update the information in our existing application or should we submit a new SCA?

Thanks for your help,
Matt

Matthew Fujioka, P.E.
Project Manager/Senior Engineer

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Email 3

Lane Saito

From: Matt Fujioka
Sent: Tuesday, November 17, 2015 4:06 PM
To: Lane Saito
Subject: FW: Status of SCA

Sorry, here it is

Matthew Fujioka, P.E.
Associate Director

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
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From: Yoneshige, Mindy [mailto:myoneshige@honolulu.gov]
Sent: Monday, November 09, 2015 10:00 AM
To: Matt Fujioka
Subject: RE: Status of SCA

Hi Matt,

Just double checked and both SCAs are still with ENV.

Thanks,

Mindy Yoneshige, P.E.
City & County of Honolulu
Department of Planning & Permitting
Wastewater Branch
650 S. King St. 1st Floor
Honolulu, HI 96813
(808) 768-8197

From: Matt Fujioka [mailto:mfujioka@wilsonokamoto.com]
Sent: Monday, November 09, 2015 9:55 AM
To: Yoneshige, Mindy
Cc: Lane Saito
Subject: Status of SCA

Hi Mindy,

Just wanted to check back on the status of the following SCAs that are in review:

1. (TMK: 2-3-021: 037, 038, and 039) - 641 Keeaumoku Street Condominium Development
    a. Last update in September was that it was with ENV for review and would take another 2-3 months or so for review.
2. (TMK: 2-6-006: 001 and 004) – One Waikiki (Old Kyoya Restaurant)
    a. Last update was that this parcel is served by the Ft Derussy pump station, which is still awaiting EPA approval for the improvements.

Please let me know if you have any additional updates for these two SCAs, thanks.
Matt

Matthew Fujioka, P.E.
Associate Director

WILSON OKAMOTO CORPORATION
INNOVATORS • PLANNERS • ENGINEERS

1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826
T (808) 946-2277 F (808) 946-2253
W http://www.wilsonokamoto.com

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WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

PARK KALIA - WAIKIKI DUE DILIGENCE
HONOLULU, OAHU, HAWAII

C&C OF HONOLULU GIS MAP OF SEWER SYSTEM IN PROJECT VICINITY

Appendix B

Water System Information

Request For Flow and Pressure Data Letter to Mr. Robert Chun, BWS

Response Letter To Request For Flow and Pressure Data Letter, provided by BWS

Existing Water Meter and Lateral Information, provided by BWS

Water Facility Map in Project Vicinity

WILSON OKAMOTO
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FAX: 808-946-2253
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10045-01
June 16, 2015

City and County of Honolulu
Board of Water Supply
Customer Care Division
630 South Beretania Street
Honolulu, HI 96813

Attention: Mr. Robert Chun

Subject: 1Waikiki Hotel
Honolulu, Oahu, Hawaii
TMK's: 2-6-006: 001 & 004

Dear Mr. Chun:

Wilson Okamoto Corporation is the civil engineering consultant performing a due diligence study for the proposed 1Waikiki hotel in Waikiki. The total project site is approximately 28,761 square feet and is located at 2055/2057A Kalakaua Avenue. The project site is identified by Tax Map Key's: 2-6-006: 001 & 004 (See attached TMK Map).

At this time we would like to request your assistance in determining the adequacy of the existing BWS storage and water distribution system in the vicinity of the project site to support the proposed project. The existing project site is currently occupied by the now closed Kyo-ya Restaurant. The project proposes to demolish the existing structures on the property and build a 154 unit hotel that includes a restaurant, bar, pool & fitness area, concierge & café, and basement parking area.

The hotel floor level descriptions and area are as follows:

Levels	Floor Area
Level 26 (Wedding Chapel & Bar or Penthouse Unit)	3,800 sf or 3,524 sf
Levels 4-25 (Hotel Units)	106,964 sf (Total All Levels)
Level 3 (Lobby & Restaurant)	4,862 sf
Level 2 (Pool & Fitness)	3,850 sf
Level 1 (Concierge & Café)	3,850 sf
Total	123,326 sf or 123,050 sf

In addition to your review of the existing water system, we would like to obtain pressure and flow information for 2 existing fire hydrants located in the vicinity of the project site. The hydrant numbers are M01057 and M01048. (See attached BWS System Map).

Please call 946-2277 should you have any questions or require additional information.

Sincerely:

Lane Saito, P.E.
Project Engineer

Enclosures: TMK map
BWS System Map

PLAT 15

KŪHIŌ AVENUE

PLAT 16

KALĀKAUA AVENUE

TRUE NORTH
Scale: 1 in. = 20 ft.

1721 App.

"LUANA WAIKIKI"

C.

19,243 sf

L

3

26,164 sf

2

U.S. MILITARY RESERVATION (FORT DE RUSSEY) BOUNDARY

A

DETECTOR CHECK METER
ESMT "A" [200 sf]

(8400 sf)

B

11,504 sf
(3104 sf)

17,257 sf

4

1

PLAT 05

LC APP 762 Map 2, LC APP 857 Map 2 and LC APP 1721 Map 1; HONOLULU, OAHU, HAWAII.

Date: 05/07/2014

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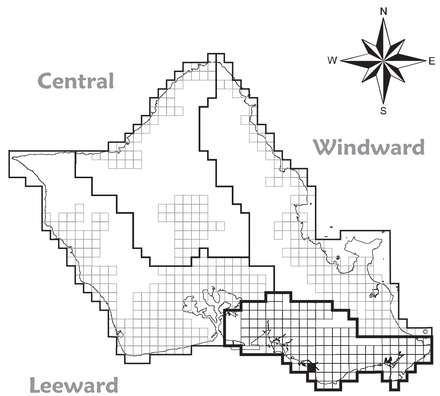
DEPARTMENT OF BUDGET & FISCAL SERVICES
REAL PROPERTY ASSESSMENT DIVISION
TAX MAPS BRANCH
CITY & COUNTY OF HONOLULU
TAX MAP

FIRST TAXATION DIVISION

ZONE	SECTION	PLAT
2	6	006

SCALE: 1 INCH = 20 FEET

Tile: R38C46 (Metro)



LEGEND

WATER MAIN TYPES
- Service
- Bypass
- Distribution
- Lateral
- Maintenance
- Transmission
- Private
- Non-Potable

PIPE CASINGS
- Concrete Jacket over DI pipe
- Pipeline Tunnel

MISCELLANEOUS
- Building Footprint
- Facility
- Inset Frame
- Stream Centerline

MATERIALS

AC	ASBESTOS CEMENT
AC-JM	AC-JOHNS MANSVILLE
AC-KM	AC-KEASBEY MATTISON
CC	CONCRETE CYLINDER
CC-A	CC-AMERICAN
CC-H	CC-HAWAII
CC-S	CC-SOUTHERN
CI	CAST IRON
CU	COPPER
DI	DUCTILE IRON
GI	GALVANIZED IRON
PVC	POLYVINYL CHLORIDE
STL	STEEL
CP	CATHODIC PROTECTION
NP	NON-POTABLE

BILLING METERS
- CM Compound
- DC Detector Check
- FM FM
- Unknown

FITTINGS
- Cut & Plug
- Emergency Connection
- Flow Tube
- Reducer
- Transition Coupling

FIRE HYDRANT
- Fire Hydrant
- 99 No Fire Hydrant Number

OPERATIONAL METERS
- FL Flow
- MS Master
- TUR Turbine
- Unknown
- Venturi

PUMPS
- Lift
- Line
- Source

RESERVOIR
- Reservoir

SOURCES
- Shaft
- Source Well
- Spring
- Tunnel
- Unknown

VALVES
- Air Release
- Air Release BFV
- Air Release BGGV
- Air Release Gate
- Altitude
- Backflow Preventor
- Bevel Gear Gate
- Butterfly
- Check
- Closed
- Control
- English
- Flap
- Float
- Gate
- Pressure Reducing
- Pressure Relief
- Pressure Sustaining
- Solenoid Control
- Spur Gear Gate
- Square Bottom Bevel Gear
- Stopcock
- Tapping
- Unknown

WATER TREATMENT PLANTS
- Aeration
- Blender
- Chlorination
- GAC
- Recycled Water Facility
- Sand Filtration

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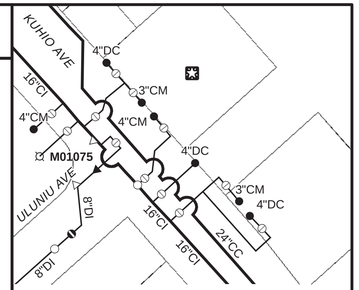
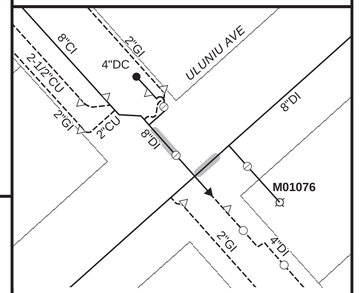
This map is a schematic representation of the water distribution system. Some features have been exaggerated for clarity & may not be to scale.

Revisions as of: 4/28/2006



INSET A



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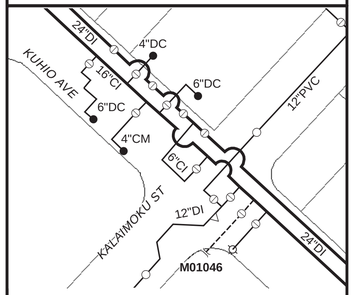

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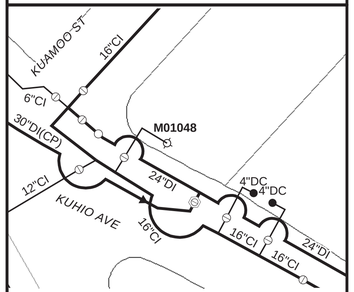
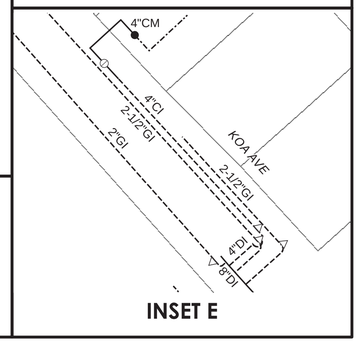


INSET D



INSET E

LS

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

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ADAM C. WONG, Vice Chair
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KAPUA SPROAT

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FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

June 23, 2015

RECEIVED
JUN 29 2015
WILSON OKAMOTO CORPORATION

Mr. Lane Saito
Wilson Okamoto Corporation
1907 South Beretania Street, Suite 400
Honolulu, Hawaii 96826

Dear Mr. Saito:

Subject: Your Letter Dated June 16, 2015 Requesting the Availability of Water and Fire Flow Data to the Proposed 1 Waikiki Hotel on Kalakaua Avenue - Tax Map Key: 2-6-006: 001, 004

Thank you for your letter regarding the proposed 154-unit high-rise hotel and commercial development.

The existing water system cannot provide adequate fire protection to the proposed development in Kalakaua Avenue. Our Water System Standards require a fire hydrant to be located within 125 linear feet of high-rise hotel development and provide a flow of 4000 gallons per minute in the Waikiki area. The nearest fire hydrant is located approximately 295 linear feet away from the parcel. Therefore, the developer will be required to install a fire hydrant on Kalakaua Avenue within 125 linear feet of the parcels. The construction drawings should be submitted for our approval. However, please be advised that this information is based upon current data, and information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

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

High-Rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

Water conservation measures are required for all proposed developments. These measures include low flow plumbing fixtures, utilization of nonpotable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xerscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

The Board of Water Supply has suspended fire flow tests on fire hydrants as a water conservation measure. However, you may use the following calculated flow data for the following fire hydrants:

Fire Hydrant Number	Location	Static Pressure (psi)	Residual Pressure (psi)	Flow (gpm)
M-01057	Kalakaua Avenue	76	26	4000
M-01048	Kuhio Avenue	76	36	4000

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

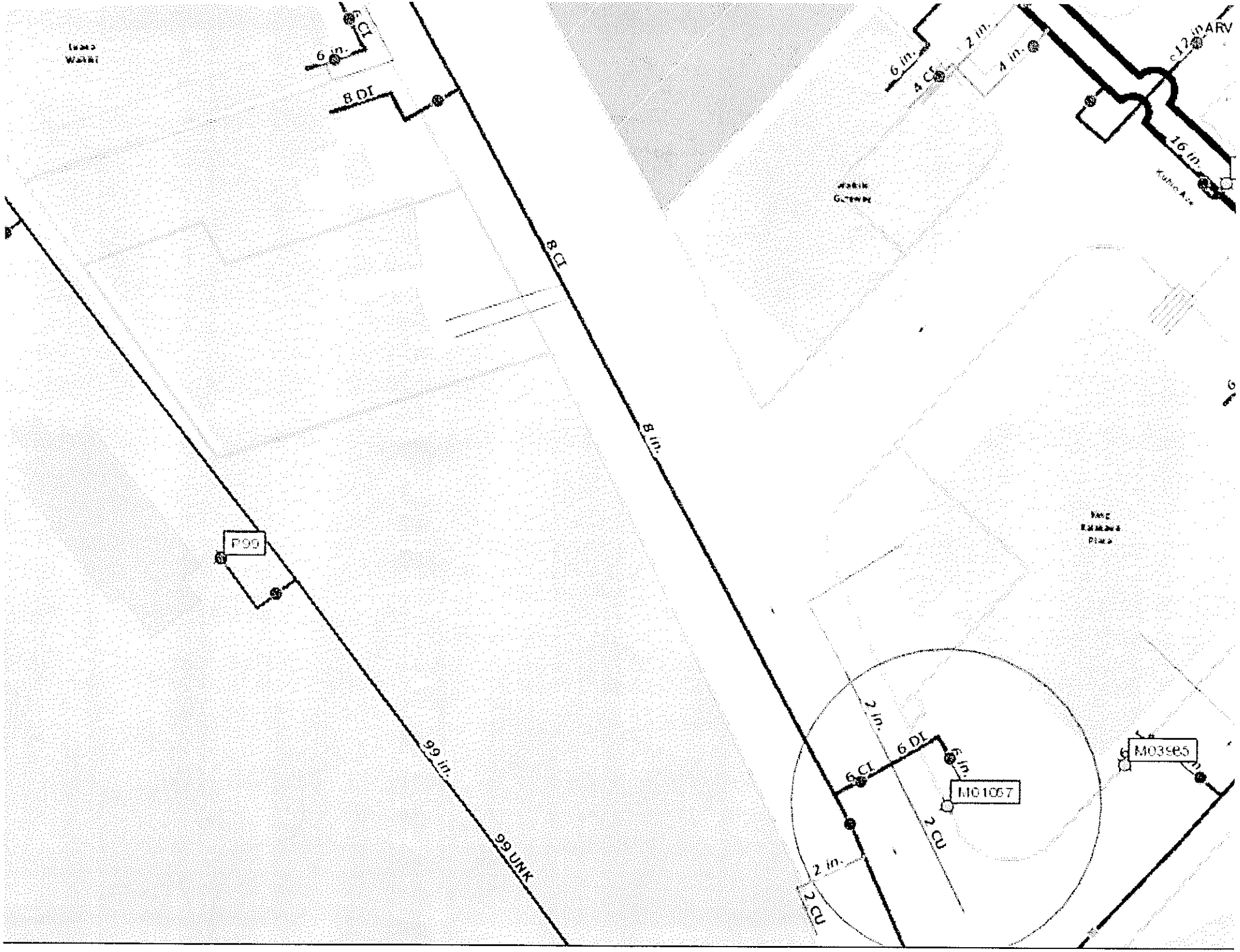
The maps showing the location of the fire hydrants are attached.

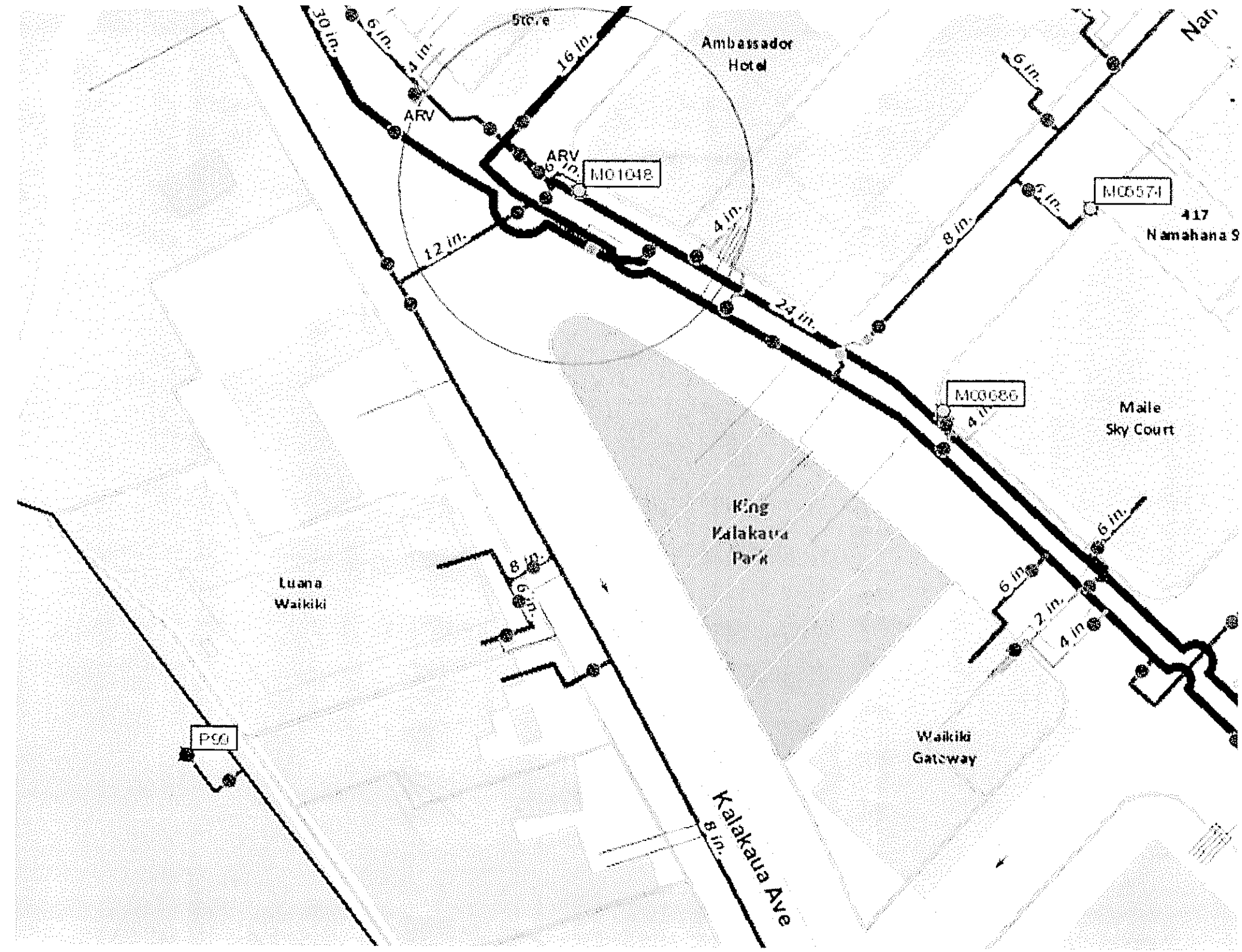
If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

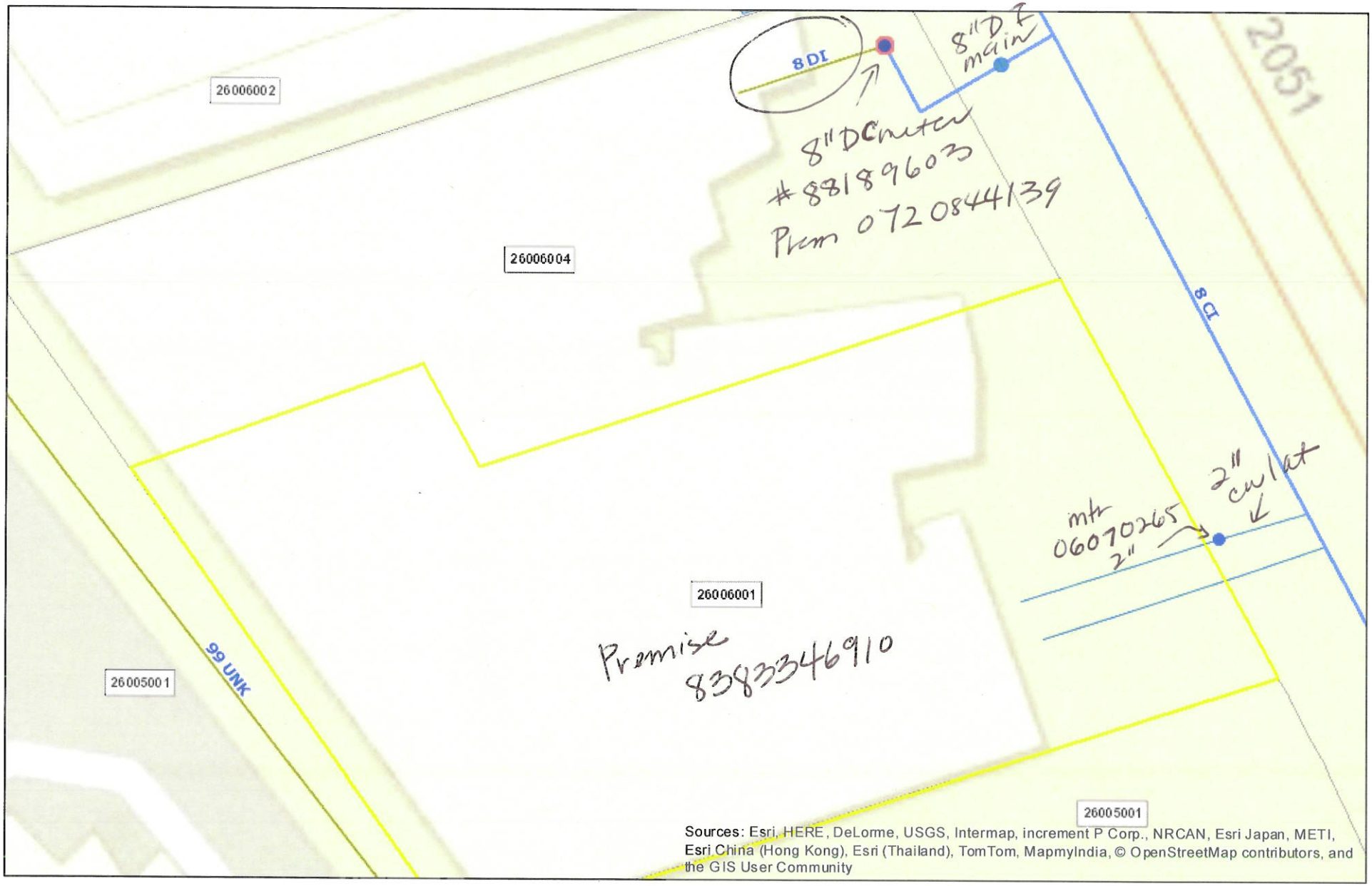
Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

Attachment


6 in.
6 CI
8 DI
8 CI
8 in.
6 in.
6 CI
2 in.
4 in.
12 in ARV
16 in.
P99
99 in.
99 UNK
2 in.
6 DI
6 in.
6 CL
M01067
2 CU
2 in.
2 CU
M03985


Ambassador Hotel
ARV
ARV
M01048
M00574
M00086
417
Namahana S
Maile Sky Court
King Kalakaua Park
Luana Waikiki
Waikiki Gateway
P90
Kalakaua Ave
30 in.
6 in.
4 in.
16 in.
12 in.
4 in.
24 in.
8 in.
6 in.
6 in.
6 in.
8 in.
6 in.
6 in.
2 in.
4 in.
8 in.



Honolulu Board of Water Supply
City and County of Honolulu

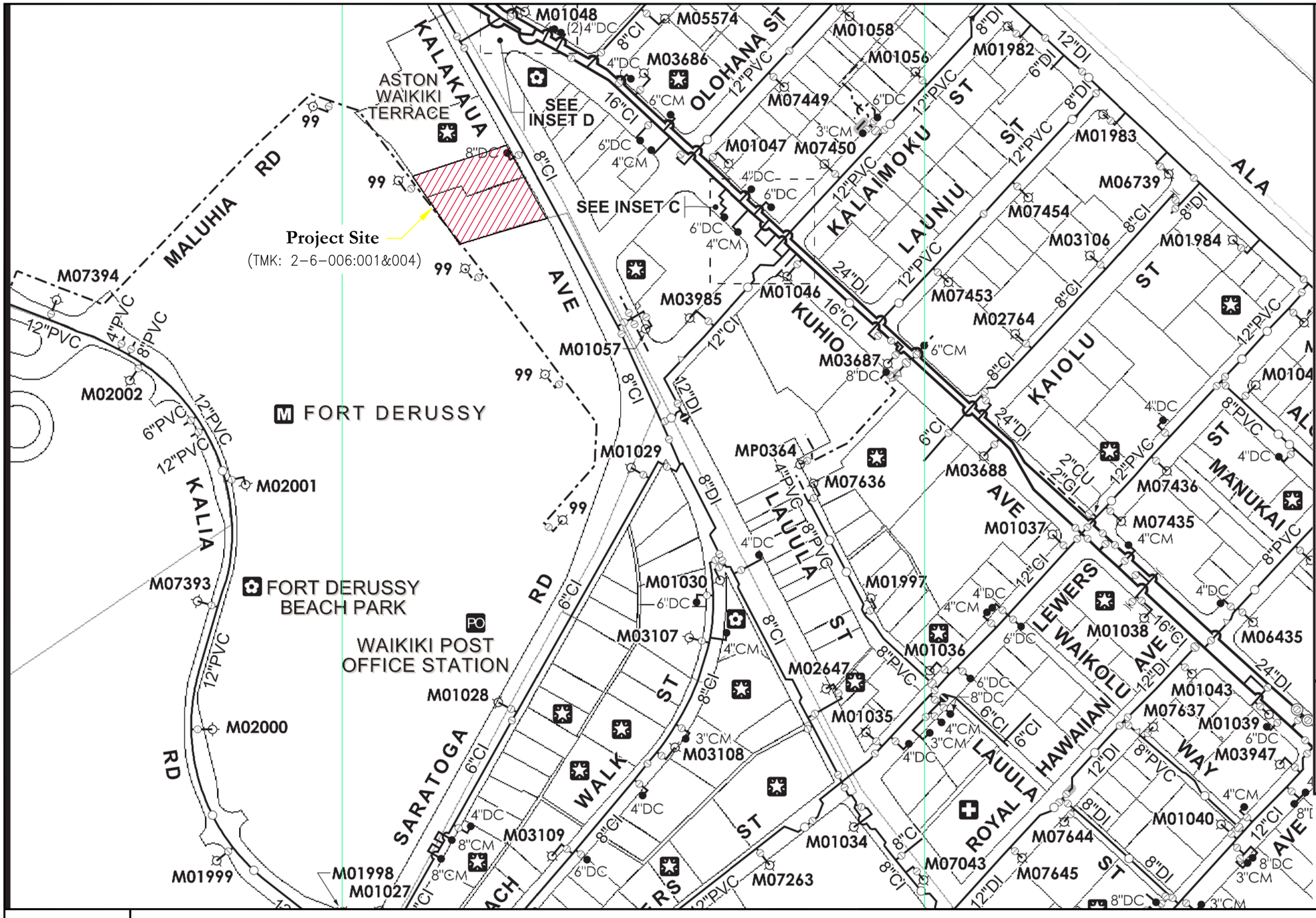
Printed By: KSHIGENAGA

June 17, 2015

1:352

0 0.00275 0.0055 0.011 mi

0 0.0045 0.009 0.018 km



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- Stopcock
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WATER TREATMENT PLANTS
- Aeration
- Blender
- Chlorination
- GAC
- Recycled Water Facility
- Sand Filtration

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This map is a schematic representation of the water distribution system. Some features have been exaggerated for clarity & may not be to scale.

Revisions as of: 4/28/2006

GRAPHIC SCALE:

0 100 200 400 Feet

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

PARK KALIA - WAIKIKI DUE DILIGENCE
HONOLULU, OAHU, HAWAII

BWS FACILITY SYSTEMS MAP

Appendix C

Site Grading, Runoff, and Storm Drainage System Information

Site Reconnaissance Photos

PHOTO 1: EXISTING SIDEWALK FRONTING THE PROJECT SITE. DEPRESSED SIDEWALK AREA IS ADJACENT TO EXISTING TREE ALONG CURB LINE

PHOTO 2: DEPRESSED SIDEWALK AREA.

WILSON OKAMOTO CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

PARK KALIA - WAIKIKI DUE DILIGENCE
HONOLULU, OAHU, HAWAII

SITE GRADING, FLOODING, AND STORM DRAINAGE SYSTEM
SITE RECONNAISANCE PHOTOS

PHOTO 3: TRENCH DRAIN IN DEPRESSED AREA.

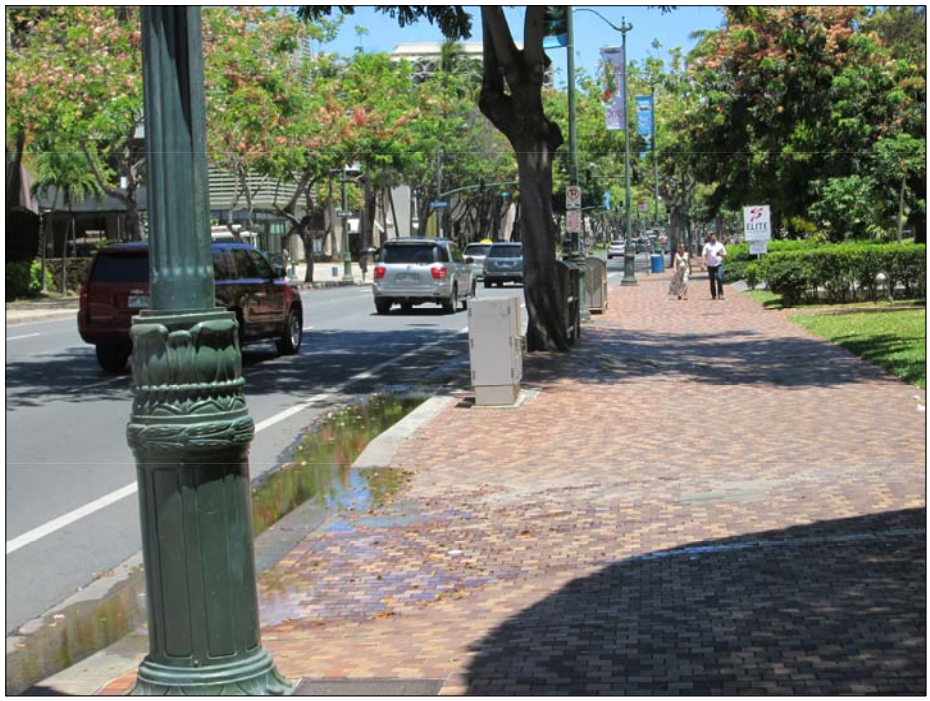

PHOTO 4: PONDING IN GUTTER.

Appendix D

Traffic Information

Email Correspondence with Mel Hirayama, DPP, TRB

Lane Saito

From: Hirayama, Mel J. <mhirayama@honolulu.gov>
Sent: Thursday, June 25, 2015 5:03 PM
To: Lane Saito
Cc: Matt Fujioka; Watanabe, Lance K.; Patterson, Jack R.; Uechi, Rika
Subject: RE: ONE Waikiki Hotel Project - TRB Inquiry
Attachments: OneWaikiki_Concept.pdf

Lane…

As part of the WSD, in addition to the TIAR, there will be a condition to prepare a construction management plan and a traffic management plan (TMP). The TMP will need to take into consideration other modes of travel, which will include bike and pedestrian. A pedestrian access to the rear of the property will need to be considered. At this time, it will probably be controlled by a gate requiring guests to have a card to get access. A location for bicycle parking will also need to be provided, primarily for employees. Also, include transit incentives. For the wedding, is this for guest only or will locals be able to participate. Question is: if there is enough parking for a local event.

The other standard comments are driveway grade, max 5%, sight distance and recessing any gates. The ped connection at Kalakaua Avenue is good with the splitter in the walkway to the public sidewalk.

Lance/Jack/Rika… any comments?

Mel H. – TRB

From: Lane Saito [mailto:lsaito@wilsonokamoto.com]
Sent: Tuesday, June 23, 2015 10:32 AM
To: Hirayama, Mel J.
Cc: Matt Fujioka; Watanabe, Lance K.
Subject: ONE Waikiki Hotel Project - TRB Inquiry

Mel,

I have a couple of questions for TRB regarding City ROW improvements that could potentially be required for the proposed ONE Waikiki condo-hotel project. Please see attached pdfs for TMK Map, Project Location Map, and Conceptual Plan Layout and Information for your reference.

Project Summary:

The project site is located at 2055/2057A Kalakaua Avenue at the now closed Kyo-ya restauarant site identified by TMKs: 2-6-006: 001& 004. The conceptual project plan is still in the works but at this time proposes to demolish the existing on-site structures and construct a 27 floor "5-star" condo-hotel named ONE Waikiki that includes 180 units, pool, fitness area, bar and lounge area, penthouse floor level wedding chapel, and restaurant (only planned function open to the public). An underground parking garage of 55 stalls (1 car per 4 units) will be provided for the facility. The porte cochere and underground parking garage entrance and exit layouts are shown in the attached conceptual plan layout. The new development will utilize the existing site driveway apron and location. Pedestrian access to the new development will be provided by three sidewalk connections along the Kalakaua Avenue frontage. A TIAR is currently being prepared for the project.

Questions for TRB:

1. At this time, besides work incidental to utility and sidewalk connection installation does TRB anticipate any frontage improvements that may be required along Kalakaua Avenue, in the City ROW, due to the project (add turning lane into site, road widening, sidewalk widening)? Kalakaua Avenue fronting the site is a one-way four lane road with a bike lane. The site is located between the Kalakaua/Kuhio Ave split and Olohana Street.

2. Any other improvements that TRB may require due to the proposed project?

Please let me know if you have any questions.

Thank you for your help,

Lane Saito, P.E.
Project Engineer

WILSON OKAMOTO
CORPORATION
ENGINEERS | PLANNERS | CONSULTANTS

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Park Kalia - Waikiki

Honolulu, Hawaii

Pedestrian Wind Assessment

RWDI # 1502433
November 17, 2015

SUBMITTED TO

Tsukada Global Holdings, Inc.

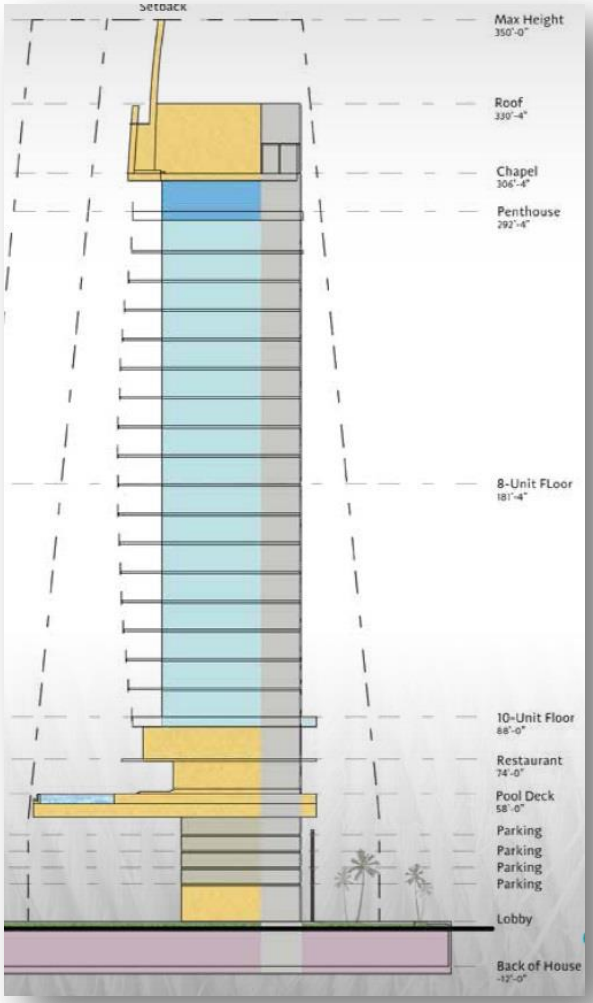
c/o:
Mark Higa
WCIT Architecture
725 Kapiolani Blvd, #400
Honolulu, HI 96813
Tel: 808-592-2345
Mhiga@wcitarch.com

SUBMITTED BY

Rowan Williams Davies & Irwin Inc.
650 Woodlawn Road West
Guelph, Ontario, Canada N1K 1B8
519.823.1311

Hanqing Wu, Ph.D., P.Eng.
Principal / Technical Director
Hanqing.Wu@rwdi.com

Mark A. Hunter, C.E.T.
Principal / Senior Project Manager
Mark.Hunter@rwdi.com



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1. INTRODUCTION

Rowan Williams Davies & Irwin Inc. (RWDI) was retained by Tsukada Global Holdings, Inc. to assess the pedestrian wind comfort conditions for the proposed Park Kalia development in Honolulu, Hawaii (see Image 1 and cover page).

The objective of this assessment is to provide a qualitative evaluation of pedestrian wind comfort conditions around the proposed development. Conceptual mitigation measures to improve wind comfort conditions have been recommended, where necessary. This qualitative assessment is based on the following:

- a review of regional long-term meteorological data;
- A preliminary design presentation dated November 13, 2015;
- our engineering judgement and knowledge of wind flows around buildings[1-3];
- our experience of wind-tunnel testing of various buildings, including recent projects in the Honolulu area; and,
- use of software developed by RWDI (Windestimator[2]) for estimating the potential wind conditions around generalized building forms.

This qualitative approach provides a screening-level estimation of potential wind conditions. The conceptual wind control measures are derived from the predicted wind conditions and our understanding of the available design details. To quantify these conditions or refine any conceptual mitigation measures, physical scale model tests would be required at a later design stage.

The assessment on potential wind-induced cladding loads is presented in a separate report.

Image 1 - Aerial View of Existing Site and Surroundings
(*Image Courtesy of Google earth™*)

1. H. Wu and F. Kriksic (2012). "Designing for Pedestrian Comfort in Response to Local Climate", *Journal of Wind Engineering and Industrial Aerodynamics*, vol.104-106, pp.397-407.
2. H. Wu, C.J. Williams, H.A. Baker and W.F. Waechter (2004), "Knowledge-based Desk-Top Analysis of Pedestrian Wind Conditions", *ASCE Structure Congress 2004,* Nashville, Tennessee.
3. C.J. Williams, H. Wu, W.F. Waechter and H.A. Baker (1999), "Experience with Remedial Solutions to Control Pedestrian Wind Problems", *10th International Conference on Wind Engineering*, Copenhagen, Denmark.

2. BUILDING AND SITE INFORMATION

The proposed development is located on the southwest side of Kalakaua Avenue, adjacent to the existing 17-story Outrigger Luana Waikiki Building in Honolulu, Hawaii (Image 1). Currently, the site is occupied by a low-rise building and surrounded by parks to the south through west. Dense buildings exist across Kalakaua Avenue and they will provide sheltering for the development from the prevailing winds blowing from the northeast and east-northeast directions, as shown in Image 2.

The proposed development consists of a 330 ft tower of 26 stories with a slender geometry and curvilinear facade (cover page and Image 3 below and Image 4 on the next page). The tower is "streamlined" in an east-west direction. Considerable landscaping has been proposed around the building.

Outdoor pedestrian areas include sidewalks along Kalakaua Avenue, the pick-up/drop-off for the auto court, the landscaped lobby/concierge with water features at the grade level (Image 3), plus above-ground (a) pool and pool deck, (b) dining lanais, (c and d) balconies at each unit floor and (e) penthouse pools (Image 4).

Image 2 – Tall Surrounding Buildings
(*Image Courtesy of Google earth™*)

Image 3 – Park Level Plan

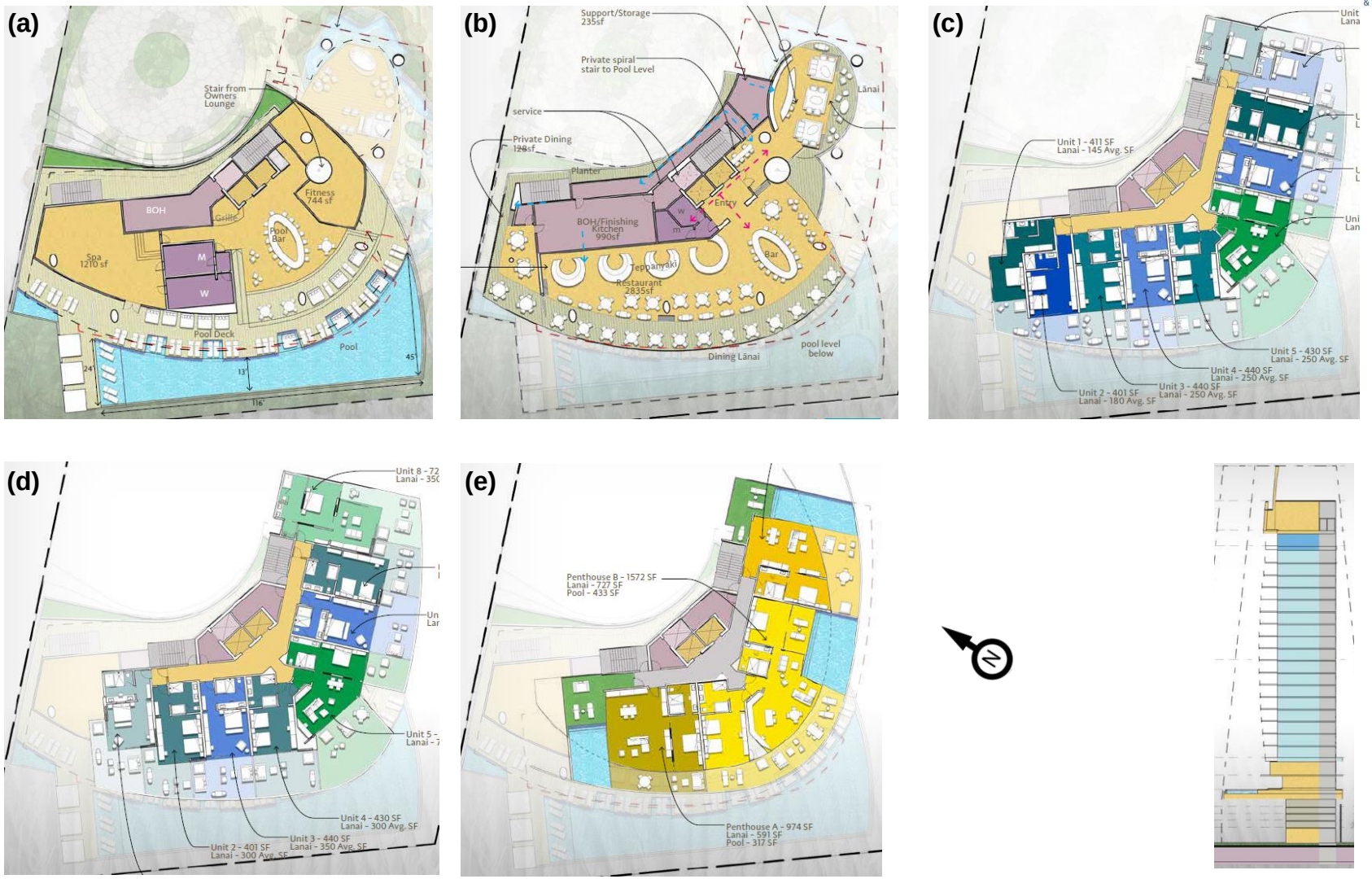
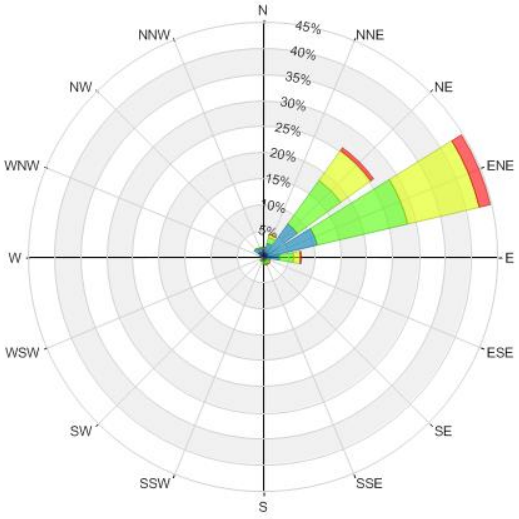


Image 4 – Floor Plans at (a) Pool Level, Restaurant Level, (c) Lower Tower Levels, (d) Upper Tower Levels and (e) Penthouse Level

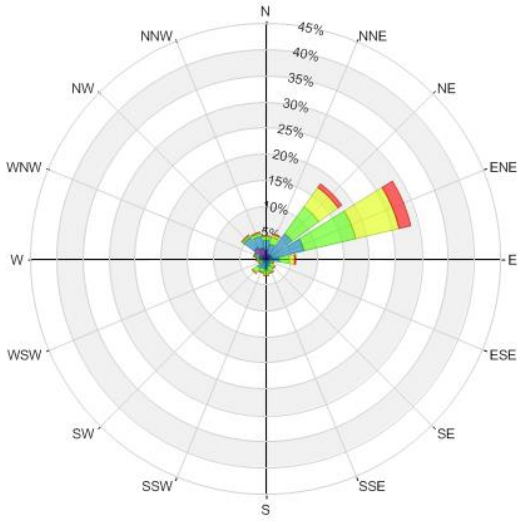
3. METEOROLOGICAL DATA

Meteorological data from Honolulu International Airport, for the period 1980 to 2009, was used as a reference for wind conditions in the area. The distributions of wind frequency and directionality for the summer (May through October) and winter (November through April) seasons are shown in Image 5 below. When all data is considered, winds from the northeast and east-northeast directions are predominant in the summer and winter seasons.

Strong winds of a mean speed greater than 15 mph measured at the airport occur for 26.7% and 20.7% of the time during the summer and winter seasons, respectively. Strong northeast and east-northeasterly winds are prevalent in the summer and winter (yellow and red colours). Winds from these directions potentially could be the source of uncomfortable or even severe wind conditions, depending upon the site exposure or development design.



Summer Winds (May to October)



Winter Winds (November to April)

Wind Speed (mph)	Probability (%) Summer	Winter
Calm	2.9	6.1
1-5	8.2	14.5
6-10	27.4	31.9
11-15	34.7	26.9
16-20	23.6	16.8
>20	3.1	3.9

Image 5 – Directional Distribution (%) of Winds (Blowing From)
Honolulu International Airport (1980-2009)

4. EXPLANATION OF WIND CRITERIA

The RWDI pedestrian wind criteria are used in the current study. These criteria have been developed by RWDI through research and consulting practice since 1974. They have also been widely accepted by municipal authorities as well as by the building design and city planning community.

Sitting: Calm or light breezes desired for outdoor restaurants and seating areas where one can read a paper without having it blown away.

Standing: Gentle breezes suitable for main building entrances and bus stops.

Strolling: Moderate winds that would be appropriate for window shopping and strolling along a downtown street, plaza or park.

Walking: Relatively high speeds that can be tolerated if one's objective is to walk, run or cycle without lingering.

Wind conditions are considered suitable for sitting, standing or walking if the wind speeds are expected for at least four out of five days (80% of the time). An **uncomfortable** designation means that the criterion for walking is not satisfied.

Safety is also considered by the criteria and is associated with excessive gust wind speeds that can adversely affect a pedestrian's balance and footing. If winds sufficient to affect a person's balance occur more than 0.1% of the time, the wind conditions are considered severe. Wind control measures are typically required at locations where winds are rated as uncomfortable or they exceed the wind safety criterion.

These criteria for wind forces represent average wind tolerance. They are sometimes subjective and regional differences in wind climate and thermal conditions as well as variations in age, health, clothing, etc. can also affect people's perception of the wind climate.

For the current development, wind speeds comfortable for walking or strolling are appropriate for sidewalks; lower wind speeds comfortable for standing are required for the entrance area, where pedestrians may linger. Low wind speeds comfortable for sitting are desired for outdoor seating areas, pool decks and balconies; however, standing conditions are generally accepted, as a breeze is often considered pleasant in a warmer climate, such as that found in Honolulu.

5. PEDESTRIAN WIND CONDITIONS

5.1 Background

Predicting wind speeds and occurrence frequencies is complicated. It involves building geometry, orientation, position and height of surrounding buildings, upstream terrain and the local wind climate. Over the years, RWDI has conducted more than 2,500 wind-tunnel model studies on pedestrian wind conditions around buildings, yielding a broad knowledge base. This knowledge has been incorporated into RWDI's proprietary software that allows, in many situations, for a qualitative, screening-level numerical estimation of pedestrian wind conditions without wind tunnel testing.

The proposed building is taller than its immediate surroundings and, therefore, exposed to the prevailing winds. Tall buildings tend to intercept the stronger winds at higher elevations and redirect them down to the ground level. Such a downwashing flow (see Image 6a) is the main cause for increased wind activity around tall buildings at the grade level. When two buildings are situated side by side, wind flow tends to accelerate through the space between the buildings due to the Channeling Effect (Image 6b). If these building/wind combinations occur for prevailing winds, there is a greater potential for increased wind activity.

For the current project, dense tall buildings exist in the area between Kalakaua Avenue and Ala Wai Canal and they provide sheltering for the proposed tower from the prevailing east-northeast and northeast winds (Images 1, 2 and 5). The slender geometry and curved tower corners (Images 3 and 4) promote horizontal flows and reduce the potential of downwashing winds. In addition, the proposed dense landscaping is also positive in reducing the wind activity at grade.

Overall, it is our opinion that the wind safety criterion will be satisfied throughout the year on and around the development. Detailed discussions on the potential wind comfort conditions at key pedestrian areas are provided in the following sections.

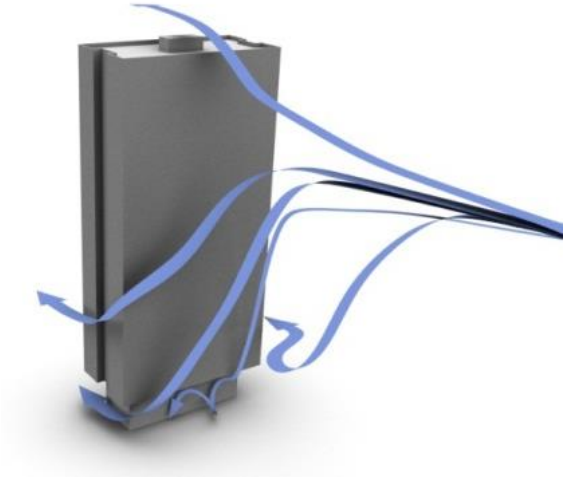


Image 6a – Downwashing Flow

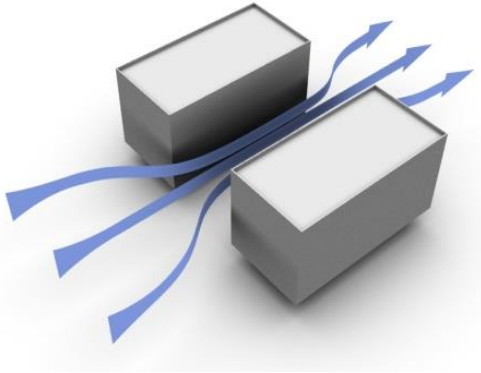


Image 6b - Channeling Effect

5.2 Ground-level Areas

Due to the location of the proposed tower and local wind directionality, wind conditions on public sidewalks along Kalakaua Avenue, including the entry area to the nearby Outrigger Luana Waikiki Building, will not be affected by the proposed development.

The proposed landscaping (Image 7) is a positive design feature for wind control. However, the proposed tower will deflect winds down to the grade level and winds may accelerate between and under trees. As a result, the overall conditions at grade are expected to be comfortable for strolling or walking, but not suitable for passive pedestrian activities such as sitting or standing.

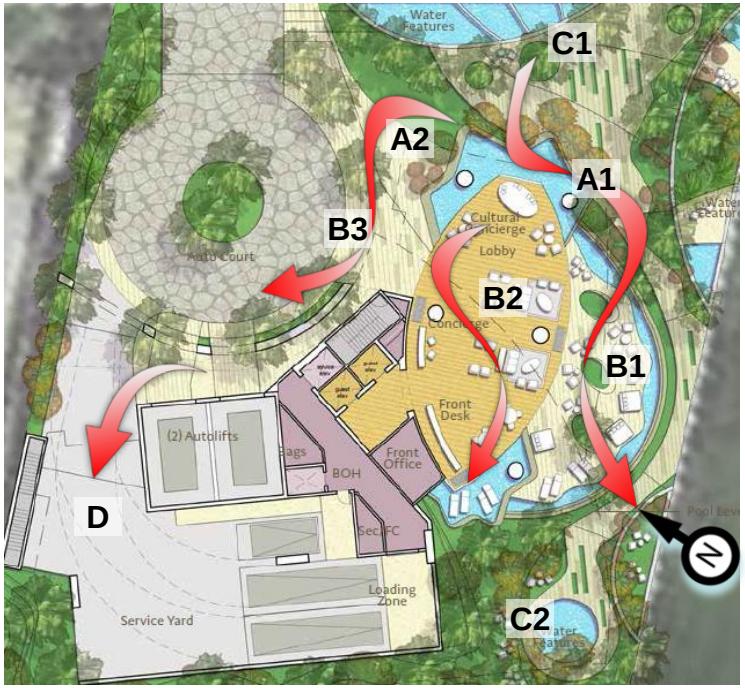


Image 7 – Ground Level Plan

For instance, the highest wind activity on site is predicted to occur around and under the two exposed tower corners (A1 and A2 in Image 7). These wind flows will then accelerate into the outdoor seating, the main lobby and the potential pick-up/drop-off areas (B1, B2 and B3, respectively, in Image 7).

In addition, wind conditions around the water feature and garden area along Kalakaua Avenue (C1) are expected not to be affected by the proposed development, while lower wind speeds are predicted in the garden area at the west end (C2), due to protection offered by the proposed dense landscaping.

The service yard (D) would be windy, if this area is not fully enclosed along the west and north perimeter and by a roof. However, this is not of a concern due to limited public usage of the area.

The potential wind problems at grade may be caused by a combination of horizontal and vertical winds. Therefore, wind mitigation should include both vertical and horizontal components. It is recommended to:

- Refine the landscaping design to include dense under plantings in the east garden along Kalakaua Avenue (C1) and large, dense canopy-type trees at the tower corners (A1 and A2);
- If needed, install glass screens or landscaping on the east side of outdoor seating areas, main lobby and pick-up/drop-off areas (B1 to B3), where patrons are more likely to linger; and
- If feasible louver-type trellises and screens can also be considered underneath the tower and between structural columns to reduce wind energy.

Photos in Image 8 on the next page are wind mitigation examples for consideration. Wind tunnel tests should be conducted at a later design stage to determine the wind conditions and to evaluate the effectiveness of these mitigation strategies.

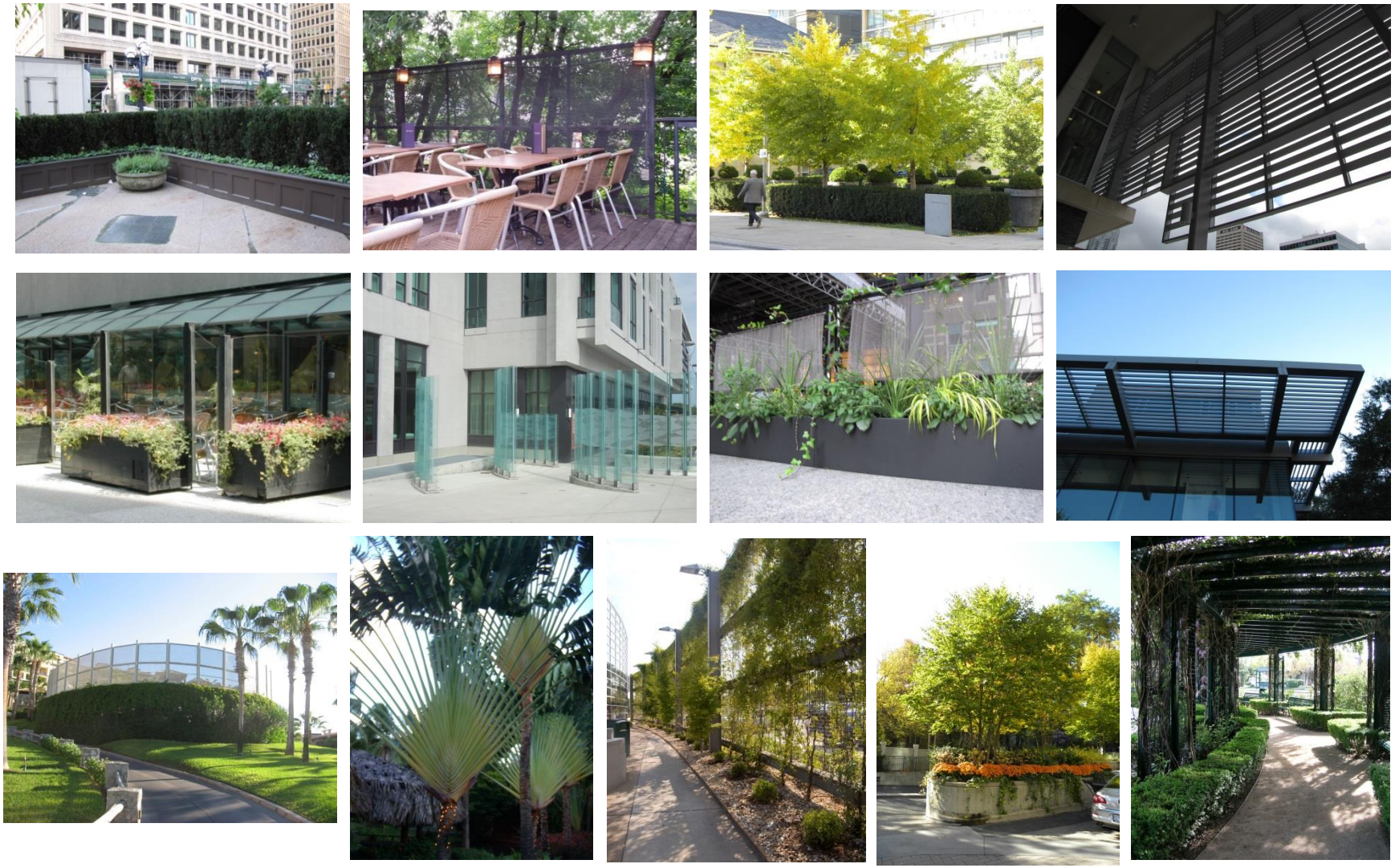


Image 8 – Wind Control Examples for Outdoor Areas at Grade

5.4 Above-Ground Areas

As shown in Image 4, the proposed development includes swimming pools, dining lanais and balconies at various levels. These areas are primarily located on the west side of the tower and, therefore, largely sheltered by the proposed structure from the prevailing east-northeast and northeast winds. Wind conditions are predicted to be suitable for sitting or standing in these areas in general and they are considered appropriate.

Exceptions are those areas close to the exposed east and north corners of the tower, where higher wind speeds are expected due to exposure. If lower wind activity is desired for the above-ground outdoor areas, tall parapets or wind screens should be considered as shown by red lines in Image 10.

These parapets/screens should be at least 8 ft in height. While a screen of approximately 70% solid has the optimal wind control effect in both speed reduction and protection distance, a 100% solid wall is also effective for the current project due to the local wind direction and generally small balconies and pools at upper levels. Image 11 includes three photos for reference.

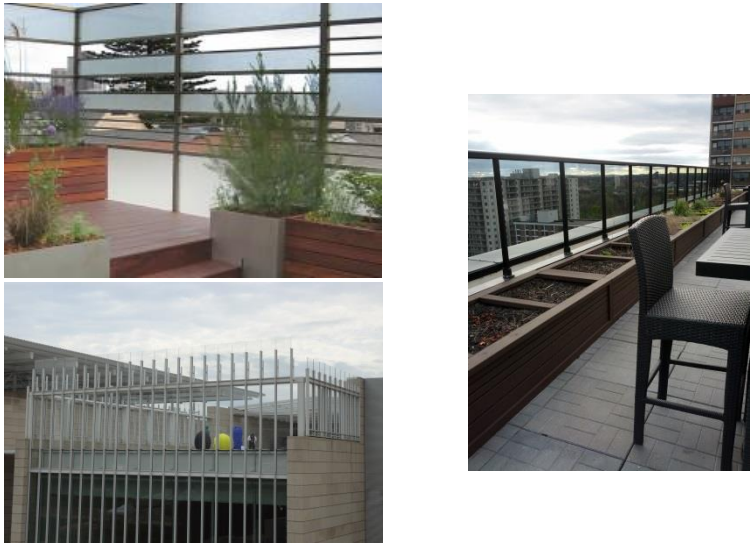


Image 11 – Examples of Tall Parapets and Screens

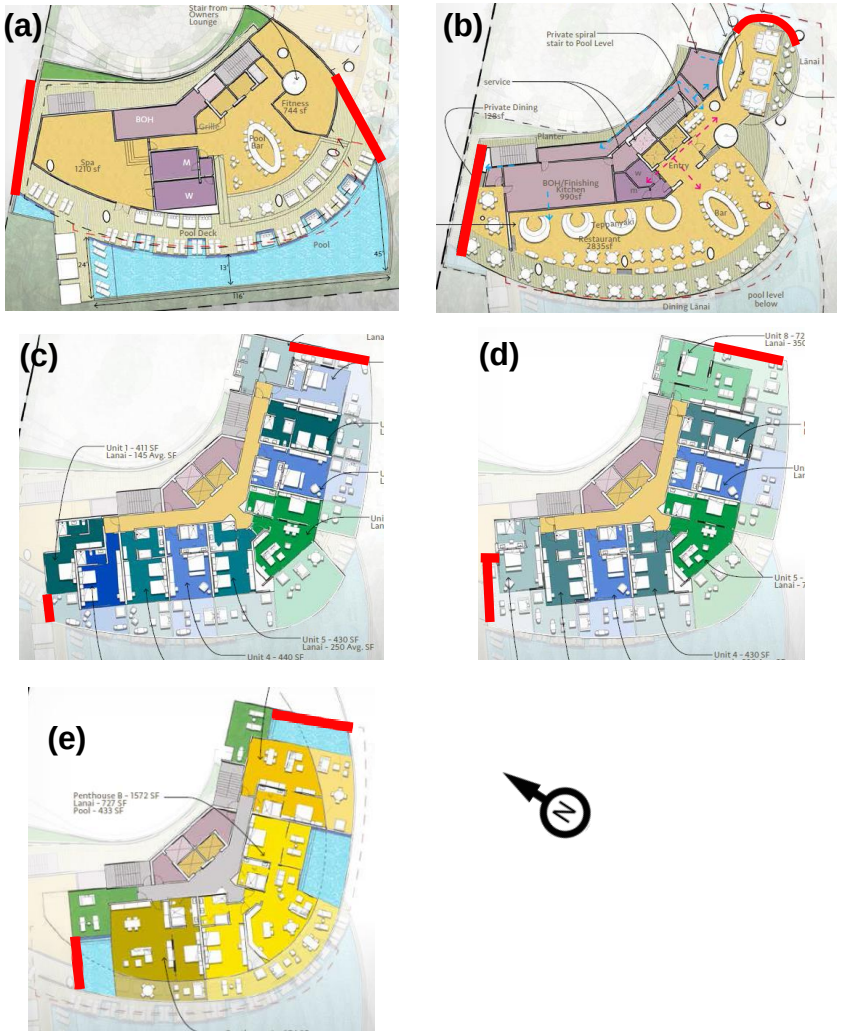


Image 10 – Tall Parapets/screens Wind Control Measures for above-ground Areas

6. SUMMARY

The proposed development includes several positive design features for wind control, such as slender shape, curved tower corners and dense landscaping. The existing tall buildings across Kalakaua Avenue also provide sheltering for the proposed tower from the prevailing winds. As a result, the proposed development is not expected to create negative wind impact on public sidewalks along Kalakaua Avenue, including the area in front of the Outrigger Luana Waikiki Building.

While the future wind speeds are predicted to be generally suitable for strolling or walking, they are higher than desired for outdoor seating or standing in the gardens, main lobby and pick-up-drop-off area. Wind control solutions are presented to reduce both the horizontal and vertical winds, and photo examples are provided for reference.

Additional wind control suggestions are also provided for the exposed above-ground pool decks and balconies, where higher-than-desired wind speeds may occur in localized areas.

Wind tunnel tests should be conducted at a later design stage to quantify the wind conditions and to evaluate the effectiveness of wind mitigation strategies.

7. APPLICABILITY OF RESULTS

In the event of any significant changes to the design, construction or operation of the building or addition of surroundings in the future, RWDI could provide an assessment of their impact on the design considered in this report. It is the responsibility of others to contact RWDI to initiate this process.

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DRAFT REGULAR MEETING MINUTES
TUESDAY, SEPTEMBER 8, 2015
WAIKIKI COMMUNITY CENTER

CALL TO ORDER: Chair Robert Finley called the meeting to order at 7:00 p.m. **with a quorum of 14 members present**. Note: This 17-member Board requires nine (9) members to establish quorum and to take official Board action.

Board Members Present: Jermel Anderson, Jeff Apaka, David Benson, Helen Carroll, Paul Ciliano (Appointed at this meeting) Louis Erteschik, Robert Finley, Walt Flood, Jeff Geck, William 'Bill' Lofquist, Jeff Merz, John Nigro, Jim Poole, Patricia Shields, and Mark Smith.

Board Members Absent: Jo-Ann Adams

Guests: Dominic Dias (Board of Water Supply), Deputy Director of the Department of Transportation Services Mark Garrity (Mayor Kirk Caldwell's representative), Representative Tom Brower, Kurt Tsuneyoshi (Councilmember Trevor Ozawa's Office), Lieutenant Dien Shearer (Honolulu Police Department, District 6-Waikiki), Captain Keola Young (Honolulu Fire Department), Dave Moskowitz, Corey Dillman, Rick Egged (Waikiki Improvement Association), Tom Schnell (PBR Hawaii), John B. Williams, David Falls, Kelly Hupp (Hale Koa Hotel/ Fort DeRussy), Sunny Chan, Geoffrey Hill, Raytan Vares, Steve Winter, Richard Schwarts, Kathryn Henski, Ben Sadoski and Joli Tokusato (Unite Here Local 5), Denise Boisheit, Keith Kurahashi (Kusao & Kurahashi Inc.), Mark Harpeman, videographer (DVDmodo), and Jordan Ozaki (Neighborhood Commission Office).

In Memoriam: Chair Finley announced the passing of Assistant Chief of Police Greg Lefcourt. Chair Finley spoke of Assistant Chief Lefcourt's long service to the Board and community. A moment of silence was held.

Resignation: Chair Finley announced the resignation of Janet Grace and thanked her for her service to the Board.

FILLING OF VACANCY IN SUBDISTRICT 2:
Paul Ciliano volunteered to fill the vacancy in Subdistrict 2 and introduced himself. **Apaka nominated Paul Ciliano to fill the vacancy in Subdistrict 2. Ciliano was APPOINTED to fill the vacancy by UNANIMOUS CONSENT (Aye:** Anderson, Apaka, Benson, Carroll, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; **Nay:** None; **Abstain:** None**).**

Neighborhood Assistant Jordan Ozaki administered the Oath of Office to Ciliano. **15 members were present.**

CITY MONTHLY REPORTS:

Honolulu Fire Department (HFD): Captain Keola Young reported the following:

- August 2015 Statistics: There were 4 structure fires, 189 emergency medical calls, 8 search/rescues, and 5 miscellaneous calls.
- Fire Safety Tip: HFD has the following guidelines for senior citizens, which will enable HFD to assist individuals during an emergency: Call 9-1-1 first for any emergency; have a list of medications and medical history available; know where advanced directives are; ensure adequate access for first responders; and ensure that an address is clearly marked and visible.

Honolulu Police Department (HPD): Lieutenant Dien Shearer reported the following:

- July 2015 Statistics: There were 11 robberies, 14 burglaries, 245 thefts, and 32 unauthorized entries into a motor vehicle (UEMV), 40 speeding citations, 741 parking citations, 3 loud muffler citations, and 149 citations and 7 arrests for park closures.
- Road Closure: Kalakaua Avenue from the Waikiki Beach groin to Kapahulu Avenue will be closed on Saturday, September 12, 2015 from 5:00 p.m. until around 10:30 p.m., due to the Hawaii 5-0 Sunset Premiere. Kalakaua Avenue from Lewers Street to Kealohahilani Street will be close on Saturday, September 19, 2015 from 3:00 p.m. to midnight due to the Aloha Week Hoolaulea.

- Mobile Devices: Although weather warnings and alerts may appear on mobile devices, it is against the law to operate a mobile device while driving. Pull over to turn off the alert.

Questions, comments, and concerns followed:

1. Mufflers: Carroll raised concerns about the lack of muffler citations. Smith noted that more citations will help decrease the number of loud mufflers.
2. Abandoned Motorcycle: Flood showed a photo of an abandoned motorcycle on Kalakaua Avenue. Benson also noted he reported the motorcycle to HPD.
3. Hawaiian Monarch Party: Benson noted that the Board received testimony regarding a rooftop party at the Hawaiian Monarch. Lieutenant Shearer noted that HPD responds to all calls. Chair Finley noted that the party was referred to the Liquor Commission as a formal complaint. Erteschik noted that residents may contact the Hawaii Association of Apartment Owners (AOAO) with concerns. Lieutenant Shearer noted that a disorderly conduct violation may be issued in certain daytime situations if the complainant meets the officer on the scene to fill out a report and appear in court.
4. Atkinson Drive: Merz thanked HPD for the continued patrol on Atkinson Drive and Ala Moana Boulevard.
5. Statistics: Lofquist asked and Lieutenant Shearer answered that the crime statistics are comparable to last month's statistics.
6. Safety: Shields raised concerns about safety in Waikiki, noting open containers of alcohol on Kuhio Avenue and syringes found on the sidewalk on Liliuokalani Avenue.
7. Loitering on Private Property: A resident asked and Lieutenant Shearer answered that resident managers or property owners must contact HPD each time in order for HPD to issue trespass warnings on private property. "Blanket" permission is not allowed. Erteschik noted that laws must be changed for stricter trespassing enforcement.

Board of Water Supply (BWS): Dominic Dias reported the following:

- Water Main Breaks: There was a water main break at Paoa Place and Kalia Road.
- Water Emergency Preparedness: Residents should store at least one gallon of water per person per day for at least five (5) to seven (7) days. In the event of an emergency, stay tuned to media reports to receive water information bulletins, and take appropriate actions announced by BWS or other emergency response agencies.

Questions, comments, and concerns followed:

- Kuhio Avenue Project: Flood asked about water work on Kuhio Avenue fronting the Ritz Carlton. Dias noted that the project is a private project, but he will follow up with BWS inspectors.
- Turning off Water: To prevent flooding, Smith commented on the benefit of turning off water before long vacations. Dias agreed that it is a good idea.
- Power Outage Preparation: Poole asked and Dias answered that BWS has a portable back-up generator in the event of a power outage.
- Ala Wai Boulevard: Lofquist raised concerns about lengthy projects along Ala Wai Boulevard.

RESIDENTS' AND COMMUNITY CONCERNS:

- Mopeds: Resident Dave Moskowitz suggested tougher moped laws be adopted.
- Noise: Resident Moskowitz raised concerns about the lack of noise enforcement by the Liquor Commission.
- Waikiki Business Improvement District (WBID) Update Request: Resident Moskowitz asked for an update from the WBID Association.
- Presentation: A resident announced that there will be a presentation on the condominium-hotel project to be built at the property formally known as King's Village on Thursday, October 8, 2015 at 10:30 a.m. at the Mission Memorial Building.

PUBLIC EVENTS: Chair Finley announced the following event: Susan G. Komen Race for the Cure: The Susan G. Komen Race for the Cure charity run will be held on Sunday, October 18, 2015 at Kapiolani Park. More information can be found at www.komenhawaii.org.

ELECTED OFFICIALS:

Mayor Kirk Caldwell's Representative: Deputy Director Mark Garrity circulated the September 2015 City News handout and reported the following:

- Loitering at Nike Town Update: According to David Simpson of Robertson Properties, there is a roving security team from Securitas who are instructed to patrol at 2080 Kalakaua Avenue. They are authorized to issue trespass warnings on behalf of the Robertson Properties. The security team may be contacted at 371-7841.
- Hawaii Prince Hotel Noise Update: Assistant Manager, Mark Nishida noted that trucks to clean the grease trap are called on an as-needed basis. The process takes approximately three (3) hours. The trucks must park on Ala Moana Boulevard and run the hose to the hotel due to the size of the trucks. Nishida can be contacted at 956-1111 and the contractor, Pacific Environmental Solutions, may be contacted at 848-0513.

Questions, comments and concerns followed:

1. Sidewalk Repair Needed: Flood showed Garrity a picture of a section of a sidewalk in need of repair at the intersection of Kapahulu Avenue and Kalakaua Avenue. Rick Egged of the Waikiki Improvement Association (WIA) noted that the sidewalk is scheduled to be repaved.
2. Wastewater Spill: Shields raised concerns about the seven (7) wastewater spills.
3. Ena Road Sidewalk: Benson reported a narrow strip of sidewalk and dirt strip on Ena Road needing to be paved. Garrity noted that the sidewalk area may be under the jurisdiction of the property owner adjacent to the sidewalk.
4. Ala Moana Boulevard Correction: Garrity asked and Chair Finley clarified that repairs on Ala Moana Boulevard to Kalakaua Avenue were causing road closures, not on the previously mentioned Ala Wai Boulevard.
5. Hedge Trimming Needed: Resident Moskowitz reported that a hedge fronting the Modern Honolulu needs trimming and is starting to obstruct the sidewalk.

Governor David Ige's Representative: A representative was not present; a report was not available.

Councilmember Trevor Ozawa: Kurt Tsuneyoshi circulated a handout and reported the following:

- Sewage: Councilmember Ozawa is investigating the recent sewage spills and is committed to holding the City accountable.
- Temporary Trash Bins: Temporary trash bins were installed on the beach fronting the Moana Surfrider and the Royal Hawaiian Hotel. Usage of the bins will be monitored.

Questions, comments and concerns followed: Sewage Spill: Resident Moskowitz raised concerns about the sewage spill, and Tsuneyoshi noted that Councilmember Ozawa is questioning Mayor Caldwell's office.

Representative Tom Brower: Representative Brower distributed a handout and reported the following:

- Written Report: Electric personal mobility devices on sidewalks and homelessness are addressed in the written report.
- Loitering on Private Property: Fences help to deter people from loitering and camping on private property.
- 100-Year Flood: An article about the Ala Wai Canal flood control was published in Civil Beat, naming ways to prevent flooding.

Questions, comments and concerns followed: Homelessness: Erteschik asked about the progress of the new homelessness initiatives. Brower reported that there has been slow but noticeable progress on the issue.

Senator Brickwood Galuteria: Raytan Vares introduced himself and circulated a handout.

Questions, comments and concerns followed: Kupuna Affairs: Chair Finley noted that Senator Galuteria is active in kupuna affairs and asked if there are any upcoming events.

Waikiki Improvement Association (WIA): Rick Egged reported the following:

- Waikiki Special District (WSD) Guidelines: The WSD guidelines rewriting workshop will be held on Thursday, September 17, 2015 at 7:00 p.m. at the Waikiki Community Center.
- Aloha Month: September is "Aloha Month," with many upcoming events in Waikiki including the Aloha Week Hoolaulea and parade.

APPROVAL OF THE August 11, 2015 MINUTES: **The August 11, 2015 regular meeting minutes were APPROVED UNANIMOUSLY, 15-0-0 (Aye:** Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; **Nay:** None; **Abstain:** None**).**

NEW BOARD BUSINESS:

PRESENTATIONS: Chair Finley noted that the Board may take public input and make recommendations per section 2-13-102 of the Neighborhood Plan.

Denny's Kuhio Project: Tom Schnell from PBR Hawaii and Associates presented a diagram of a proposed restaurant at the corner of Kuhio Avenue and Kapahulu Avenue. Schnell noted they are at the preliminary stage of the process and reported the following: The permitted height limit for the property is 220 feet; the proposed project is 24-feet high. It is almost certain that the restaurant will be a Hawaiian themed Denny's restaurant. Proposed design concepts include 200 seats, with 40 outdoor seats, a 40 seat banquet facility, bicycle parking, surf board racks, an outdoor shower, tropical landscaping, sustainable energy features. The main entrance will be on Kapahulu Avenue and there will be 11 parking spaces and a loading zone entrance off Kuhio Avenue. The goal for the project is to create an affordable family-style restaurant for residents and visitors. The environmental assessment (EA) is being prepared and will include a traffic study and engineering report. Environmental pre-consultation reports were sent to area residents. There will be many opportunities for community input.

Questions, comments, and concerns followed:

1. Alcohol: Flood asked and Schnell answered that they are anticipating applying for a liquor license for table service.
2. Denny's Operator: Shields asked and Schnell noted that the operator is a different operator from the Denny's that was previously in the area.
3. Grease Trap: Smith asked and Schnell answered that developers will consider noise from grease trucks and ensure that grease and delivery trucks do not block the roadway.
4. Five Guys: Lofquist suggested that if the deal is not finalized, Five Guys Burger and Fries should be considered.
5. Concerns: Resident Kathryn Henski raised concerns about air conditioner noise, cooking smell, trash, parking capability, and crime. Merz agreed that AC noise should be considered by the developer.
6. Support: A resident commended the landowner for choosing a low-density project. Merz noted thanked Schnell for a thoughtful presentation and applauded the developer for including community features and the use of smart urban design principles. Erteschik noted his support.

Erteschik moved and Smith seconded that the Waikiki Neighborhood Board No. 9 support the concept of the project as currently proposed.

Discussion Followed:

1. Disclosures: Chair Finley asked if there were any disclosures and Flood noted he owns Denny's stock. No conflict was determined.
2. Noise: Smith noted that the developers should be held accountable to use scrubber technology so there is minimum noise in the surrounding area.

The motion PASSED by MAJORITY CONSENT 14-0-1, (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; **Nay:** None; **Abstain:** Flood**).**

One Waikiki Project, Condo Hotel: Keith Kurahashi from Kusao & Kurahashi Inc. presented a PowerPoint and reported the following: Best Hospitality LLC, the owners of the property of the former Kyo-ya Restaurant, are proposing to build a 350-feet-tall condo hotel with 176 units. The existing 25-foot height limit for the property was established in the 1980s. Views of Diamond Head or the horizon line from the Punchbowl lookout would not be obstructed by the new tower, as it would be aligned with Allure Waikiki. In addition to the units, plans for the building include a garden café, a restaurant, outdoor activity space, pool deck, fitness center, spa, chapel, and a total of 51 parking stalls. The development would increase hotel units in Waikiki, provide jobs and economic benefits including additional tax revenue for the City and State. A DEA, an application for a Waikiki Special District permit, and request for a City Council resolution will be submitted.

Questions, comments, and concerns followed:

1. Disclosures: Chair Finley noted that he and Merz discussed this project.
2. Concerns and Testimony: Merz raised concerns about setting a precedent by allowing the height exemption, and noted that the Punchbowl line-of-sight rationality is arbitrary to the project. Merz also noted that the project is in non-compliance with the WSD criteria and referenced testimony from Peter J. Massucci. Erteschik noted he did not agree with the rationality for increasing the height limit from 25 feet to

350 feet, and noted that City Council should oppose the height exemption. Chair Finley noted two letters from residents Deborah and Douglas Barrett and Peter Massucci, who stated their opposition to the project.

3. Concerns from Residents: Resident Mark Harpeman raised concerns about the lack of green belts in Waikiki, and the Department of Planning and Permitting (DPP) willingness to approve projects that do not meet zoning requirements. Ben Sadoski from Unite Here Local 5 raised concerns about the units-to-parking ratio. Joli Tokusato from Unite Here Local 5 raised concerns about the loss of jobs with hotel-condo conversions. A resident raised concerns about the additional amount of wastewater the tower would generate. A resident raised concerns about steady growth of high buildings and non-smart development in Waikiki. Resident Steve Winter noted that 115 Luana Waikiki Hotel and Suites residents will lose their view if this project is approved.
4. Political Contributions: A resident asked and Kurahashi answered that he will not provide a list of political contributions and meetings with government officials, but he discloses all donations to the State Ethics Commission.
5. Additional Concerns from Board Members: Nigro stated his opposition and suggested that the developers choose a project that fits the zoning requirements and density. Smith and Shields commented on the foreign look of building in the photo renderings. Lofquist noted he opposes the project and raised concerns about the vicinity of the structure to Fort DeRussy.
6. Zoning Regulations: A resident asked the Board to focus on zoning regulations and suggested the Board be steadfast in voicing concerns to government officials.
7. Company: Shields asked and Kurahashi noted that Best Hospitality is a company based out of Japan.
8. Zoning: **Chair Finley passed the gavel to Vice Chair Erteschik.** Chair Finley disclosed that he has known Kurahashi for over 40 years. No conflict was determined. Chair Finley noted that he cannot support the project, as it is above the zoning limit of 25 feet. **Vice Chair Erteschik relinquished the gavel to Chair Finley.**

Erteschik moved and Merz seconded the motion that the Waikiki Neighborhood Board No. 9 oppose the One Waikiki project.

Merz made an amendment to the motion to add: **"because the project violates the Land Use Ordinance (LUO) zoning regulations and the Waikiki Special District design criteria."**

The amendment to the motion was APPROVED by UNIANIMOUS CONSENT. 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; **Nay:** None; **Abstain:** None**).**

The motion PASSED by UNANIMOUS CONSENT 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; **Nay:** None; **Abstain:** None**).**

REPORTS:

- Treasurer's Report: The report was deferred.
- Subdistrict 1 Report: No report was provided.
- Subdistrict 2 Report: No report was provided.
- Subdistrict 3 Report: No report was provided.

Chair's Report: Chair Finley reported the following:

- Liquor Licenses: The BLT Market and Dean & Deluca Kalaimoku, both located at 383 Kalaimoku Street, are applying for a liquor licenses.
- Resolution Draft: Chair Finley is working on a resolution to support a bridge over the Ala Wai Canal.

ANNOUNCEMENTS: Next Meeting: The next Waikiki Neighborhood Board No. 9 regular meeting will be held on Tuesday, October 13, 2015, at 7:00 p.m. at the Waikiki Community Center.

ADJOURNMENT: The meeting adjourned at 9:22 p.m.

Submitted by: Jordan E.E. Ozaki, Neighborhood Assistant
Reviewed by: Rise Doi, Neighborhood Assistant II
Reviewed and finalized by: Robert Finley, Chair; Lou Erteschik, Vice Chair; Jo-Ann Adams, Secretary

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

August 28, 2015

Fort DeRussy
c/o Mr. Richard Lebrun, General Manager
Hale Koa Hotel
2055 Kalia Road
Honolulu, Hawaii 96815

Dear Mr. Lebrun:

Subject: **Draft Environmental Assessment, Request for a City Council Resolution to Allow a 350-foot Height Limit, and Waikiki Special District Permit Applications for One Waikiki (Former Kyo-ya Restaurant Site) 2055 and 2057 Kalakaua Avenue Tax Map Keys: 2-6-6: 1 and 4**

The Applicant, Best Hospitality LLC, is planning to submit a Draft Environmental Assessment, a request for a City Council Resolution to allow a 350-foot height limit, and a Waikiki Special District Permit application for the One Waikiki Condo-Hotel Development on the site of the former Kyo-ya Restaurant to the Department of Planning and Permitting.

As an adjoining property owner and in accordance with the requirements of the City and County of Honolulu, we are notifying you of this upcoming presentation to the Waikiki Neighborhood Board described below, so that we may respond to your questions and/or concerns regarding our One Waikiki Condo-Hotel Development and Draft Environmental Assessment, request for a City Council Resolution to allow a 350-foot height limit, and Waikiki Special District Permit processes.

Waikiki Neighborhood Board No. 9

Date: Tuesday, September 8, 2015
Time: 7:00 pm
Place: Waikiki Community Center
310 Paoakalani Avenue
Honolulu, Hawaii 96815

We have attached a summary of our proposed One Waikiki Condo-Hotel Development and a location map for your review. Should you have questions, please do not hesitate to call our office at 988-2231.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Best Hospitality LLC
Department of Planning and Permitting

ONE WAIKIKI CONDO-HOTEL – SUMMARY SHEET
2055 AND 2057 KALAKAUA AVENUE
TAX MAP KEY: 2-6-6: 1 and 4

The proposed One Waikiki Condo-Hotel (the "Project") is located in the Waikiki District of Oahu and consists of two parcels of land at 2055 and 2057 Kalakaua Avenue ("Project Site"), totaling 28,761 square feet. The Applicant, Best Hospitality LLC (BH), proposes to develop a 350-foot condo-hotel on the property following the Waikiki Special District development standards of the Land Use Ordinance and the Waikiki Special District Guidelines, with a request to increase the height limit of the condo-hotel tower to 350 feet.

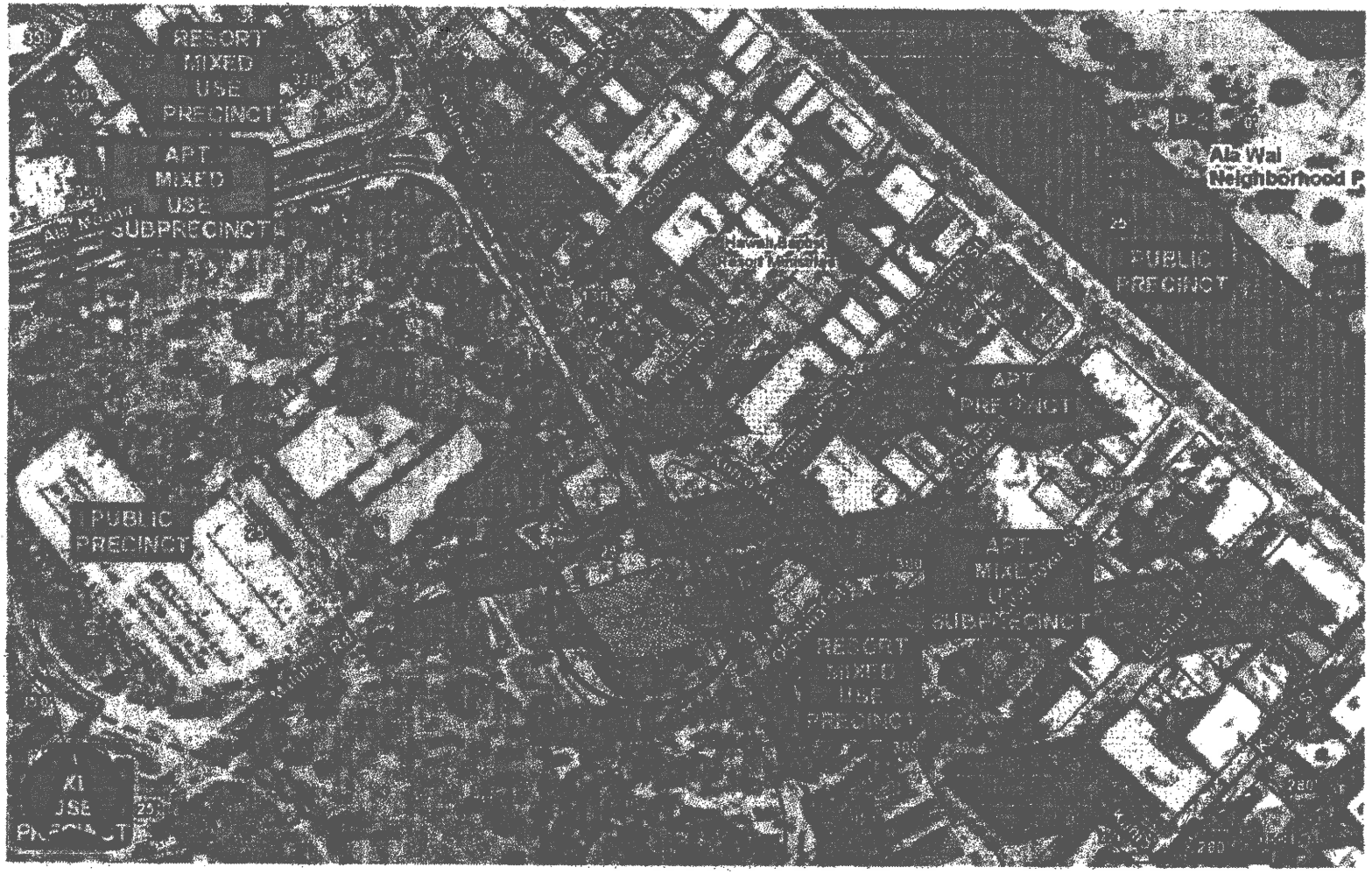
BH will submit a Draft Environmental Assessment for the Project to the Department of Planning and Permitting for processing. BH will also be requesting that the City Council support a Resolution to allow a height of 350 feet for the proposed condo-hotel tower, in accordance with Section 21-9.80-4(g)(3) and will submit a Waikiki Special District Permit, Major permit application to DPP for processing. The property is zoned Resort Mixed Use Precinct in the Waikiki Special District.

BH proposes the One Waikiki, a 350-foot high condo-hotel with approximately 180 units (studios, one bedrooms and two bedroom lock off), two restaurants, accessory hotel uses, a chapel, loading, and two parking levels. The Project will include demolition of an existing parking garage and the former Kyo-ya Restaurant on the Project Site.

The ground floor is planned for a porte cochere, hotel lobby, garden café, accessory hotel facilities, parking, and extensive landscaping and a water feature. The ground floor parking will be part of the parking garage with a separate ramp to the second level parking and loading. The parking garage/podium will have loading stalls and parking stalls along with back of house facilities.

The second level is planned with a restaurant and owner's lounge. The third level is planned with a proposed fitness center, swimming pool, pool deck and bar, and spa facility.

The tower above the third level will include the condo-hotel units, with a chapel facility with a waiting room, office, bride's dressing room, restrooms, and bridal gardens. on the top level. The top level of the condo-hotel units will contain penthouse units with gardens, creating a smaller tower element with the chapel above.



Tax Parcel	ONE WAIKIKI CONDO-HOTEL Author: KUSAO & KURAHASHI, INC.	Notes: LOCATION AND ZONING MAP Powered by ArcGIS Server 10 © City & County of Honolulu, All Rights Reserved, 2015

Luana
WAIKIKI

August 31, 2015

Aloha Luana Waikiki Owner:

The Association of Apartment Owners of the Luana Waikiki recently received the enclosed; letter, project summary, and map (3 pages) from Keith Kurahashi of Kusao & Kurahashi, Inc. The letter pertains to the planned development of: One Waikiki Condo-Hotel, the former Kyo-ya Restaurant site, directly adjacent to the Luana Waikiki.

The letter provides notice to the owners of Luana Waikiki that applicant; Best Hospitality LLC is planning a presentation to the Waikiki Neighborhood Board to respond to questions and/or concerns regarding: the proposed development, a draft environmental assessment, a request for City Council Resolution to allow a 350-foot height limit, and a Waikiki Special District Permit application.

Please review the enclosed letter for the meeting date and time, as well as contact information for the offices of Kusao & Kurahashi, Inc if there are further questions.

Mahalo,

KeAlii Alexander
Senior Director, Owner Operations
Aqua Hospitality LLC
As Agent for AOAO Luana Waikiki

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

August 27, 2015

Mr. Kevin Showe, President
Luana Waikiki AOAO
2045 Kalakaua Avenue, Suite M-150
Honolulu, Hawaii 96815

Dear Mr. Showe:

Subject: **Draft Environmental Assessment, Request for a City Council Resolution to Allow a 350-foot Height Limit, and Waikiki Special District Permit Applications for One Waikiki (Former Kyo-ya Restaurant Site) 2055 and 2057 Kalakaua Avenue Tax Map Keys: 2-6-6: 1 and 4**

The Applicant, Best Hospitality LLC, is planning to submit a Draft Environmental Assessment, a request for a City Council Resolution to allow a 350-foot height limit, and a Waikiki Special District Permit application for the One Waikiki Condo-Hotel Development on the site of the former Kyo-ya Restaurant to the Department of Planning and Permitting.

As an adjoining property owner and in accordance with the requirements of the City and County of Honolulu, we are notifying you of this upcoming presentation to the Waikiki Neighborhood Board described below, so that we may respond to your questions and/or concerns regarding our One Waikiki Condo-Hotel Development and Draft Environmental Assessment, request for a City Council Resolution to allow a 350-foot height limit, and Waikiki Special District Permit processes. Please share this letter and notification with the owners of the condo-hotel units and other units in your development.

Waikiki Neighborhood Board No. 9

Date: Tuesday, September 8, 2015
Time: 7:00 pm
Place: Waikiki Community Center
310 Paoakalani Avenue
Honolulu, Hawaii 96815

We have attached a summary of our proposed One Waikiki Condo-Hotel Development and a location map for your review. Should you have questions, please do not hesitate to call our office at 988-2231.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Best Hospitality LLC
Department of Planning and Permitting

ONE WAIKIKI CONDO-HOTEL – SUMMARY SHEET
2055 AND 2057 KALAKAUA AVENUE
TAX MAP KEY: 2-6-6: 1 and 4

The proposed One Waikiki Condo-Hotel (the "Project") is located in the Waikiki District of Oahu and consists of two parcels of land at 2055 and 2057 Kalakaua Avenue ("Project Site"), totaling 28,761 square feet. The Applicant, Best Hospitality LLC (BH), proposes to develop a 350-foot condo-hotel on the property following the Waikiki Special District development standards of the Land Use Ordinance and the Waikiki Special District Guidelines, with a request to increase the height limit of the condo-hotel tower to 350 feet.

BH will submit a Draft Environmental Assessment for the Project to the Department of Planning and Permitting for processing. BH will also be requesting that the City Council support a Resolution to allow a height of 350 feet for the proposed condo-hotel tower, in accordance with Section 21-9.80-4(g)(3) and will submit a Waikiki Special District Permit, Major permit application to DPP for processing. The property is zoned Resort Mixed Use Precinct in the Waikiki Special District.

BH proposes the One Waikiki, a 350-foot high condo-hotel with approximately 180 units (studios, one bedrooms and two bedroom lock off), two restaurants, accessory hotel uses, a chapel, loading, and two parking levels. The Project will include demolition of an existing parking garage and the former Kyo-ya Restaurant on the Project Site.

The ground floor is planned for a porte cochere, hotel lobby, garden café, accessory hotel facilities, parking, and extensive landscaping and a water feature. The ground floor parking will be part of the parking garage with a separate ramp to the second level parking and loading. The parking garage/podium will have loading stalls and parking stalls along with back of house facilities.

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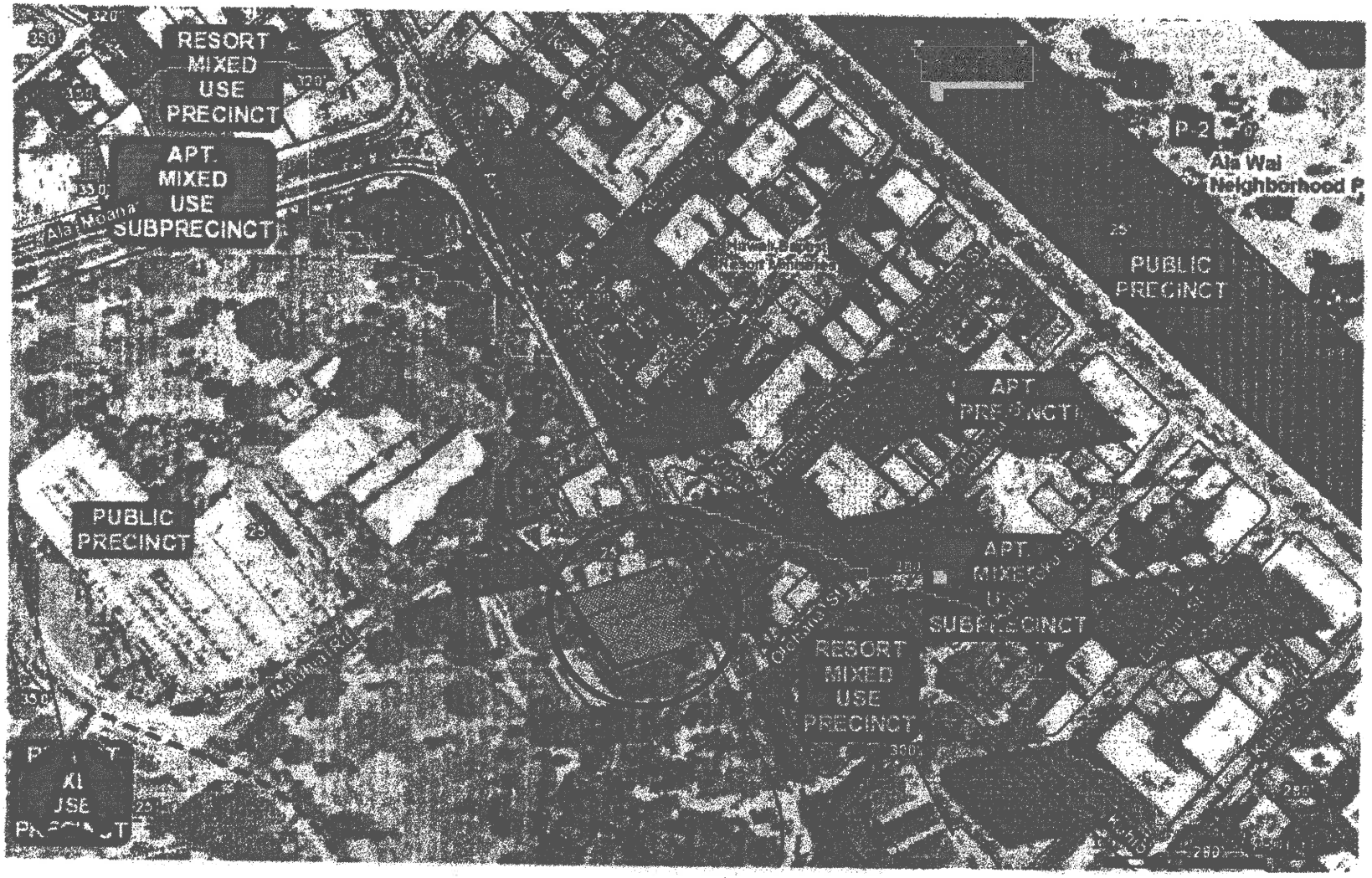

Tax Parcel	**ONE WAIKIKI CONDO-HOTEL** Author: KUSAO & KURAHASHI, INC.	Notes: LOCATION AND ZONING MAP Powered by ArcGIS Server 10 © City & County of Honolulu, All Rights Reserved, 2015

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

August 28, 2015

Nearby Property Owner

Dear Nearby Property Owner:

Subject: **Draft Environmental Assessment, Request for a City Council Resolution to Allow a 350-foot Height Limit, and Waikiki Special District Permit Applications for One Waikiki (Former Kyo-ya Restaurant Site) 2055 and 2057 Kalakaua Avenue Tax Map Keys: 2-6-6: 1 and 4**

The Applicant, Best Hospitality LLC, is planning to submit a Draft Environmental Assessment, a request for a City Council Resolution to allow a 350-foot height limit, and a Waikiki Special District Permit application for the One Waikiki Condo-Hotel Development on the site of the former Kyo-ya Restaurant to the Department of Planning and Permitting.

As a nearby property owner, we are notifying you of this upcoming presentation to the Waikiki Neighborhood Board described below, so that we may respond to your questions and/or concerns regarding our One Waikiki Condo-Hotel Development and Draft Environmental Assessment, request for a City Council Resolution to allow a 350-foot height limit, and Waikiki Special District Permit processes.

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Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Best Hospitality LLC
Department of Planning and Permitting

TMK 2-6-6: 3

Getty Leasing Inc.
2 Jericho Plaza, Suite 110
Jericho, NY 11753

TMK 2-6-16: 65
Hilda B Tenn & Chong Hing Tenn Trusts
c/o Paul Luckfield, Trustee
3721 Kanaaina Avenue, #21B
Honolulu, Hawaii 96815

Tax Parcel	ONE WAIKIKI CONDO-HOTEL Author: KUSAO & KURAHASHI, INC.	Notes: LOCATION AND ZONING MAP
		Powered by ArcGIS Server 10 © City & County of Honolulu, All Rights Reserved, 2015

ONE WAIKIKI CONDO-HOTEL – SUMMARY SHEET
2055 AND 2057 KALAKAUA AVENUE
TAX MAP KEY: 2-6-6: 1 and 4

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DEPARTMENT OF COMMUNITY SERVICES
CITY AND COUNTY OF HONOLULU
715 SOUTH KING STREET, SUITE 311 ● HONOLULU, HAWAII 96813 ● AREA CODE 808 ● PHONE: 768-7762 ● FAX: 768-7792

KIRK CALDWELL
MAYOR

GARY K. NAKATA
DIRECTOR

BARBARA YAMASHITA
DEPUTY DIRECTOR

October 14, 2015

Mr. Keith Kurahashi
President
Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Consultation on Proposed Draft Environmental Assessment
One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii
Tax Map Key: (1) 2-6-6:1 and 4

We have reviewed your letter dated August 20, 2015, and the enclosed summary and map for the One Waikiki Project.

Our review of the documents provided indicates the proposed project will have no adverse impacts on any Department of Community Services' activities or projects at this time.

Thank you for providing us with the opportunity to comment on this matter.

Sincerely,

Gary K. Nakata
Director

GKN:jc

DEPARTMENT OF FACILITY MAINTENANCE

CITY AND COUNTY OF HONOLULU

1000 Ulu`ohia Street, Suite 215, Kapolei, Hawaii 96707
Phone: (808) 768-3343 • Fax: (808) 768-3381
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

ROSS S. SASAMURA, P.E.
DIRECTOR AND CHIEF ENGINEER

EDUARDO P. MANGLALLAN
DEPUTY DIRECTOR

IN REPLY REFER TO:
DRM 15-639

September 2, 2015

Mr. Keith Kurahashi, President
Manoa Market Place
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii Tax Map Keys (1) 2-6-6: 1 and 4

Thank you for the opportunity to review and to give our input regarding the subject Environmental Assessment (EA) project dated, August 20, 2015.

Our comments are as follows:

- The proposed project should be coordinated with the Department of Design and Construction (DDC) Kalakaua Avenue Sidewalk project.
- Once construction phase commence, install approved Best Management Practices (BMP) fronting all drainage facilities such as catch basin and drainage inlets along Kalakaua Avenue.
- During construction and upon completion of project; any damages/deficiencies to Kalakaua Avenue road's right-of-ways shall be corrected to City Standards, match sidewalk special tiles with DDC's Kalakaua Avenue Sidewalk project and at the owner's cost.
- Contractor shall be responsible for clearing storm drain facilities to mitigate flooding during construction and remove BMP's upon completion of the project.

If you have any questions, please call Mr. Kyle Oyasato of the Division of Road Maintenance at 768-3697.

Sincerely,

Ross S. Sasamura, P.E.
Director and Chief Engineer

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
Phone: (808) 768-3003 • Fax: (808) 768-3053
Website: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHELE K. NEKOTA
DIRECTOR

JEANNE C. ISHIKAWA
DEPUTY DIRECTOR

August 31, 2015

Mr. Keith Kurahashi, President
Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii. Tax Map Key: (1) 2-6-6:1 and 4

Thank you for the opportunity to review and comment at the pre-consultation stage of a Draft Environmental Assessment for the One Waikiki Condo-Hotel Development.

The Department of Parks and Recreation has no comment. As the proposed project will have no impact on any programs or facilities, you may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner at 768-3017.

Sincerely,

Michele K. Nekota
Director

MKN:jr
(622043)

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 7TH FLOOR • HONOLULU, HAWAII 96813
PHONE: (808) 768-8000 • FAX: (808) 768-6041
DEPT. WEB SITE: www.honoluludpp.org • CITY WEB SITE: www.honolulu.gov

KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2015/ELOG-1753(SB)
2015/ELOG-1753

October 13, 2015

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Assessment Consultation for Draft Environmental Assessment
One Waikiki Condo-Hotel
2055 and 2057 Kalakaua Avenue – Waikiki
Tax Map Key 2-6-6: 1 and 4

This is in response to your request received on August 25, 2015, for comments regarding a proposed 350-foot-high condo-hotel project with 180 units along Kalakaua Avenue and adjacent to Fort DeRussy. It will be difficult for the Department of Planning and Permitting (DPP) to support the proposed height increase.

The site is located in the Resort Mixed Use District with a 25-foot height limit. It consists of two parcels (Parcels 1 and 4) that have a total lot area of 28,761 square feet. Our records indicate that on October 5, 1998, the Department of Land Utilization approved a Conditional Use Permit (Type 1) for joint development of these two parcels for the existing two-story restaurant (Kyoya) and parking structure. A Special District Permit (Major) was issued on June 26, 1989. A zoning variance was also approved on March 3, 1989, to allow this restaurant to exceed the allowable maximum height of 25 feet by nine feet.

We understand that the proposed project will involve demolishing the former Kyoya restaurant and parking structure to develop the proposed condo-hotel. On the ground floor, there will be a porte cochere, lobby, garden cafe, accessory hotel facilities, parking, and landscaping. The second level will have a restaurant and owner's lounge; the third level will have a fitness center, swimming pool, pool bar, and a spa facility. The condo-hotel units will start from the third level and the top level will house the penthouse units with gardens. It will contain a wedding chapel facility with waiting room, bride's dressing room, restrooms, and bridal gardens.

We further understand that the proposed project will require the preparation of a Draft Environmental Assessment due to its location in Waikiki and the possible use of the City's

right-of-way (Kalakaua Avenue). A Resolution (to be reviewed and approved by the City Council) will be required to allow the proposed 350-foot-high condo-hotel to exceed the allowable height of 25 feet.

The proposed 350-foot-high condo-hotel will exceed the 25-foot height limit by 325 feet. This is excessive. Furthermore, the project site is bordered on its Diamond Head-makai side by Fort DeRussy, which is a significantly important landmark in Waikiki; noted in the Waikiki Special District Design Guidelines as the largest open space in Waikiki, its park-like setting should be enhanced and complemented. The excessive height of the proposed building is unlikely to either enhance or complement Fort DeRussy as an important open space feature in Waikiki. Fort DeRussy provides an important view corridor toward the ocean from those areas mauka of Kalakaua Avenue. And, it is also essential to maintain the mauka views of the Koolau Mountains from Fort DeRussy. The proposed tower height could adversely impact these view corridors, as well. Therefore, we believe that it will be difficult for the DPP to support the project at the proposed 350-foot height. We will, of course, process the request regardless should your client choose to move forward with the project.

Should you have any questions, please contact Sery Berhanu of our Urban Design Branch at 768-8033 or via email at sberhanu@honolulu.gov.

Very truly yours,

George I. Atta

George I. Atta, FAICP
Director

Doc 1289475

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

This response was also faxed to your office on 9-4-15. Thank you.

KIRK CALDWELL
MAYOR

OUR REFERENCE MT-DK

September 4, 2015

Mr. Keith Kurahashi, President
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in response to your letter dated August 20, 2015, requesting pre-consultation comments on a proposed Draft Environment Assessment for the One Waikiki Condo-Hotel development in Waikiki.

Based on the information provided, this project should have no significant impact on the services or operations of the Honolulu Police Department at this time.

If there are any questions, please call Major Clyde Ho of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

DAVE M. KAJIHIRO
MARIE A. McCAULEY
DEPUTY CHIEFS

OUR REFERENCE MT-DK

September 4, 2015

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Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

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Thank you for the opportunity to review this project.

Sincerely,

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

Serving and Protecting With Aloha

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

09036PNN.15

September 18, 2015

Mr. Keith Kurahashi
President
Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Consultation Comments for the Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development Waikiki, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated August 20, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like

community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

NN:ay

c: DOH-EPO #15-215 [via email only]

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

09036PNN.15

September 18, 2015

Mr. Keith Kurahashi
President
Kusao & Kurahashi, Inc.
Planning and Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Pre-Consultation Comments for the Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development Waikiki, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated August 20, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

September 9, 2015

Keith Kurahashi, President
Kusao & Kurahashi, Inc.
Planning & Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Via email: kkurahashi@hawaii.rr.com

Dear Mr. Kurahashi,

SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (1) Land Division – Oahu District; (2) Division of Forestry & Wildlife; and (3) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE
MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 24, 2015

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_Engineering Division
_X_Div. of Forestry & Wildlife
___Div. of State Parks
_X_Commission on Water Resource Management
_X_Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
_X_Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii
LOCATION: Waikiki, Oahu, Hawaii; 2055 and 2057 Kalakaua Avenue; Tax Map Key Nos. (1) 2-6-6: 1 and 4
APPLICANT: Tsukada Global Holdings by its consultant, Kusao & Kurahashi, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 8, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____
Print Name: _____
Date: _____

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2015 AUG 28 AM
DEPT. OF LAND & NATURAL RESOURCES

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 24, 2015

MEMORANDUM

~~TO:~~ Fran

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
_X_ Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

~~FROM:~~ TO Russell Y. Tsuji, Land Administrator

SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii

LOCATION: Waikiki, Oahu, Hawaii; 2055 and 2057 Kalakaua Avenue; Tax Map Key Nos. (1) 2-6-6: 1 and 4

APPLICANT: Tsukada Global Holdings by its consultant, Kusao & Kurahashi, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 8, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

(X) We have no objections.
(X) We have no comments.
( ) Comments are attached.

Signed: [signature]
Print Name: Galen Kuwakami
Date: 8/26/15

DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
LAND DIVISION
2015 SEP -4 AM 10:57

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

*15AUG25 AM10:55 ENGINEERING

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

August 24, 2015

MEMORANDUM

TO: FR:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
X Engineering Division
X Div. of Forestry & Wildlife
___Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

FROM: TO: Russell Y. Tsuji, Land Administrator

SUBJECT: Pre-Consultation on a Proposed Draft Environmental Assessment for One Waikiki, a Condo-Hotel Development in Waikiki, Oahu, Hawaii

LOCATION: Waikiki, Oahu, Hawaii; 2055 and 2057 Kalakaua Avenue; Tax Map Key Nos. (1) 2-6-6: 1 and 4

APPLICANT: Tsukada Global Holdings by its consultant, Kusao & Kurahashi, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document.

Please submit any comments by September 8, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____
Print Name: Carty S. Chang, Chief Engineer
Date: 9/3/15

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/ Russell Y. Tsuji
REF: Pre-Consultation for DEA for Proposed One Waikiki (Condo-Hotel Development)
Oahu.065

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) **Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zone AO. The National Flood Insurance Program regulates developments within Zones AO as indicated in bold letters below.**

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

(X) **Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.**

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

(X) **Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.**

( ) Mr. Carter Romero (Acting) at (808) 961-8943 of the County of Hawaii, Department of Public Works.

( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

( ) Other: _____

_____

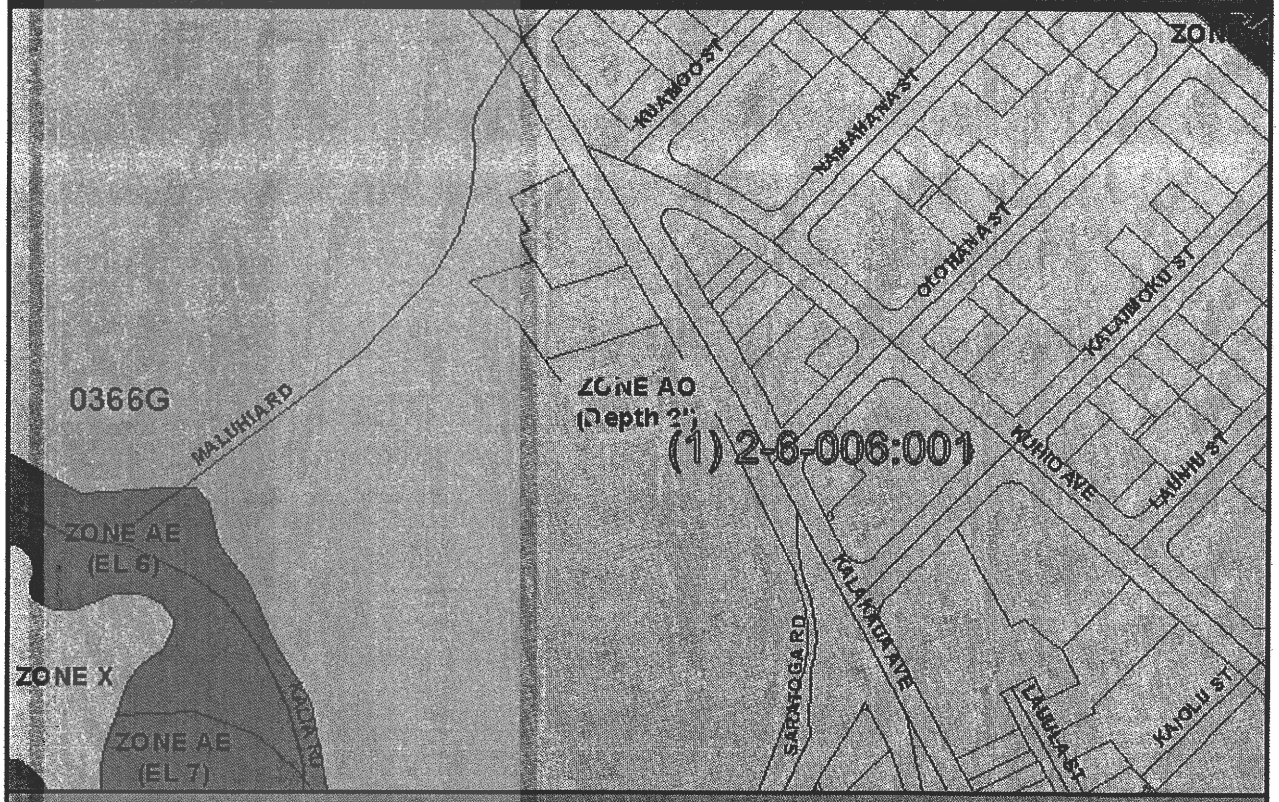
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 9/3/15

State of Hawaii

FLOOD HAZARD ASSESSMENT REPORT



NATIONAL FLOOD INSURANCE PROGRAM

FLOOD ZONE DEFINITIONS

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water-surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

- **Zone A:** No BFE determined.
- **Zone AE:** BFE determined.
- **Zone AH:** Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
- **Zone AO:** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
- **Zone V:** Coastal flood zone with velocity hazard (wave action); no BFE determined.
- **Zone VE:** Coastal flood zone with velocity hazard (wave action); BFE determined.
- **Zone AEF:** Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA – An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

- **Zone XS (X shaded):** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
- **Zone X:** Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

- **Zone D:** Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

PROPERTY INFORMATION

COUNTY:	HONOLULU
TMK NO:	(1) 2-6-006-001
PARCEL ADDRESS:	2057 KALAKAUA AVE HONOLULU, HI 96815
FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL(S):	15003C0366G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

PARCEL DATA FROM:	APRIL 2014
IMAGERY DATA FROM:	MAY 2006

IMPORTANT PHONE NUMBERS

County NFIP Coordinator	
City and County of Honolulu	
Mario Siu-Li, CFM	(808) 768-8098
State NFIP Coordinator	
Carol Tyau-Beam, P.E., CFM	(808) 587-0267

Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.

If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and shall not be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.

Keith Kurahashi

From: Keith Kurahashi <kkurahashi@hawaii.rr.com>
Sent: Thursday, September 10, 2015 2:24 PM
To: 'Kuwaye, Kristen'
Cc: 'Liu, Rouen'
Subject: RE: One Waikiki, a Condo-Hotel Development in Waikiki

Ms. Kuwaye and Mr. Liu,

Thank you for your response. Your comments will be included in the Draft EA.

Keith

From: Kuwaye, Kristen [mailto:kristen.kuwaye@hawaiianelectric.com]
Sent: Thursday, September 10, 2015 1:17 PM
To: 'kkurahashi@hawaii.rr.com'
Cc: Liu, Rouen
Subject: One Waikiki, a Condo-Hotel Development in Waikiki

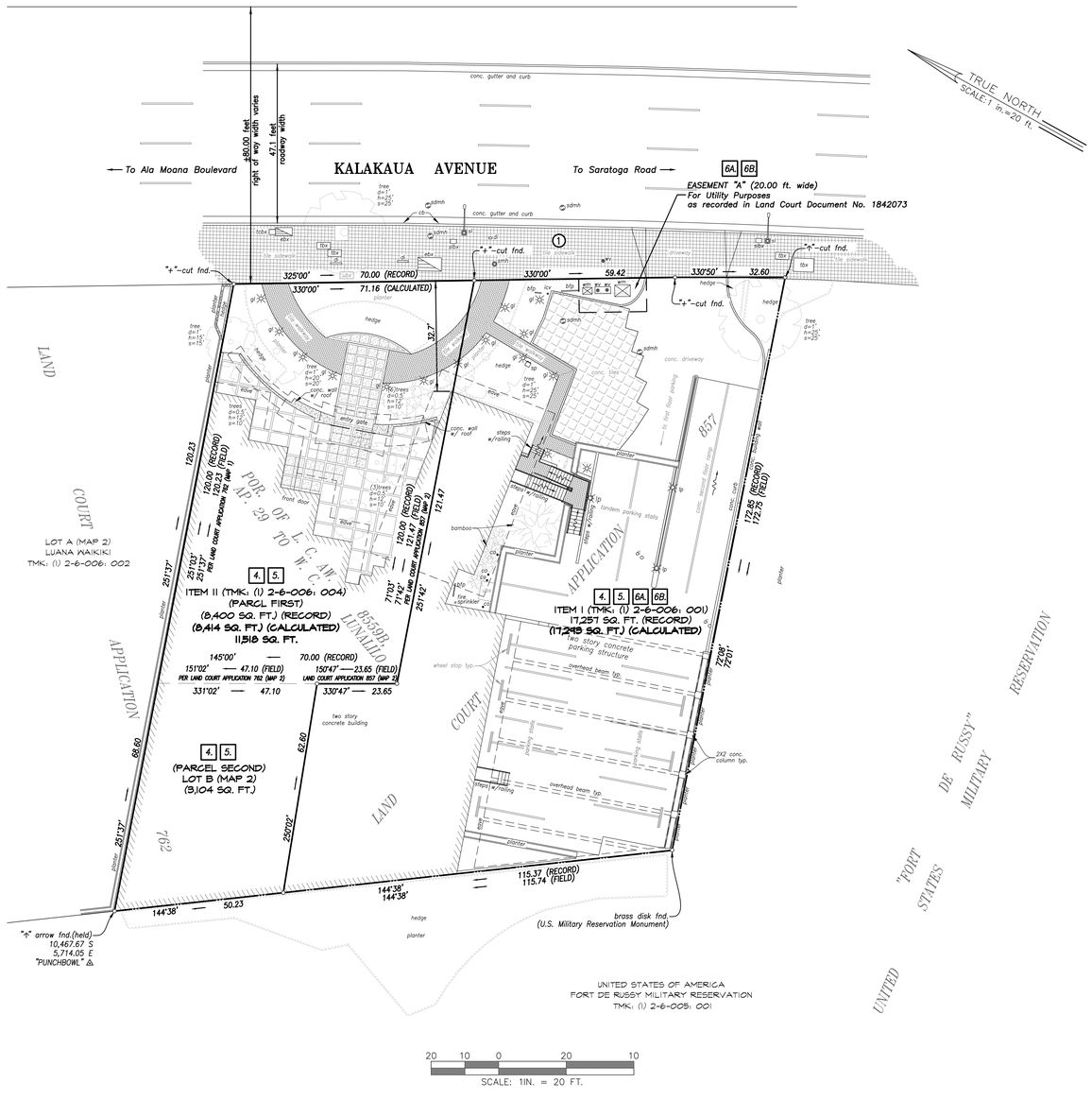
Kristen Kuwaye on behalf of Rouen Liu

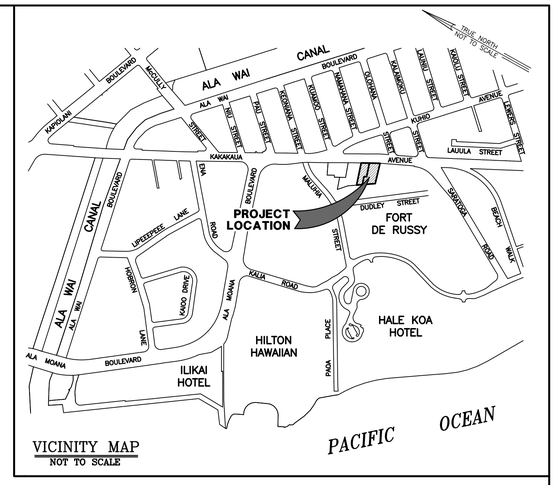
Dear Mr. Keith Kurahashi,

Thank you for the opportunity to comment on the subject project. Hawaiian Electric Company has no objection to the project. Should HECO have existing easements and facilities on the subject property, we will need continued access for maintenance of our facilities.
We appreciate your efforts to keep us apprised of the subject project in the planning process. As the proposed One Waikiki, Condo-Hotel Development Project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.
If you have any questions, please call me at 543-7245.

Sincerely,
Rouen Q. W. Liu
Permits Engineer
Tel: (808) 543-7245
Email: Rouen.liu@hawaiianelectric.com

CONFIDENTIALITY NOTICE: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and/or privileged information. Any unauthorized review, use, copying, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender immediately by reply e-mail and destroy the original message and all copies.





VICINITY MAP
NOT TO SCALE

ALTA/ACSM LAND TITLE SURVEY

OF THE PROPOSED ONE WAIKIKI PROJECT BEING LOT B (MAP 2) OF A PORTION OF LAND COURT APPLICATION 762, ALL OF LAND COURT APPLICATION 857 AND A PARCEL OF LAND BEING A PORTION OF LAND COMMISSION AWARD NO. 8559B, APANA 29 TO W. C. LUNALILO AT PAU, WAIKIKI, HONOLULU, OAHU, HAWAII TAX MAP KEY: (1) 2-6-006: 001 AND 004

Owner: LEAHI LLC

Site Address: 2051 and 2057 KALAKAUA AVENUE
HONOLULU, HAWAII 96815

Please note the following structural discrepancies

(1) Tile sidewalk along Kalakaua Avenue crosses into Subject Lot along the entire length (168.18 feet) by 0.05 feet to 0.5 feet

Surveyor's Certification

To: Tsukada Global Holdings, Inc. and Title Guaranty of Hawaii, Incorporated.

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 8, 9, 10, 11(a) and 13 of Table A thereof. The field work was completed on June 15, 2015.

AUSTIN, TSUTSUMI, & ASSOCIATES INC.
501 SUMNER STREET, SUITE 521
HONOLULU, HI 96817
PHONE: 533-3646

ERIK S. KANESHIRO
LICENSED PROFESSIONAL LAND SURVEYOR
No. 9826
HAWAII, U.S.A.

THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION.

By : _____
Erik S. Kaneshiro
Licensed Professional Land Surveyor
Certificate Number 9826
EXP. 04/16

REV. AUGUST 17, 2015
JUNE 26, 2015

24" X 36" = 6.0 SQ. FT.

PROPERTY DESCRIPTIONS

ITEM I (TMK: (1) 2-6-006: 001)

All of that certain parcel of land situate at Pau, Waikiki, Honolulu, City and County of Honolulu, State of Hawaii, containing an area of 17,257 square feet, more or less, as shown on Map 1, filed in the Office of the Assistant Registrar of the Land Court of the State of Hawaii with Land Court Application No. 857 of the Security Investment Company, Limited.

Being land(s) described in Transfer Certificate of Title No. 1,036,281 issued to LEAHI LLC, a Hawaii limited liability company, as Tenant in Severalty.

BEING THE PREMISES ACQUIRED BY LIMITED WARRANTY DEED

GRANTOR : KYO-YA MANAGEMENT COMPANY, LTD., a Hawaii corporation

GRANTEE : LEAHI LLC, a Hawaii limited liability company, as Tenant in Severalty

DATED : December 21, 2011
FILED : Land Court Document No. T-8024297

ITEM II (TMK: (1) 2-6-006: 004)

-FIRST:-

All of that certain parcel of land (being portion(s) of the land(s) described in and covered by Land Commission Award No. 8559B, Apana 29 to W. C. Lunalilo) situate, lying and being on the southwest side of Kalakaua Avenue, at Pau, Waikiki, Honolulu, City and County of Honolulu, State of Hawaii, and thus bounded and described:

Beginning at a point on the makai side of Kalakaua Avenue, at the easterly corner of land belonging to Fred Leslie, said point of commencement being distant 562 feet from the easterly corner of the land conveyed to Frank Hustace by Deed of Lau Chong, dated December 20, 1897, and conveyed to Mellie E. Hustace by deeds of H. Focke and Paul Muhlendorf, recorded in the Register Office, Oahu, in Book 250, on Pages 177-180 and thence running:

1. 71° 42' 121.47 feet along Land Court Application 857;
2. 150° 47' 23.65 feet along same;
3. 151° 02' 47.10 feet along Lot B (Map 2) of Land Court Application 762;
4. 251° 37' 120.23 feet along Lot A (Map 2) of Land Court Application 762;
5. 330° 00' 71.16 feet along Kalakaua Avenue to place of commencement, containing an area of 8,414 square feet, more or less.

-Note:- Tax Map shows an area of 8,400 square feet.

-SECOND:-

All of that certain parcel of land situate at Waikiki, Honolulu, City and County of Honolulu, State of Hawaii, described as follows:

LOT B, area 3,104 square feet, more or less, as shown on Map 2, filed in the Office of the Assistant Registrar of the Land Court of the State of Hawaii with Land Court Application No. 762 of Mary Ellen Loncke.

Being land(s) described in Transfer Certificate of Title No. 1,066,500 issued to LEAHI LLC, a Hawaii limited liability company, as Tenant in Severalty.

BEING THE PREMISES ACQUIRED BY LIMITED WARRANTY DEED

GRANTOR : FONG INN ESTATE COMPANY, a Hawaii general partnership

GRANTEE : LEAHI LLC, a Hawaii limited liability company, as Tenant in Severalty

DATED : September 6, 2013
FILED : Land Court Document No. T-8649245
RECORDED : Document No. A-49970394

ENCUMBRANCES:

4. Mineral and water rights of any nature in favor of the State of Hawaii.

5. The terms and provisions contained in the following:

INSTRUMENT : AGREEMENT FOR ISSUANCE OF CONDITIONAL USE PERMIT UNDER SECTION 4.40-21 OF THE LAND USE ORDINANCE (LUO)

DATED : July 5, 1988
FILED : Land Court Document No. 1600945
RECORDED : Liber 22678 Page 641
PARTIES : KYO-YA CO, LTD., "Declarant"

Note: No Joinder by FONG INN ESTATE COMPANY, a Hawaii general partnership.

AS TO ITEM I:

6A. DESIGNATION OF EASEMENT "A"

SHOWN : on Map 2 of Land Court Application No. 857, as set forth by Land Court Order No. 101016, filed February 4, 1991

6B. GRANT

TO : CITY AND COUNTY OF HONOLULU

DATED : August 2, 1991
FILED : Land Court Document No. 1842073
GRANTING : an easement for utility purposes, to be exercised and enjoyed by the Board of Water Supply, City and County of Honolulu, over said Easement "A"

Abbreviations:

bfp	back flow preventer
cb	catch basin
co	clean out
d	diameter
di	drain inlet
ebx	electrical box
fh	fire hydrant
fnd.	found
ft	feet
gl	garden light
icv	irrigation control valve
in	inches
lp	light post
sdmh	storm drain manhole
sl	street light
slbx	street light box
smh	sanitary manhole
sp	stand pipe
tcbx	traffic control box
tbx	telephone box
typ	typical
tp	telephone pole
ubx	utility box
wm	water meter
wv	water valve

Notes

1. Coordinates and azimuths shown on this map are referred to Government Survey Triangulation Station "Punchbowl".
2. Said described property is located within Flood Zone "AO" with a depth of 2 feet as shown on Map Number 15003C0366G with a revision date of January 19, 2011, in the City and County Honolulu, State of Hawaii, which is the current Flood Insurance Rate Map for the community in which said premises is situated.
3. Names of adjoining property owners taken from Real Property Tax Records.
4. Survey is based on Preliminary Report issued by Title Guaranty of Hawaii, Inc. dated July 6, 2015 Order No. 201512032.
5. Lot description of Item II, Parcel First is based on adjoining Land Court Applications 762, 957 and Kalakaua right-of-way location.
6. Total number of marked parking stalls in subject lot = thirty five (35) stalls. This total includes two (2) handicap stalls.

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
EMD/CWB

01039PNN.16

January 26, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Comments on the Draft Environmental Assessment for the Proposed Park Kalia Waikiki Condo-Hotel Project
TMK: (1) 2-6-006:001, 004
Waikiki, Island of Oahu, Hawaii

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of a letter from the Department of Planning and Permitting, dated January 12, 2016, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf.

1. Any project and its potential impacts to State waters must meet the following criteria:

   a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.

   b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.

   c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).

2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for an NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee ($1,000 for an individual NPDES permit or $500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: https://eha-cloud.doh.hawaii.gov/epermit/. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

   Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and HAR, Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of $25,000 per day per violation.

5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:

   a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like

community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g., minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.

c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.

d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.

e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: http://health.hawaii.gov/cwb, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,

ALEC WONG, P.E., CHIEF
Clean Water Branch

NN:ak

c: DOH-EPO [via e-mail Noella.Narimatsu@doh.hawaii.gov only]
Joette Yago, DPP-Urban Design Branch [via e-mail jyago@honolulu.gov only]

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Alec Wong, P.E., Chief
Clean Water Branch
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801-3378

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Wong:

Thank you for your letter dated January 26, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The Applicant understands and will comply with the State's anti-degradation policy (HAR Chapter 11-554-1.1, designated uses (HAR Chapter 11-554-1-3) and applicable water quality criteria (HAR Chapter 11-554-4 through 11-554-8).

2. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance will be less than an acre.

3. The Department of the Army has been contacted through this DEA process and since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project is not expected to require a Department of the Army Permit (401 Water Quality Certification).

4. The Applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.

5. The Applicant understands the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters.

a. The Project will increase landscaped open space on the Project site, allowing the natural percolation of some rain and storm water for irrigation and reduce storm water flowing into drainage ways.

b. The Applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems.

c. The Applicant will consider storm water Best Management Practice (BMP) approaches to minimize the use of potable water for irrigation.

d. As mentioned earlier, the Applicant will significantly increase landscape areas on the property reducing excessive runoff, resulting in an improvement to stormwater quality by allowing percolation of storm water to recharge groundwater to revitalize natural hydrology.

e. The City provides existing storm water infrastructure, however, reduction of storm water runoff from our property will reduce the existing flows to the City's storm drainage system increasing the capacity of the drainage ways that presently support this site.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

POLICE DEPARTMENT

CITY AND COUNTY OF HONOLULU

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

KIRK CALDWELL
MAYOR

LOUIS M. KEALOHA
CHIEF

MARIE A. McCAULEY
CARY OKIMOTO
DEPUTY CHIEFS

OUR REFERENCE MT-DK

January 27, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Schnell:

This is in response to a letter from the Department of Planning and Permitted (dated January 12, 2016) requesting comments on a Draft Environmental Assessment for the Park Kalia Waikiki condo-hotel project located at 2055 and 2057 Kalakaua Avenue.

Based on the information provided, this project should have no significant impact on the services or operations of the Honolulu Police Department.

If there are any questions, please call Major Clyde Ho of District 6 (Waikiki) at 723-3345.

Thank you for the opportunity to review this project.

LOUIS M. KEALOHA
Chief of Police

By
MARK TSUYEMURA
Management Analyst VI
Office of the Chief

cc: Urban Design Branch, Department
of Planning and Permitting

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Louis M. Kealoha, Chief of Police
Honolulu Police Department
City and County of Honolulu
801 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Major Clyde Ho, District 6 (Waikiki)

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project: Park Kalia-Waikiki Condo Hotel
Applicant: Best Hospitality LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2055 and 2057 Kalakaua Avenue
Tax Map Key: 2-6-6: 1 and 4

Dear Chief Kealoha:

Thank you for your letter dated January 27, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comment that "Based on the information provided, this project should have no significant impact on the services or operations of the Honolulu Police Department."

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

VIRGINIA PRESSLER, M.D.
DIRECTOR OF HEALTH

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

In reply, please refer to:
File:

EPO 16-026

January 29, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment (DEA) for Park Kalia Condo-Hotel, Waikiki, Oahu
TMK: 2-6-6: 1 & 4

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEA to our office via the OEQC link:
http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Oahu/2010s/2016-01-23-OA-5E-DEA-Park-Kalia-Waikiki-Condo-Hotel.pdf

EPO strongly recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at: http://health.hawaii.gov/epo/landuse. Projects are required to adhere to all applicable standard comments. EPO has recently prepared draft Environmental Health Management Maps for each county. They are online at: http://health.hawaii.gov/epo/egis

EPO recommends you review the need and/or requirements for a Clean Air Branch permit. The Clean Air Branch can be consulted via e-mail at: Cab.General@doh.hawaii.gov or via phone: (808) 586-4200.

If noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at: http://health.hawaii.gov/irhb/noise

EPO also suggests that the Hazard Evaluation and Emergency Response (HEER) Office's Site Discovery and Response (SDAR) Section be contacted. The SDAR section protects human health and the environment by identifying, investigating, and remediating sites contaminated with hazardous substances (non-emergency site investigations and cleanup). The HEER Office's SDAR Section can be contacted at: (808) 586-4249. For historical maps on lands where sugarcane was grown see: http://health.hawaii.gov/epo/egis/sugarcane

EPO encourages you to examine and utilize the Hawaii Environmental Health Portal. The portal provides links to our e-Permitting Portal, Environmental Health Warehouse, Groundwater Contamination Viewer, Hawaii Emergency Response Exchange, Hawaii State and Local Emission Inventory System, Water Pollution Control Viewer, Water Quality Data, Warnings, Advisories and Postings. The Portal is continually updated. Please visit it regularly at:
https://eha-cloud.doh.hawaii.gov

You may also wish to review the draft Office of Environmental Quality Control (OEQC) viewer at: http://eha-web.doh.hawaii.gov/oeqc-viewer This viewer geographically shows where previous Hawaii Environmental Policy Act (HEPA) {Hawaii Revised Statutes, Chapter 343} documents have been prepared.

In order to better protect public health and the environment, the U.S. Environmental Protection Agency (EPA) has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and combines environmental and demographic indicators in maps and reports. EPO encourages you to explore, launch and utilize this powerful tool in planning your project. The EPA EJSCREEN tool is available at: http://www2.epa.gov/ejscreen

We request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa,

Laura Leialoha Phillips McIntyre, AICP
Program Manager, Environmental Planning Office

LM:nn

Attachment 1: EPO Draft Environmental Health Management Map
Attachment 2: OEQC Viewer Map of Area
Attachment 3: U.S. EPA EJSCREEN Table

c: Hiro Matsumura, Best Hospitality, LLC
Joette Yago, Department of Planning and Permitting
DOH: CAB, IRHB, SAN {via email only}

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Ms. Laura Leialoha Phillips McIntyre, AICP
Environmental Planning Office Manager
Environmental Health Administration
Department of Health (DOH)
919 Ala Moana Blvd., Suite 312
Honolulu, Hawaii 96814

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Ms. McIntyre:

Thank you for your letter dated January 29, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

The Applicant has reviewed the Standard Comments you referenced and offer the following related to the Standard Comments specifically applicable to our proposal:

Clean Air Branch

1. Construction/Demolition Involving Asbestos.

   Should Applicant's contractor find that the demolition activities involve asbestos, the Asbestos Abatement Office in the Noise, Radiation and Indoor Air Quality Branch will be contacted.

2. Control of Fugitive Dust

   The Applicant will prepare a dust control management plan and understands that the plan does not require DOH approval.

   Activities will comply with the provisions of Hawaii Administrative Rules, Section 11-60.1-33 on Fugitive Dust.
   The following measures will be considered as appropriate to control fugitive dust:

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

Clean Water Branch

1. The Applicant understands and will comply with the State's antidegradation policy (HAR Chapter 11-554-1.1, designated uses (HAR Chapter 11-554-1-3) and applicable water quality criteria (HAR Chapter 11-554-4 through 11-554-8).

2. The Department of the Army has been contacted and since the Project does not involve work performed in, over, and under navigable waters of the United States, the Project will not require a Department of the Army Permit.

3. The Project will not require a National Pollutant Discharge Elimination System (NPDES) permit since the area of disturbance will be less than an acre.

4. The Applicant understands that all discharges related to the Project construction must comply with the State's Water Quality Standards.

5. The Applicant understands and will comply with the monitoring requirements, if applicable and further understands the enforcement and penalties that could occur.

6. The Applicant does not expect this Project to involve a Polluted Runoff Control Project through your office seeking federal grants.

Hazard Evaluation & Emergency Response Office (HEER)

1. A Phase I Environmental Site Assessment (ESA) will be conducted for the property. The Applicant will comply with applicable sections of Chapter 128D, Environmental Response Law, HRS, and Title 11, Chapter 451, HAR State Contingency Plan.

2. The Project site does not involve lands formerly used in the production of sugar cane.

3. The Applicant will seek a "no further action" (NFA) letter if necessary, prior to permit approval.

Noise Radiation & Indoor Air Quality Branch Standard Comments

The project will comply with applicable requirements of the following Administrative Rules of the Department of Health:

- Chapter 11-39 Air Conditioning and Ventilating
- Chapter 11-45 Radiation Control
- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal & Certification
- Chapter 11-504 Asbestos Abatement Certification Program

Safe Drinking Water Branch

The Project does not involve development or actions affecting a Public Water System, except for a water line lateral (connection) for service off the municipal system; does not involve Underground Injection Control or injection wells; and does not involve development of a Golf Course and therefore it is not subject to these comments.

Solid and Hazardous Waste Branch

Hazardous Waste Program

The Applicant does not expect to deal with hazardous waste but will comply with state regulations for hazardous waste in Chapters 11-260 to 11-280, Hawaii Administrative Rules (HAR) if necessary.

Solid Waste Section

The Applicant will not be developing solid waste disposal, recycling, reclamation or transfer systems. The Applicant may have a small on-site recycling program. As a generator of solid waste the Applicant will ensure that their wastes are delivered to permitted solid waste management facilities.

Office of Solid Waste Management

The Applicant will develop a solid waste management plan encouraging recycling and reuse of construction materials, including designated trash bins for recycling.

Underground Storage Tanks

The Applicant does not plan to have underground storage tanks.

Wastewater Branch

The Applicant will be connecting to the City's municipal sewer system and has submitted a sewer connection permit application that is under review by the Wastewater Branch.

Other Comments

1. Noise – If noise created during the construction phase may exceed the maximum allowable levels, as set forth in Hawaii Administrative Rules, Chapter 11-46 "Community Noise Control", a permit will be obtained before commencement of work.

2. Sugar Cane Map – Sugar cane was not grown on the Project site.

3. Hawaii Environmental Health Portal
   a. The Aloha Petroleum Site one lot over from the Project site shows up on the Environmental Health Warehouse site for having underground storage tanks.
   b. The Project will not be subject to Air Emissions Reporting Requirements.

Your letter and this response will be included in the Final EIS.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DEPARTMENT OF EMERGENCY MANAGEMENT
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET • HONOLULU, HAWAII 96813
PHONE: (808) 723-8960 • FAX: (808) 524-3439

KIRK CALDWELL
MAYOR

MELVIN N. KAKU
DIRECTOR

PETER J.S. HIRAI
DEPUTY DIRECTOR

February 2, 2016

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

This is in reply to the January 12, 2016 request for comments for the draft environmental assessment for the project at the former Kyoya restaurant and parking structure.

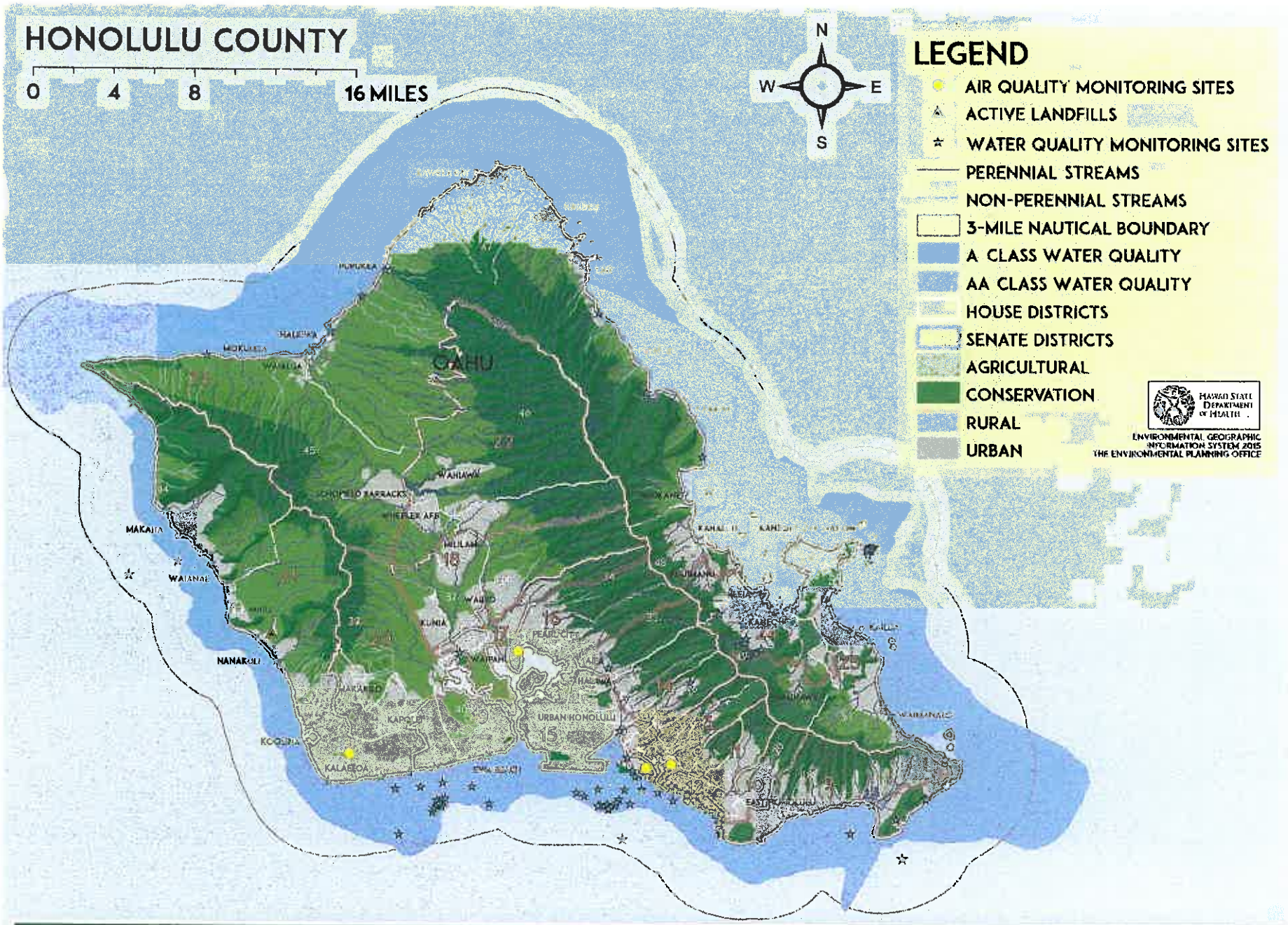
The property sits outside of the tsunami evacuation zone and thus is not in danger during a tsunami warning. However, the property sits within the newly designated extreme tsunami evacuation zone (XTEZ), and thus would be endangered should an extreme tsunami warning be called. This is a very rare but destructive occurrence where a very large earthquake in certain areas could create a very large tsunami that would go much farther inland than a normal tsunami. Scientists estimate that such an occurrence would have a chance of occurring once in three thousand years.

In these occurrences, the guidance to properties such as this would be to evacuate to the fourth floor or higher in a building of at least ten stories; ten stories ensures that the building is engineered with enough structural integrity, and evacuating people to the fourth floor or above ensures that everyone remains above any possible wave action. This is not a statutory requirement; rather, it is a guidance based upon best practices and life-saving lessons learned from historically destructive tsunamis, notably the March 11, 2011 Tohoku Disaster.

Please contact Mr. Peter Hirai, Deputy Director of the Department of Emergency Management, at 723-8960 or phirai@honolulu.gov if you have any questions regarding this. Thank you.

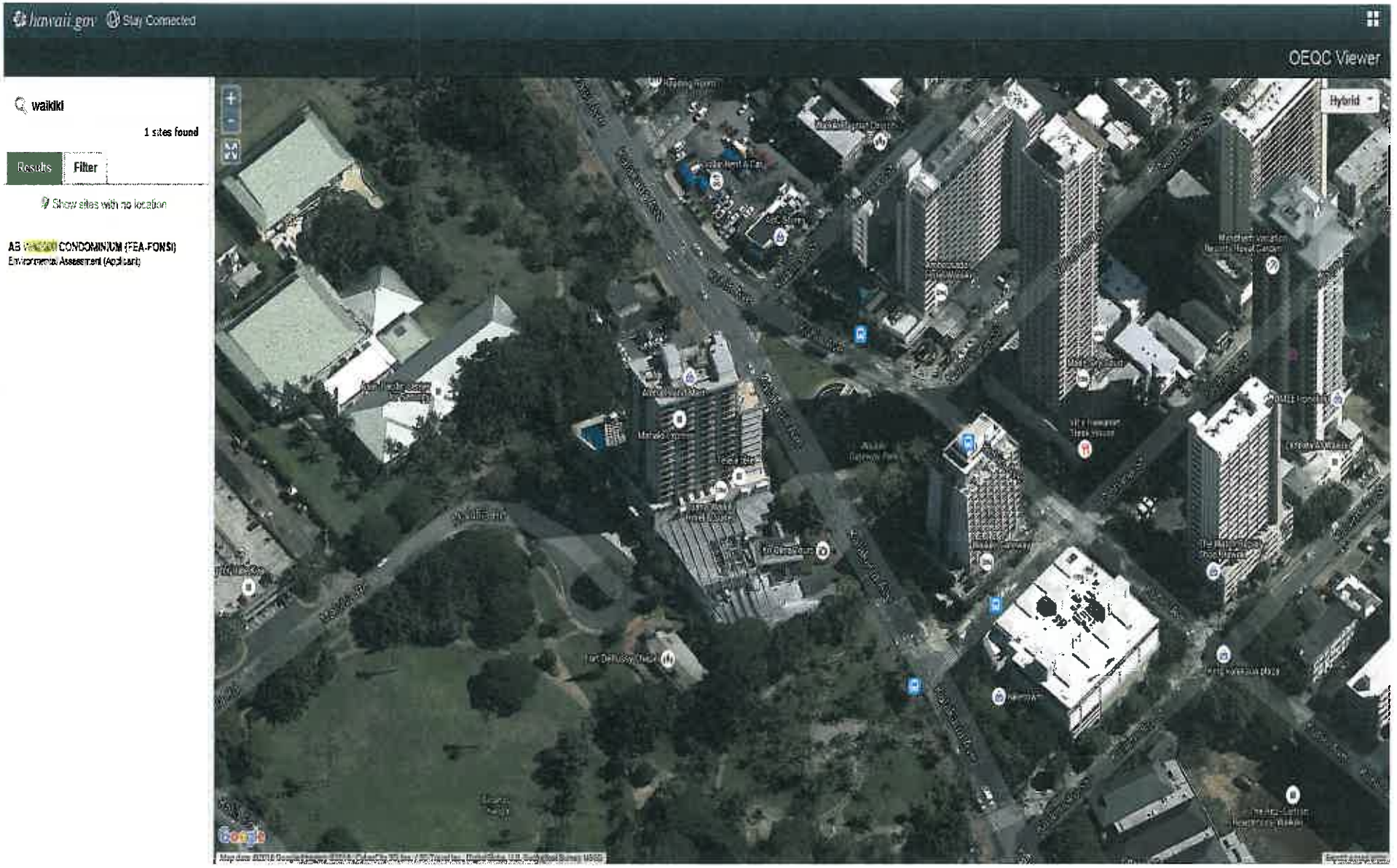
Sincerely,

Melvin N. Kaku



ENVIRONMENTAL HEALTH MANAGEMENT ON OAHU

MAP INTENDED FOR ILLUSTRATIVE PURPOSES ONLY. SITE LOCATIONS ARE APPROXIMATE.

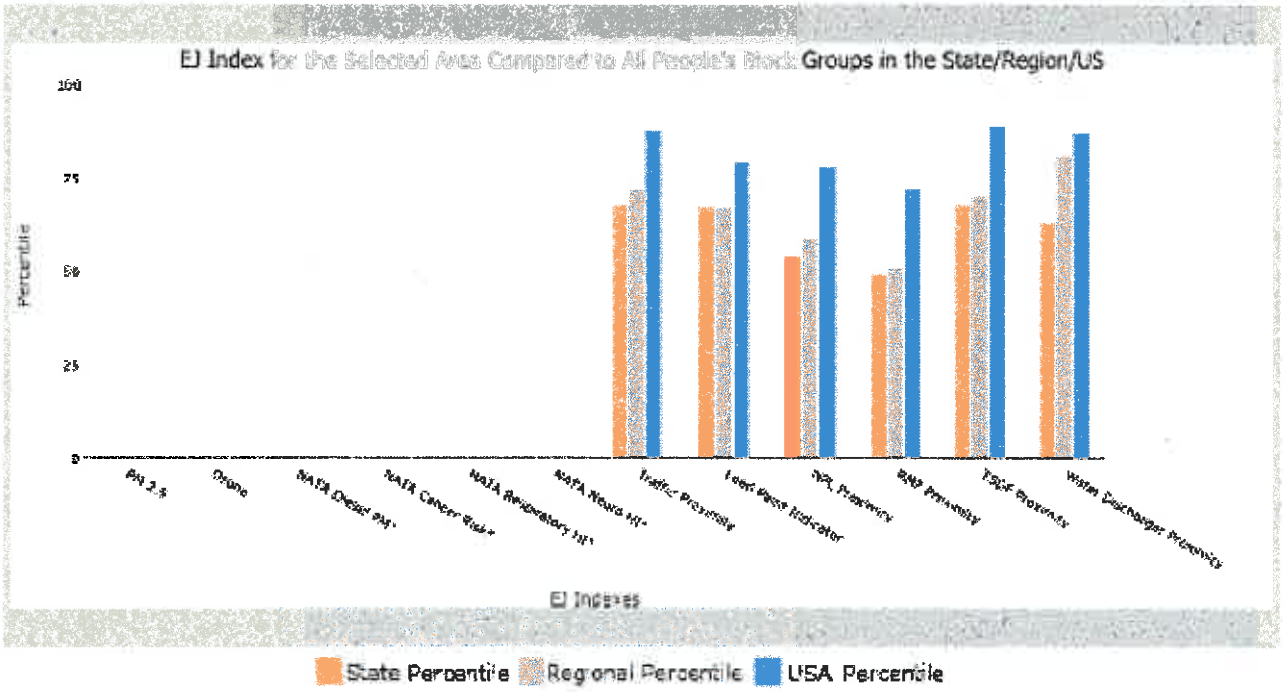

hawaii.gov
Stay Connected
OEQC Viewer
waikiki
1 sites found
Results
Filter
Show sites with no location
AB [redacted] CONDOMINIUM (FEA-FONSI)
Environmental Assessment (Applicant)
Hybrid

EJSCREEN Report

for 1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 57066

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA Diesel PM*	N/A	N/A	N/A
EJ Index for NATA Air Toxics Cancer Risk*	N/A	N/A	N/A
EJ Index for NATA Respiratory Hazard Index*	N/A	N/A	N/A
EJ Index for NATA Neurological Hazard Index*	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	68	72	88
EJ Index for Lead Paint Indicator	67	67	78
EJ Index for Proximity to NPL sites	54	59	78
EJ Index for Proximity to RMP sites	49	51	72
EJ Index for Proximity to TSDFs	68	70	89
EJ Index for Proximity to Major Direct Dischargers	63	81	87



This report shows environmental, demographic, and EJ indicator values. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report

for 1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 57068

January 26, 2016

Digitized Line

1:1,128

EJSCREEN Report

for 1 mile Ring around the Corridor, HAWAII, EPA Region 9

Approximate Population: 57066

Selected Variables	Raw Data	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m³)	N/A	N/A	N/A	9.85	N/A	9.78	N/A
Ozone (ppb)	N/A	N/A	N/A	49.7	N/A	48.1	N/A
NATA Diesel PM (µg/m³)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Cancer Risk (lifetime risk per million)*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Respiratory Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
NATA Neurological Hazard Index*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	190	280	70	190	72	110	85
Lead Paint Indicator (% Pre-1960 Housing)	0.19	0.17	61	0.25	54	0.3	47
NPL Proximity (site count/km distance)	0.048	0.092	46	0.11	42	0.098	50
RMP Proximity (facility count/km distance)	0.093	0.18	48	0.41	20	0.31	32
TSDF Proximity (facility count/km distance)	0.11	0.092	74	0.12	69	0.054	88
Water Discharger Proximity (facility count/km distance)	0.33	0.33	68	0.19	87	0.25	81
Demographic Indicators							
Demographic Index	54%	51%	61	46%	63	35%	78
Minority Population	75%	77%	34	57%	65	36%	82
Low Income Population	34%	25%	73	35%	53	34%	55
Linguistically Isolated Population	16%	6%	90	9%	77	5%	89
Population With Less Than High School Education	8%	10%	52	18%	35	14%	38
Population Under 5 years of age	4%	6%	25	7%	24	7%	25
Population over 64 years of age	17%	14%	68	12%	80	13%	75

* The National-scale Air Toxics Assessment (NATA) environmental indicators and EJ indexes, which include cancer risk, respiratory hazard, neurodevelopment hazard, and diesel particulate matter will be added into EJSCREEN during the first full public update after the soon-to-be-released 2011 dataset is made available. The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: http://www.epa.gov/ttn/atw/natamain/index.html.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Melvin N. Kaku, Director
City and County of Honolulu
Department of Emergency Management
650 South King Street, Basement
Honolulu, Hawaii 96813-3078

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Kaku:

Thank you for your letter dated February 2, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

The Applicant appreciates that you have determined that "The property sits outside of the tsunami evacuation zone and thus is not in danger during a tsunami warning."

The Applicant further understands that the property is within the newly designated extreme tsunami evacuation zone (XTEZ). And that scientists estimate that an extreme tsunami would have a chance of occurring once in three thousand years.

Should an XTEZ event occur, the Applicant will take care and evacuate residents to the fourth floor or higher (third parking level and up). Fortunately the residential floors and activity floors, except for the ground floor are all above the fourth floor (third parking level) or higher.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DAVID Y. IGE
GOVERNOR

FORD N. FUCHIGAMI
DIRECTOR

Deputy Directors
JADE T. BUTAY
ROSS M. HIGASHI
EDWIN H. SNIFFEN
DARRELL T. YOUNG

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

IN REPLY REFER TO:
STP 8.1930

February 3, 2016

Mr. George I. Atta, FAICP
Director
City and County of Honolulu
Department of Planning and Permitting
650 South King Street, 7th Floor
Honolulu, Hawaii 96813

Dear Mr. Atta:

Subject: Park Kalia
Draft Environmental Assessment
Waikiki, Oahu, Hawaii
TMK: (1) 2-6-006:001 and 004

The subject project is not expected to significantly impact the State highway facility. However, a permit from DOT Highways Division, is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,

FORD N. FUCHIGAMI
Director of Transportation

c: Keith Kurahashi, Kusao & Kurahashi, Inc.

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 13, 2016

Mr. Ford N. Fuchigami, Director
Department of Transportation
State of Hawaii
869 Punchbowl Street
Honolulu, Hawaii 96813-5097

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Fuchigami:

Thank you for your letter dated February 3, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

The Applicant appreciates that you have determined that "The subject project is not expected to significantly impact the State highway facility."

The Applicant understands that a permit from the Department of Transportation, Highway Division is required for the transport of oversized and/or overweight materials and equipment on State highway facilities.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

BOARD OF WATER SUPPLY

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

February 5, 2016

KIRK CALDWELL, MAYOR

DUANE R. MIYASHIRO, Chair
ADAM C. WONG, Vice Chair
DAVID C. HULIHEE
KAPUA SPROAT
BRYAN P. ANDAYA

ROSS S. SASAMURA, Ex-Officio
FORD N. FUCHIGAMI, Ex-Officio

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

ELLEN E. KITAMURA, P.E.
Deputy Manager and Chief Engineer

Mr. Keith Kurahashi, President
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: The Letter Dated January 12, 2016 Requesting Comments on the Draft Environmental Assessment for the Park Kalia Waikiki, Condo-Hotel Development in Waikiki, Kalakaua Avenue – Tax Map Key: 2-6-006:001 & 004

Thank you for the opportunity to comment on the proposed condo/hotel project.

The existing water system cannot provide adequate fire protection to accommodate the proposed development. The Board of Water Supply (BWS) Water System Standards require a fire hydrant to be located within 125 linear feet of the property and provide a fire flow of 4000 gallons per minute (gpm) for hotel and high-rise developments in Waikiki. The nearest fire hydrant, fire hydrant M-1057, is located approximately 300 feet from the property and can supply a flow of 4000 gpm. Therefore, the developer will be required to install a fire hydrant in the vicinity of the parcel to provide adequate fire protection in accordance with our Water System Standards. The construction drawings should be submitted for our review. However, please be advised that this information is based upon current data, and therefore, the BWS reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

Water conservation measures are recommended for all proposed developments. These measures include low-flow plumbing fixtures, utilization of nonpotable water for irrigation using rain catchment and chiller/air handler condensate, cooling tower conductivity meters and water softening recycling systems, drought tolerant plants, xeriscape landscaping, efficient irrigation systems and the use of Water Sense labeled ultra-low-flow water fixtures and toilets.

High-rise buildings with booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in our water system.

The proposed project is subject to BWS Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

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

If you have any questions, please contact Robert Chun, Project Review Branch of our Water Resources Division at 748-5443.

Very truly yours,

ERNEST Y. W. LAU, P.E.
Manager and Chief Engineer

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 13, 2016

Mr. Ernest Y.W. Lau, P.E.
Manager and Chief Engineer
Board of Supply
City and County of Honolulu
630 So. Beretania Street
Honolulu, Hawaii 96813

Attention: Mr. Robert Chun
Project Review Branch, Water Resource Division

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project: Park Kalia-Waikiki Condo Hotel
Applicant: Best Hospitality LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2055 and 2057 Kalakaua Avenue
Tax Map Key: 2-6-6: 1 and 4

Dear Mr. Lau:

Thank you for your letter dated February 5, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

The Applicant will install a fire hydrant in the vicinity of the Project site to provide adequate fire protection in accordance with Board of Water Supply (BWS), Water System Standards. The construction drawings will be submitted to BWS for review and approval.

The Applicant understands that the final decision on availability of water will be confirmed when the building permit application is submitted for approval.

The Applicant understands that when water is made available, the Applicant will be required to pay your Water System Facilities charges for resource development, transmission and daily storage.

The Applicant will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands. The Applicant will explore use of non-potable water for irrigation use and chiller/air handler

condensate if applicable. The Applicant proposes use of native landscaping species that are historically specific to the Kalia area, that may thrive in the environment and microclimate.

The Applicant understands that for this high-rise Project booster pumps will be required to install water hammer arrestors or expansion tanks to reduce pressure spikes and potential main breaks in your water system.

As you have recommended, the on-site fire protection requirements will be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

OFFICE OF PLANNING
STATE OF HAWAII

DAVID Y. IGE
GOVERNOR

LEO R. ASUNCION
DIRECTOR
OFFICE OF PLANNING

235 South Beretania Street, 6th Floor, Honolulu, Hawaii 96813
Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

Telephone: (808) 587-2846
Fax: (808) 587-2824
Web: http://planning.hawaii.gov/

Ref. No. P-15044

February 12, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment for the Park Kalia Waikiki Condo-Hotel Project, Honolulu, Oahu; Tax Map Key (1) 2-6-006: 001 & 004

Thank you for the opportunity to provide comments on the Draft Environmental Assessment (Draft EA) for the Park Kalia Waikiki Condo-Hotel project. The Draft EA review material was forwarded to our office by the Department of Planning and Permitting, City and County of Honolulu by letter dated January 12, 2016.

It is our understanding that Best Hospitality, LLC proposes to demolish the existing buildings on the proposed project site and will construct a condominium/hotel in its place. This new building will be a 26-floor, 325-foot high, 170-unit structure, with a basement used for parking. The building will be situated on two parcels of land at 2055 and 2057 Kalakaua Avenue in Waikiki.

The proposed condominium/hotel will include such amenities as landscaped gardens, an entrance lobby, a front desk area, a concierge desk, office space, restaurants, a swimming pool, a pool bar, a fitness center, spa areas, lounges, private dining areas, and lower level storage space. The proposed hotel will offer wedding services, which include a wedding chapel, a family lounge, bridal salons, gardens, and outdoor fountains.

The Office of Planning (OP) has reviewed the transmitted material and has the following comments to offer:

1. The Draft EA addresses many of the programs, policies, and objectives that fall under the jurisdiction of OP. Section 8.8, pages 115-125 of the Draft EA examines the project's consistency with the Hawaii Revised Statutes (HRS) Chapter 205A-2, the objectives and policies of the Hawaii Coastal Zone Management program.

2. The Draft EA includes an analysis of the project's consistency to HRS Chapter 226, the Hawaii State Plan. Section 7.1.1, pages 55-68 of the Draft EA includes a discussion on a

number of the Hawaii State Plan's overall themes such as the economy, tourism, recreation, and sustainability. The analysis on the State functional plans include topics such as the economy, energy, historic preservation, recreation, tourism, and transportation. The Draft EA also lists the goals, objectives, and priority guidelines on themes such as economic activity, physical development, and urban design.

3. Section 8.7.3.1 – Water Resources, pages 103 and 104, of the Draft EA includes an analysis on water quality standards of Waikiki and flood plain management. Furthermore, in Appendix H, Section 5, pages 5-1 to 5-2 of the Due Diligence Report includes an examination on site grading, runoff, and storm drainage systems.

   We understand that due to the project site being less than one acre, the City and County of Honolulu's stormwater management practices may not be required for this project. OP, however, encourages the applicant to consider stormwater mitigation practices to control flooding and inundation impacts. Reducing the amount of impervious and hardened surfaces is an effective method in mitigating stormwater inundation. During heavy storms, hardened surfaces allow storm runoff to flow into storm-drains and overwhelm nearby coastal areas with sediment and land-based pollutants. Please consider Low-Impact Development (LID) design features and best management practices (BMP) to control stormwater runoff. LID techniques promote a range of structural BMPs for stormwater mitigation that minimize the negative effect on the marine environment.

   LID design concepts and stormwater runoff BMPs embrace decentralized micro-scale controls that infiltrate, filter, store, reuse, evaporate, and detain runoff close to its source. In this case, effective BMP-LID stormwater control methods include design features such as enhanced landscaping, bio-retention basins, and permeable pavers for driveway areas. These design features are found in OP's "Low Impact Development, A Practitioners Guide." For more information on this, please examine Section 3.4, pgs. 3-14 to 3-17 of this guide. It can be viewed or downloaded from the OP website at http://files.hawaii.gov/dbedt/op/czm/initiative/lid/lid_guide_2006.pdf

If you have any questions regarding this comment letter, please contact Josh Hekekia of our office at (808) 587-2845.

Sincerely,

Leo R. Asuncion
Director

c: George I. Atta, FAICP, Department of Planning and Permitting, City and County of Honolulu

Attn.: Joette Yago, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 13, 2016

Mr. Leo R. Asuncion
Acting Director, Office of Planning
State of Hawaii
P.O. Box 2359
Honolulu, Hawaii 96804

Attention: Mr. Josh Hekekia

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Asuncion:

Thank you for your letter dated February 12, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The Applicant appreciates your confirmation that the DEA addresses many of the programs, policies, and objectives under the jurisdiction of the Office of Planning (OP) and that the DEA examines the Project's consistency with the objectives and policies of the Hawaii Coastal Zone Management program.

2. The Applicant appreciates your confirmation that the DEA contains an analysis of the Project's consistency to HRS Chapter 226, the Hawaii State Plan.

3. The Applicant appreciates your confirmation that the DEA has analyzed water quality standards of Waikiki and flood plain management and includes an examination of on-site grading, runoff, and storm drainage systems.

   Although, as you have confirmed the Project site is less than one acre and storm water management practices may not be required for this project, the Applicant will consider storm water management practices to control flooding and inundation impacts. The Applicant is reducing a significant amount of impervious surfaces to mitigate storm water inundation.

   The Applicant will also consider Low-Impact Development (LID) design features and best management practices (BMP) to control storm water runoff.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

KIRK CALDWELL
MAYOR

MICHAEL D. FORMBY
DIRECTOR

MARK N. GARRITY, AICP
DEPUTY DIRECTOR

TP1/16-639124R

February 12, 2016

Mr. Keith Kurahashi
Project Manager
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Draft Environmental Assessment (DEA) Park Kalia, Tax Map Key: 2-6-6: 1 and 4; Waikiki, Oahu, Hawaii

In response to a letter dated January 12, 2016, from George I. Atta, FAICP, Director, City and County of Honolulu, Department of Planning and Permitting, we have the following comments:

1. When feasible, the project should include complete streets provisions as part of the improvements.
2. The short- and long-term Traffic Control Plans should address, consider, and inform employees, volunteers, and visitors of the future car and bike share programs that are coming to Waikiki or could be included as part of congestion mitigation.
3. Any damage to the existing roadway and sidewalk area caused by the project should be restored to its original condition or better.
4. Coordinate construction schedules with other nearby properties that have planned developments to ensure minimal impacts on City streets.
5. Any construction materials and equipment should be transferred to and from the project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize any possible disruption to traffic on the local streets.

Thank you for the opportunity to review this matter. Should you have any further questions, please contact Michael Murphy of my staff at 768-8359.

Very truly yours,

Michael D. Formby
Director

cc: Department of Planning and Permitting, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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April 13, 2016

Mr. Michael D. Formby, Director
Department of Transportation Services
650 South King Street, 11th Floor
Honolulu, Hawaii 96813

Attention: Mr. Michael Murphy

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Formby:

Thank you for your letter dated February 12, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The Applicant will include complete streets provisions when feasible. The Applicant plans include a park that extends from the existing right-of-way (sidewalk) into the Project site.

2. The Applicant's short- and long-term Traffic Control Plans will address and inform employees, volunteers (if any) and visitors of the future car and bike share programs that are coming to Waikiki or could be included as part of congestion mitigation.

3. Applicant agrees to repair any damage to the existing roadway and sidewalk area (restore to its original condition or better) caused by the Project.

4. Applicant will have their construction management consultant coordinate construction schedules/activities with other nearby properties that may be under construction at the same time to ensure minimal impacts on City streets.

5. Construction materials and equipment will be transferred to and from the Project site during off-peak traffic hours (8:30 a.m. to 3:30 p.m.) to minimize possible disruption to peak hour traffic on the local streets.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

WAIKIKI NEIGHBORHOOD BOARD NO. 9

c/o NEIGHBORHOOD COMMISSION • 530 SOUTH KING STREET ROOM 406 •
HONOLULU, HAWAII, 96813
PHONE (808) 768-3710 • FAX (808) 768-3711 • INTERNET: http://www.honolulu.gov

February 17, 2016

Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813

Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, HI 96813

Kusao and Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Re: Draft Environmental Assessment for Proposed Park Kalia Condominium Hotel and Wedding Chapel Development

Thank you for including the Waikiki Neighborhood Board in the review process for the above-referenced project. The Waikiki Neighborhood Board supports developments that comply with our Land Use Ordinance (LUO) regulations, are consistent with the Waikiki Special District Design Guidelines, are culturally appropriate and complement their surroundings.

The Waikiki Neighborhood Board voted to recommend denial of this proposed development when presented before our Board on September 8, 2015. The basis for this recommendation of denial is summarized below:

This project:

- does not comply with zoning regulation (Land Use Ordinance)
- does not comply with numerous provisions of the Waikiki Special District Design Guidelines, the City and County of Honolulu General Plan and the Primary Urban Center (PUC) Development Plan.
- does not meet the criteria for the approval of a variance, nor does the applicant demonstrate any unique qualities or "hardships" associated with the project area which would warrant approval of a height variance.
- results in significant negative impacts to both the built and natural environment in the immediate and surrounding area
- violates the intent of the "Punchbowl Sightline" ROH Section 21.9.80.4(g)(3) variance provision of the LUO.

Waikiki Neighborhood Board - Comments on the Draft Environmental Assessment

History and Intent of Zoning - Chapter 2 Page 10

An outline of the land use history of these two project parcels is provided in this section of the Draft EA. In contrast to the applicant's analysis of this timeline, the City's intent concerning the land use and height limit for these two parcels has been perfectly clear and consistent over the past 35+ years.

Briefly, in 1976 the height limit was reduced on these parcels from 350 feet to 25 feet. In 1986, these parcels were designated "Park" and recommended in land use plans as "Open Space" with a 25-foot height limit. In 1992, the designations of these parcels were changed in the PUC Development Plan from "Commercial" to "Park". And while in 1996 the designation of these parcels was changed from "Park" back to "Commercial", the height limit of 25 feet was formally maintained in 1997 and again re-acknowledged in zoning code as 25 feet as recently as 2011.

Contrary to the statements made by the applicant in Chapter 2, page 2, this Board believes there has never been ambiguity on the City's part in its intent in preserving a 25-foot height limit on these two properties over the years, nor is the failure to rezone these parcels for a 350 height limit an "error" on the City's part.

In response to another of the applicant's comments, this Board believes the City's "failure to place a symbol on the City's public facilities map" indicates nothing as to the intent of the City to acquire or not acquire these parcels at a future date for public use.

In summary, this Board strongly disagrees that the designation and continual re-designation of these parcels with a 25-foot height limit over the years was done in "error" by the City, as stated by the applicant.

Maximization of Economic Return

The applicant repeatedly states in this EA that these two project parcels are "underutilized". While this may be the perception from the property owner's fiscal return perspective, this is an incorrect statement from a land use and regulatory realm. The property owner purchased these properties with the full understanding of their existing land use controls, limitation on uses, and of course, the 25-foot height limit restriction. The property owner is not being denied all economic use of these properties and therefore cannot claim that being denied the 350-foot variance creates a "taking" of his property or creates some economic "hardship" for him. The intent of a variance approval is not to ensure a developer achieves a profitable rate of return on a property on which he may have paid an inflated price, based on the potential approval of a future discretionary land use decision.

Economic Benefits to Community

Throughout the EA, the applicant exhaustively outlines the proposed fiscal, employment and sales benefits Waikiki and more importantly the City and County of Honolulu is to gain from implementation of this development. These types of "benefits" are now standard and expected of most new developments in Waikiki due to the strength of the market and the desirability of our neighborhood.

Implying these standard "benefits" are somehow justification for approving a variance 14 times the current height limit standard, is an incorrect application and rationale for a variance.

Impacts to the Surrounding Neighborhood

The relationship of this development to its surrounding built environment is never discussed in this EA. Specifically, an architectural dialogue with the Luana Hotel, the Fort Derussy Chapel and to a lesser degree the Asia Pacific Center for Security Studies and the featured war memorial just Diamond Head of the proposed site, is never mentioned.

Aside from an exhaustive description of parks in general in Appendix A "Importance of Parks", there is no discussion of how this project enhances the surrounding area's history, culture, activities, current uses or potential planned improvements.

Public Views, Public Space and Context

While it can be argued that the narrow Kalakaua Avenue site corridor may be minimally impacted by this development, public views from a full suite of public areas around the Fort Derussy area will be significantly and negatively impacted by this proposed 350-foot tower.

All valuable public views are to be considered with new developments, not just designated view corridors. This policy is codified in numerous Honolulu land use policies including but not limited to:

- 1992 General Plan – III Natural Environment, Objective B, Policy 2 "Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas".

- Figure 3:1 View Corridors of the PUC Development Plan. This figure specifically shows a dedicated view corridor "tail" from Fort Derussy to the Ko'olau Mountains.

The proposed 350-foot tower violates these policies and others related to the preservation of public views.

Additionally, the Waikiki Neighborhood Board notes that based on early consultation with the Honolulu Department of Design and Construction, that agency has responded to early consultation for this EA with concerns with the height and view impacts and that DPP stated that it will be difficult for them to support this project as proposed.

Intent and Application of the "Punchbowl Sightline" Variance Provision

When originally presented before the public and the Board, the proposed zoning code amendment known here as the "Punchbowl Sightline" provision was described as allowing a developer some relief in the form of an additional 30-40 feet in height in exchange for creative design applications and possible "slendering" of high rise developments on parcels to reduce visual bulk and shadowing. The intent of the Punchbowl provision was never to allow a developer to construct a tower 14 times the height of the current zoning regulations.

The tower is proposed to exceed the zoning height limit by 325 feet, an order of magnitude 14 times that permitted by the current zoning regulations. This variance process is discretionary and therefore an explanation is needed why the additional 325 feet is proposed/required for this development and what design alterations have been made to add credence to consideration of variance consideration. Under provisions of a variance, the desire to maximize fiscal returns can never be used as justification for the issuance of a zoning variance.

Promotion of a Hawaiian Sense of Place and Design Guidelines

The Waikiki Special District Design Guidelines state that:

- *'the long axis of all new high rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views….'*
- *'building forms which produce narrow towers are preferred'*
- *'buildings with a series of graduated, stepped forms are preferred for new projects'*

The tower as proposed violates all of these policies. A discussion is needed outlining the rationale for non-compliance with our neighborhood's approved design criteria. Stating and/or demonstrating visually that impacts will not be significant, does not negate the need to provide the public with a rationale for pursing design non-compliance.

Violation of Provisions of Chapter 343 and Hawaii Environmental Review Laws

Based on all of the above, this Board believes the impacts from this proposed development are significant Under significance criteria as outlined in HRS Chapter 343 a FONSI cannot be issued and the preparation of an EIS is required.

Mahalo for your consideration of the above comments on the Draft EA. We look forward to the preparation of an EIS which adequately addresses concerns noted by this Board, agencies, environmental groups and the general public.

Sincerely,

Bob Finley, Chair
Waikiki Neighborhood Board

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April 13, 2016

Mr. Bob Finley, Chair
Waikiki Neighborhood Board No. 9
C/o Neighborhood Commission Office
Honolulu Hale
530 South King Street, Room 406
Honolulu, Hawaii 96813

Dear Mr. Finley:

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Thank you for your letter dated February 17, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comments and offer the following responses (following the order set forth in your letter):

This project:

- ***"does not comply with zoning regulation (Land Use Ordinance)"***

  The Project does comply with the Land Use Ordinance and more specifically the Waikiki Special District as described below from the DEA and Final Environmental Assessment (FEA):

"7.5 LAND USE ORDINANCE (SEC. 21-9.80 WAIKIKI SPECIAL DISTRICT)

7.5.1 Waikiki Special District Objectives (Sec. 21-9.80-1)

7.5.1.1 Promote a Hawaiian Sense of Place

The Project design includes landscaped yards and public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building

face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

7.5.1.2 Optimum Community Benefits

The development of the Project Site will provide the following community benefits:

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.

- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.

- The Project will provide a greater average setback along Kalakaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.

- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalakaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.

- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.

    - The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
    - The proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.

- The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
- The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.

- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.

- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.

  - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
  - The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
  - The Project will reduce material waste through effective construction and operational recycling programs.

- Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kalia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kalia, Waikiki.

- The creation of a new park in Waikiki to be called Park Kalia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
- Coordinated off-site improvements to neighboring parks and open spaces, Kalakaua Park (Waikiki Gateway Park) and Fort DeRussy, to create greater connectivity.
- Commitment to providing an on-site cultural historian to provide insight and educate park users.
- Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kalia, Waikiki.
- Work with the management groups of Kalakaua Park (Waikiki Gateway Park) and Fort DeRussy Park to coordinate activities and programing.

7.5.1.3 Variety of Compatible Land Uses

The Project will include a condo hotel, retail, and dining in a mixed use venue of compatible land uses in support of the resort and residential community in Waikīkī and the larger island wide residential community.

7.5.1.4 Multimodal Transportation in Waikīkī

The Project will further the WSD objective to support the efficient use of multimodal transportation in Waikīkī and encourage the use of public transit, while balancing the critical need for adequate parking at the Project Site. The Project will take advantage of the existing bus facilities that exist along Kuhio and Kalakaua Avenues in providing for the needs of employees and condo hotel guests. Convenient bike racks will be provided in the parking garage as needed to satisfy bike-user demand.

The condo-hotel operator intends to implement a TMP which will encourage its employees to use public transit and carpools. The condo hotel operator will provide within its management office an employee responsible for the TMP who will encourage and coordinate the use of public transit and carpools, and make transit and biking information available to all employees at the Project Site.

7.5.1.5 Support Visitor and Resident Needs

The Project will provide commercial support for visitors and residents with dining experiences in a conveniently located mixed use development. The redevelopment of the Project Site will enhance the visitor experience in Waikīkī.

7.5.1.6 Rejuvenation and Revitalization in the Special District

The Project will replace the Project Site's older development with a new condo-condo-hotel, a chapel and dining.

7.5.1.7 Hawai'i's Tropical Climate and Ambience

The Project will take advantage of Hawai'i's tropical climate and ambiance with a large public open space and setback and yard areas at street level that will include tropical landscaping and a water feature.

The Project will also include lanais for each of the condo-hotel units allowing the occupants to take advantage of the tropical climate and ocean views from their units.

The open, podium area on the amenity deck located on the 6th floor will be utilized as an outdoor dining terrace and main pool deck. This open amenity deck will allow the condo-hotel guests to take advantage of Hawai'i's tropical climate and the ocean and mauka views from the deck.

7.5.1.8 Diamond Head View from Punchbowl

Most of the tower will be in the view profile of the Allure Waikiki and all of the tower will have no impact on the view of Diamond Head from the Punchbowl Lookout (see **Appendix A2, View Corridors**). The Applicant designed this Project to minimize the impact on the view of Diamond Head from Punchbowl.

7.5.1.9 Pedestrian Orientation in Waikīkī; People-Oriented, Interactive Landscaped Open Spaces

The Project, through its landscaped public open space and its landscaped yard area will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site.

7.5.2 Prominent View Corridors and Historic Properties (Sec. 21-9.80-4)

7.5.2.1 Significant Public Views

"(1) Intermittent ocean views from Kalia Road across Fort DeRussy Park and from the Ala Wai Bridge on Ala Moana Boulevard;
(2) Continuous ocean views along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue;
(3) Ocean views from Ala Wai Yacht Harbor;
(4) Ocean views from Kuhio Beach Park;
(5) Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);
(6) Mauka views from the portions of the following streets mauka of Kuhio Avenue:
(A) Nohonani Street;
(B) Nāhua Street;
(C) Kānekapolei Street;

(D) Kaiolu Street;
(E) Lewers street;
(F) Walina Street; and
(G) Seaside Avenue;

and

(7) View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue."

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.2 Preserve, Maintain, and Enhance These Views

Due to the Project's location, none of these significant public views will be affected by the proposed tower.

7.5.2.3 Historic Properties

"*Development should preserve, maintain and enhance historic properties whenever possible. Special district permit applications involving buildings over 50 years old shall be submitted to the state department of land and natural resources for review and comments.*"

The existing structures on the Project Site are only about 25 years old and they are not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey Initial Report ("AIS") and Cultural Impact Assessment ("CIA") for One Waikiki were conducted by Cultural Surveys Hawai'i, Inc. in July, 2015. The Archaeological Inventory Survey for One Waikiki is included in its entirety in **Appendix E**. The Cultural Impact Assessment is included in its entirety in **Appendix G**.

7.5.3 General Requirements and Design Controls (Sec. 21-9.80-4)

The design of buildings and structures will reflect a Hawaiian sense of place, as described in this section.

7.5.3.1 Uses and Structures Allowed in Required Yards and Setbacks

Should roof eaves, awnings (including retractable awnings) and other sunshade devices be provided, they will not be more than 42 inches vertically or horizontally beyond the building face for buildings under 60 feet in height. On buildings over 60 feet in height, roof eaves may extend more than 42 inches into a required yard, street setback or height setback area if the resulting roof form is integral to a cohesive, coherent design character for the structure. In no case, will such extension exceed one-half the width of the required yard or height setback.

7.5.3.2 Curb Cuts

Curb cuts for driveway openings and sight distances at all intersections will comply with the design standards of the Department of Transportation Services (DTS).

7.5.3.3 Design Guidelines.

General Guidelines

The only general guideline described in LUO Exhibit 21-9.15 that affects this Project is the 25-foot height limit. BH will be requesting, through a Resolution from City Council, a 350-foot height limit. The Project will meet all other Waikiki Special District design standards.

Yards. The 20-foot yard required for Kalakaua Avenue per the development standards under LUO Table 21-9.6(B) will be met possibly through yard averaging.

Utility Installations. Except for antennas, utility installations (if developed) will be designed and installed in an aesthetic manner so as to hide or screen wires and equipment completely from view, including views from above; provided, however, that any antenna located at a height of 40 feet or less from existing grade, visible from a public right-of-way, will take full advantage of stealth technologies in order to be adequately screened from view at ground level without adversely affecting operational capabilities.

Building Materials. BH may be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment. A variety of building materials will be employed, including natural materials and possibly textured concrete and plaster.

Building Scale, Features and Articulation. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

Ground Level Features

a. Within the development, attention will be given to pedestrian-oriented ground level features, which will draw pedestrians into the condo-hotel lobby. A close indoor-outdoor relationship will be promoted with the partially open condo hotel lobby. Design priority will include the visual links through the development connecting the sidewalk and other public areas with on-site open spaces, such as the public open space.

b. Building facades at the ground level along open spaces and major streets (including Kalākaua Avenue, Kūhiō Avenue, Kapahulu Avenue, Ala Wai Boulevard and Ala Moana Boulevard) will include as appropriate open lobbies, arcade entrances, and display windows, and may include outdoor dining where it is permitted. The Kalakaua Avenue frontage will have a porte cochere and open lobby as promoted by this guideline.

c. All commercial uses located at ground level, other than as required by paragraph "b", at least one-half of the total length of the building façade along streets shall be devoted to open lobbies, arcade entrances, display windows and outdoor dining where permitted. This guideline will be met with the open lobby.

d. The Project will include a partially open condo hotel-lobby.

e. The building will be situated between a street and open spaces, the ground level pedestrian way will provide visual links between the street and the partially open condo-hotel lobby.

f. Where blank walls occur fronting a street or open space, they shall be screened with heavy landscaping or appropriately articulated exterior surfaces.

g. Only a ground level parking lift is planned for the mechanical parking garage.

h. The partially open condo hotel lobby will be open to its Kalakaua Avenue frontage.

Outdoor Lighting

Outdoor lighting will be subdued or shielded to prevent glare and light spillage onto surrounding properties and public rights-of-way.

7.5.3.4 Planned Development-Resort (PD-R)

The Project does not meet the minimum lot size requirements of 1 acre to process as a Planned Development-Resort project. (Project is 28,761 square feet in size)

7.5.3.5 Landscaping

a. Some trees six inches or greater in trunk diameter may be removed or relocated in order to allow appropriate development of the Project Site.

b. The parking structure will be landscaped or articulated with designs to reduce the impact of a solid wall.
c. Newly introduced landscape will include fragrant, lush, tropical vegetation and native plant species, where appropriate.
d. Fences or walls exceeding 36 inches in height, except for moss rock walls, shall be landscaped with vine or hedge planting or other approved vegetation on the street side. The only exception will be retractable fences to secure the property after business hours.
e. All landscape areas will have an adequate irrigation system.

7.5.3.6 Height Regulations

a. Rooftop height exemptions as allowed in the special district may be used, for mechanical appurtenances and utilitarian and architectural features.
b. Coastal height setbacks are not applicable for this development located makai of Kalakaua Avenue, about 1,800 square feet from the shoreline.

7.5.3.7 Parking

BH understands that ground floor uses other than dwellings are exempt from off-street parking requirements.

7.5.3.8 Vending Carts

Vending carts are not planned at this time.

7.5.4 Resort Mixed Use Precinct

7.5.4.1 Permitted Uses

The Resort Mixed Use Precinct allows as permitted uses the Project's proposed condo-hotel and dining uses.

7.5.4.2 Development Standards

Development Standard	Resort Mixed Use Precinct	Project
Minimum lot area (square feet)	10,000	28,761 square feet
Minimum lot width and depth (feet)	50	Average – 160' width and 180' depth
Yards - Front (feet) - Side	20 0	20-foot average
Maximum Density (FAR)	1.0 (plus ½ of the abutting right-of-way)	28,761 sf 6,480 sf 35,241 sf
Minimum open space (percent of zoning lot)	0	30%

Development Standard	Resort Mixed Use Precinct	Project
Open Space Bonus Lot area 50% right-of-way Max FAR	10 sf/1 sf of public open space 5 sf/1 sf of open space 3 sf/1 sf of arcade area 1 sf/1 sf of rooftop landscape 3.5 FAR	7,708 x 10 = 77,080 sf 507 x 5 = 2,535 sf 4,437 x 3= 13,311 sf 1,306 x 1 = 1,306 Total = 94,232 sf 35,241 sf + 88,102 sf = 123,343 sf
Maximum Height (feet)	25 feet per zoning map 350 feet subject to City Council approval by Resolution	325 feet (350' with architectural appurtenances)
Transitional Height Setback	1 foot for every 10 feet of height over 40 feet	Will be met

7.5.4.3 Parking

The parking requirement for the Project, based on 170 condo-hotel rooms is 43 stalls. HB plans to provide 67 parking stalls 24 more than required.

7.5.4.4 Loading

The loading requirement based on the 123,343 square feet of floor area for hotel use will be three loading stalls, two full size (12' by 35') and one smaller loading stalls (8.5' by 19'). HB will provide two full size stalls and one smaller loading stall, as required."

- ***"does not comply with numerous provisions of the Waikiki Special District Design Guidelines, the City and County of Honolulu General Plan and the Primary Urban Center (PUC) Development Plan."***

The Project does comply with the following Waikiki Special District Design Guidelines as described in the DEA and FEA:

"7.6 WAIKIKI SPECIAL DISTRICT GUIDELINES

The proposed development will satisfy the objectives and standards of the WSD as follows:

7.6.1 Hawaiian Sense of Place

The Project's overall design will reflect a "Hawaiian Sense of Place" by including a lush tropical landscape in public open spaces, a water feature, meandering walkways, a contemporary Hawaiian façade, canopy trees and gathering places.

The Project design includes landscaped yards and public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

Exterior Building Colors. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

The building façade will be varied with a high degree of articulation. The overall exterior and interior design and finish materials will be selected to convey a contemporary tropical Hawaiian feel. From an aerial view, the high level of articulation will include a curved building face. HB will also provide lanais for each of the condo hotel units and open stairs on the mauka side of the building to provide articulation and contrast. At the pedestrian level specifically, native patterns are planned for the façade of the building on all sides, and stone walls, wooden benches, stone walkways, and other natural elements in all areas of public interaction further promote a "Hawaiian Sense of Place".

7.6.2 Building Design

"The following guidelines are intended to promote building design which responds to Hawai'i 's climate, relates to human scale and preserves significant public views. The resulting design solutions should reduce the perception of crowding, enhance the aesthetics of Waikiki and impart a greater sense of Hawaiiana in the built environment."

As noted, the following guidelines, including the **mauka/makai orientation** are intended to promote a design that responds to climate, relates to human scale and preserves **significant public views** (emphasis added).

Significant public views are described in the "Waikiki Special District Design Guidelines" as follows:

"...Significant views are identified in Section 9.80-3(a) of the LUO and include:

- Views of Diamond Head from as many vantage points as possible, but especially from Ala Wai Boulevard and the Punchbowl Lookout.

- Continuous views of the ocean along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue.
- Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard.
- Mauka views from the following streets mauka of Kuhio Avenue: Nohonani and Nāhua Streets; Kānekapolei and Kaiolu Streets; Lewers and Walina Streets; and Seaside Avenue and the Ala Wai Promenade.
- Views of Ala Wai Yacht Harbor from Magic Island Park."

The Project will not affect any of these significant public views described here and in Section 21-9.80-3(a) of the Land Use Ordinance.

The Project responds to Hawai'i 's climate with lanais and a swimming pool and deck to allow visitors to enjoy the tropical climate of Hawai'i and provides a public open space at the ground level to further experience the tropical climate.

7.6.2.1 Orientation & Form

As noted in Section 7.6.2 above, since the Project will not affect the significant public views that the mauka/makai orientation was intended to protect, there is some flexibility afforded in the building orientation. This building is, however, angled in a mauka/makai orientation.

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

7.6.2.2 Open Space

The Project, through its landscaped public open space and setback areas and its landscaped yard areas will provide a people oriented interactive landscaped open space. These areas will also provide an inviting pedestrian experience around the Project Site.

7.6.2.3 Parking Facilities

The mechanical parking podium will be located above the ground floor, but will include two parking lifts that will carry and maneuver cars into the four mechanical parking levels. The Project requires 43 parking stalls but will contain approximately 67 parking stalls, which is 24 stalls in excess of the 43 parking stalls required under the LUO for hotel. This location is noted in the "Waikiki Special District Design Guidelines" as appropriate for parking in a structure.

7.6.2.4 Articulation, Scale, Material Color

The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place.

The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

BH will be utilizing articulated concrete and plaster finishes bringing out neutral tones for the larger areas of color on the structure to blend with the natural environment.

A variety of building materials will be employed, including natural materials and textured concrete and plaster. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting.

These elements of articulation, material and color are in keeping with the recommendation of the "Waikiki Special District Design Guidelines"

7.6.2.5 Entries, Lobbies & Arcades

HB plans open landscaped entry areas leading visitors into the Project at the porte cochere entry on Kalakaua Avenue. Additional landscaped public open space and landscaped yard areas will provide inviting gathering places within the Project. The Project will have an open condo-hotel lobby.

7.6.2.6 Visual Links

This building is not located between a public space and a shoreline, mountain view, open space or landmark, and is not subject to the visual link criteria. However, HB does plan to have a partially open condo hotel lobby at their porte cochere on Kalakaua Avenue.

7.6.2.7 Features in Required Yards

The following features will enhance the open space and improve the appearance of the streetscape:

- A porte cochere is planned along Kalakaua Avenue, and is set back onto the property.
- Lei stands are not proposed at this time.
- Walls & Fences – Fences and/or walls may be used to secure the perimeter of the Project in the evenings, respecting the front yard setback. The landscape elements will also have walls less than 36 inches in height to provide separation from walkways, including seat walls as a rest stop and/or gathering place for pedestrians.
- Shading Devices - Shading devices such as roof overhangs and eaves are proposed, and may encroach into the required yards no more than the amount permitted by the LUO.
- Outdoor Dining - Outdoor dining facilities are being considered and will meet WSD criteria. Vending carts are not proposed at this time.
- Rooftop Design and Equipment Screening - Rooftop machinery, equipment and utility installations will not exceed the established height limit and will be screened from view.

7.6.2.8 Roof Design and Equipment Screening

Rooftop machinery, equipment and utility installations (if any) will be screened from view (as required by the LUO) to prevent undesirable views and vistas from surrounding buildings, as well as from Punchbowl and Diamond Head.

7.6.2.9 Landscaping

As indicated in the preliminary concept plan, landscaping will be provided to improve the streetscape along Kalakaua Avenue and enhance the pedestrian experience for visitors and local residents alike. There will be significant public open space on the Project to maintain and enhance the inviting, park-like setting. The landscaping will promote and create the image for Waikīkī as a tropical resort destination.

7.6.2.10 Water Features and Artwork

A water feature will be provided within the Property.

7.6.2.11 Sidewalk & Paving

Public walkways will be constructed to match the existing sidewalks on Kalakaua Avenue, or will be upgraded to a design acceptable to the City's Department of Facility Maintenance.

7.6.2.12 Signage

HB has not designed the proposed signs for the Project; however, the proposed signs will meet LUO requirements, possibly through development of a Sign

Master Plan to be submitted as a Zoning Adjustment. If illuminated, the lighting will comply with the WSD guidelines.

7.6.2.13 Lighting

Lighting for the Project will be utilized to contribute to public safety and to enhance the nighttime ambiance of the open space areas on the property. Outdoor lighting will be subdued or shielded so as not to provide inappropriate or excessive spillage onto surrounding properties or public rights-of-way.

7.6.3 Urban Design Controls

7.6.3.1 Waikiki Gateways and Fort DeRussy

The Project is located about 640 feet from the Kalakaua Avenue/Ala Moana Boulevard gateway and will not affect this important gateway to Waikiki.

7.6.3.2 Major Streets

The Project site abuts Kalakaua Avenue, one of the Major Streets identified in the WSD Design Guidelines. Due to the increase in public open space and landscape within the required yards, the proposed design will improve pedestrian flow and offer visual relief for motorists. Landscaping and trees will be located to accentuate the tropical outdoor experience.

7.6.3.3 Waikiki Promenade

The Project is not situated along the Waikiki Promenade and will not affect the Waikiki Promenade.

7.6.3.4 Coastal Height Setback

The Project is not located near the shoreline; therefore it is not subject to a coastal height setback.

7.6.3.5 Mini Parks

A large public open space on the Project site will be maintained by the condo hotel operator or association.

7.6.3.6 Significant Public Views

As mentioned earlier, the Project will not impact the significant views that are identified in the WSD Design Guidelines and Section 9.80-3(a) of the LUO.

7.6.3.7 Public Pedestrian Access

The Project will not affect existing public pedestrian access in Waikīkī. Due to the size, shape and location of the property, new public pedestrian access is not needed or warranted.

7.6.3.8 Historic Structures, Significant Sites and Landmarks

The existing structures on the Project Site are only about 25 years old and they are not listed on the State or Federal Register of Historic Places. An Archaeological Inventory Survey Initial Report ("AIS") and Cultural Impact Assessment ("CIA") for One Waikiki were conducted by Cultural Surveys Hawai'i , Inc. in July, 2015. The Archaeological Inventory for One Waikiki is included in its **Appendix E.** The Cultural Impact Assessment is included in its entirety in **Appendix G.**

The Project does comply with the General Plan as follows:

"7.2.1 Economic Activity

General Plan Objective B - To maintain the viability of O`ahu's visitor industry.

Policy 2 - Provide for a high quality and safe environment for visitors and residents in Waikīkī.

The Project will be a significant upgrade from existing facilities and provide a high quality and safe environment for visitors and residents in Waikiki. The public benefits will include increasing the opportunities with new visitor accommodations in Waikiki; enhanced open space available to the public; and provision of an economic stimulus to a local and national economy. The development will also result in an increase in property values for the City and County of Honolulu (resulting in increased property taxes) and generate additional tax revenue in terms of GET and transient taxes to the State.

The Project is intended to become an important addition to existing visitor accommodations at this ewa end of Waikiki. It will upgrade an older, underutilized property with a new condo-hotel development, adding to the inventory of hotel rooms that has been decreasing in recent years.

Policy 3 - Encourage private participation in improvements to facilities in Waikīkī.

- The Project implements the City's vision for Waikīkī described in the Primary Urban Center Development Plan (PUCDP). Specifically, that vision seeks private reinvestment in the physical plant of Waikīkī to allow Waikīkī to remain the State's most popular tourist destination.

- The Project will comply with the WSD design guidelines providing landscape and building elements that will convey a Hawaiian sense of place.

- The Project will provide an increase in public open space including 7,708 square feet of landscaped open space and walking paths on the ground floor.

- The Project will provide a greater average setback along Kalakaua Avenue and greater landscaping in the front yard and throughout the property to enhance the pedestrian experience for visitors and local residents alike.

- The Project is intended to become an important condo-hotel destination located to energize this portion of Kalakaua Avenue towards the west end of Waikīkī which meets the demands of today's urban resort destination visitor.

- The Project will provide 170 additional condo-hotel rooms in Waikīkī of which approximately 85% are anticipated to be in a hotel rental program, which will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure.

    - The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place redevelopment, totaling 2,254 hotel units.
    - The proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units.
    - The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms).
    - The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; the 133 Kaiulani with 220 units planned and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

- The Project will offer an economic and job-creating stimulus for the local economy, during the construction period, with increases in construction jobs while being built. Upon completion, it will provide approximately 110 full-time equivalent hotel jobs as well as support jobs.

- The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion

of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000.

- The Project will be designed, maintained, and operated employing best practices for energy efficiency and environmental sustainability for projects of its kind.

    - The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Environmental Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
    - The Project will implement low-flow plumbing fixtures, explore waterless urinals, and incorporate efficient landscape irrigation systems in an effort to further reduce wastewater and potable water demands.
    - The Project will reduce material waste through effective construction and operational recycling programs.

- Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kalia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kalia, Waikiki.

    - The creation of a new park in Waikiki to be called Park Kalia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.
    - Coordinated off-site improvements to neighboring parks and open spaces, King Kalakaua Park and Fort DeRussy, to create greater connectivity.
    - Commitment to providing an on-site cultural historian to provide insight and educate park users.
    - Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kalia, Waikiki.
    - Work with the management groups of King Kalakaua Park and Fort DeRussy Park to coordinate activities and programing.

    Policy 9 - Encourage the visitor industry to provide a high level of service to visitors.

    The Project will upgrade existing facilities to improve the visitor accommodation experience in Waikīkī. That experience will also include enhanced open space available to visitors and local residents."

The Project complies with the Primary Urban Center Development Plan as follows:

"7.3.1 Vision For The PUCDP's Future

7.3.1.1 Honolulu is the Pacific's Leading City and Travel Destination

"With ongoing redevelopment and improvement, Waikīkī remains the State's largest and most popular visitor destination."

The proposed action will result in the redevelopment and improvement of this important site. The Project will provide 170 additional condo-hotel units in Waikīkī of which approximately 85% are anticipated to operate in a hotel rental program. The units will help to replace some of the hotel units that have been lost in recent years and units in existing hotels planned for closure. The hotel units lost in Waikīkī since 2003, include the Ohana Waikiki Hobron Hotel conversion of 596 hotel rooms to the Windsor, a 181-unit condominium; the net loss of 1,300 hotel rooms at the Waikiki Beach Walk redevelopment; and the loss of 358 hotel rooms of the Miramar Hotel for the International Market Place, totaling 2,254 hotel units. In addition, the proposed Princess Kaiulani/Diamond Head Tower (Moana) redevelopment will result in the net loss of 220 hotel units. The total hotel units lost and to be lost will be 2,474 units. The most recent redevelopment project planned at the Waikiki Parc Hotel will have a reduction from the existing 297 rooms into 126 1-bedroom and 2-bedroom rooms (reducing the unit count by 171 rooms). The total hotel units lost and to be lost will be 2,645 units. This reduction in units is however off set by planned units at the Ritz Carlton I and II with 641 units planned; the Hilton Hawaiian Village with 550 units planned; 133 Kaiulani with 220 units planned; and this Project with 170 units planned. The net result is still a reduction of 1,064 units in Waikīkī, resulting in a net reduction of tourist capacity in Waikīkī.

7.3.2 Land Use and Transportation

7.3.2.1 Visitor Industry

"The need to upgrade Waikīkī. Waikīkī is competing in the global market and, as a mature destination, needs to be refurbished and improved. In addition to upgrading streets and public spaces, the City and State need to adopt policies that will elicit private reinvestment in Waikīkī's physical plant."

BH proposes to invest approximately $116,000,000 million to replace the older improvements on this Project Site with a new condo-hotel facility. This development will help in replacing some of the hotel units lost in Waikīkī. This private reinvestment in Waikīkī's physical plant will implement this important vision statement of the PUCDP.

7.3.2.2 Walking

"Regional pedestrian networks are appropriate for the central Honolulu and Pearl Harbor areas. Districts with existing high levels of pedestrian activity include Waikīkī and Downtown. . . Additional elements of the network are new promenades and other pedestrian improvements to city streets (e.g., Punchbowl Street, Nimitz Highway in the Downtown area, Ward Avenue, Young Street, Keeaumoku Street and Kalākaua Avenue."

BH plans to improve the pedestrian experience along Kalakaua Avenue with enhanced public open space.

A significant increase in open space available to the public and landscaping along Kalakaua Avenue will greatly enhance the pedestrian experience through Waikīkī and provide relief from the urban forms in Waikīkī.

7.3.2.3 Bicycles

"To encourage bicycle ridership, the City has employed a Bicycle Coordinator, installed bike racks on all its buses and on many of Honolulu's streets, and has planned and partially developed a system of bikeways."

The Honolulu Bicycle Master Plan (dated April 1999) proposes a bike lane along the makai side of Kalākaua Avenue from Ala Moana Boulevard to Kapahulu Avenue. BH plans to provide bicycle racks in the new parking structure to accommodate employees that may bicycle to work, using the new bike lane planned for Kalākaua Avenue. BH understands that Bikeshare Hawai'i will be starting their bike share program in early 2016, prior to the opening of this Project.

7.4 LAND USE MAP PUC – EAST

The Project is designated Commercial on the Primary Urban Center (PUC) Development Plan Land Use Map. The proposed development of Park Kalia-Waikiki as a condo-hotel is consistent with this designation."

- ***does not meet the criteria for the approval of a variance, nor does the applicant demonstrate any unique qualities or "hardships" associated with the project area which would warrant approval of a height variance.***

One of the provisions of the LUO to encourage a property owner's right to develop their own property in an orderly manner in accordance with reasonable development and design standards is LUO Section 21-9.80-4(g)(3), which expressly authorizes the City Council to approve a change in the height limitation with respect to the Applicant's property:

"(3) *The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet."*

Therefore, the Applicant is not seeking a variance and is not subject to the variance criteria in the City Charter, but is in reality following a process expressly permitted under the LUO to request additional height to 350 feet for its Project if certain public views are not affected.

- ***results in significant negative impacts to both the built and natural environment in the immediate and surrounding area***

  The Project will affect views from the surrounding area, however, these views are not protected views in the LUO. The Project, as explained earlier will not affect significant public views describe in the LUO, WSD.

- ***violates the intent of the "Punchbowl Sightline" ROH Section 21.9.80.4(g)(3) variance provision of the LUO.***

  This provision is not a variance. This provision is met by the Project tower since:

  "the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet."

Waikiki Neighborhood Board - Comments on the Draft Environmental Assessment

History and Intent of Zoning - Chapter 2 Page 10

In my former career with the City's Department of General Planning (now part of the Department of Planning and Permitting), I worked on the Development Plans and the re-designation of these privately owned parcels on the PUC Development Plan Land Use Map was done in error. If the City intended to acquire these parcels for park use, rather than designate them Park on the Land Use Map, they should have placed a symbol on the PUC Public Facilities Map, which would have allowed for City acquisition in the future. This is the process that is followed when the City intends to acquire privately owned parcels. The Park designation on the Land Use Map led to a proposed downzoning to a Public Precinct which would have severely restricted use of the property to "Public uses and structures, including accessory activities operated by private lessees under supervision of a public agency." Fortunately the City and City Council eliminated this proposed rezoning from the package of zone changes and kept these privately owned parcels in a Resort Commercial Precinct.

In 1996, the error on the PUC Development Plan Land Use Map was corrected and the privately owned parcels were re-designated from Park to Commercial.

The Applicant continues to believe that there is an inconsistency in the City's designation of a 25-foot height limit for only these four privately owned parcels in Waikiki. An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet.

Maximization of Economic Return

The Applicant is not claiming that he experienced a taking. The City's actions over time have resulted in a significant downzoning of the property, initially in height and at one point in time the City nearly rezoned the property to allow only public uses on the four parcels.

The Applicant is asking to be allowed to follow a process established by the City to allow up to a 350-foot height limit if certain criteria are met. The Applicant believes that the Project tower will meet this criteria. Again the WSD process for requesting an increase in height limit for the Project is not a variance.

Impacts to the Surrounding Neighborhood

The DEA included the following describing the Project's relationship to surrounding development:

> *"Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kālia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kālia, Waikīkī.*
> *· · The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.*
> *· · Coordinated off-site improvements to neighboring parks and open spaces, King Kalākaua Park and Fort DeRussy, to create greater connectivity.*
> *· · Commitment to providing an on-site cultural historian to provide insight and educate park users.*
> *· · Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.*
> *· · Work with the management groups of King Kalākaua Park and Fort DeRussy Park to coordinate activities and programing."*

Public Views, Public Space and Context

The Land Use Ordinance (LUO), Waikiki Special District Urban Design Controls, Exhibit 21-9.15, mapped an area intended to provide for the "Fort DeRussy Mauka-Makai View Corridor". This area is bounded by Kalakaua Avenue, Kuhio Avenue, Kuamoo Street, Ala Wai Boulevard, and McCully Street. This area has height limits of 65 feet to 130 feet, to provide for the view corridor. The Applicant believes that this view corridor was established to implement Figure 3.1 in the PUC Development Plan and provides the mauka-makai view corridor that protects mauka views from Fort DeRussy. The Project Site does not fall within this view corridor.

The Project Site on the other hand sits across Kalakaua Avenue from an area with a 25-foot height limit, the King Kalakaua Park and a 300-foot height limit beyond that, mauka of Kuhio Avenue, and a small section of 300-foot height limit across Kalakaua Avenue on the eastern portion of the Project Site. Development in the 300-foot height limit area, in accordance with the LUO and Waikiki Special District will result in blockage of mauka views from Fort DeRussy. Maintaining a 25-foot height limit for this property will not serve to protect mauka views from Fort DeRussy over time, as new 300-foot towers are developed mauka of the Project Site. The view of the Koolau Mountains from Kuroda Field will not be a protected view based on the 300-foot height limit for a large area mauka of the Project Site.

- **1992 General Plan – III Natural Environment, Objective B, Policy 2 "Protect Oahu's scenic views, especially those seen from highly developed and heavily traveled areas".**

  One of the highly developed and heavily traveled areas would be the Punchbowl Lookout. And this Project will not affect the view of Diamond Head or the horizon line from the Punchbowl Lookout. The Applicant does not believe that Fort DeRussy Park would be considered a highly developed or heavily traveled area in Waikiki.

- **Figure 3:1 View Corridors of the PUC Development Plan. This figure specifically shows a dedicated view corridor "tail" from Fort Derussy to the Ko'olau Mountains.**

  Protection of this view corridor was described earlier.

Intent and Application of the "Punchbowl Sightline" Variance Provision

When originally presented before the public and the Board, the proposed zoning code amendment known here as the "Punchbowl Sightline" provision was described as allowing a developer some relief in the form of an additional 30-40 feet in height in exchange for creative design applications and possible "slendering" of high rise developments on parcels to reduce visual bulk and shadowing. <u>The intent of the Punchbowl provision was never to allow a developer to construct a tower 14 times the height of the current zoning regulations.</u>

The provision never set a limit on the applicable height increase that would be permitted. Heights for privately owned parcels in Waikiki for properties not in the Fort DeRussy Mauka Makai View Corridor ranges from 220 feet to 350 feet and in the case of the Applicant's property 25 feet.

The tower is proposed to exceed the zoning height limit by 325 feet, an order of magnitude 14 times that permitted by the current zoning regulations. This variance process is discretionary and therefore an explanation is needed why the additional 325 feet is proposed/required for this development and what design alterations have been made to add credence to consideration of variance consideration. Under provisions of a variance, the desire to maximize fiscal returns can never be used as justification for the issuance of a zoning variance.

As explained earlier, the request for the increase in height is not a variance from the LUO, but a request to utilize a provision in the LUO that allows the increase in height.

Promotion of a Hawaiian Sense of Place and Design Guidelines

The Waikiki Special District Design Guidelines state that:

- ***'the long axis of all new high rise structures should be oriented in a mauka-makai direction to minimize obstruction of mauka views....'***
- ***'building forms which produce narrow towers are preferred'***
- ***'buildings with a series of graduated, stepped forms are preferred for new projects'***

The tower as proposed violates all of these policies. A discussion is needed outlining the rationale for non-compliance with our neighborhood's approved design criteria. Stating and/or demonstrating visually that impacts will not be significant, does not negate the need to provide the public with a rationale for pursing design non-compliance.

The long axis of the curved tower has been oriented in a mauka-makai direction. The curved tower is relatively narrow in form. Some stepping has been provided with at the fourth floor, twelfth floor and twenty first floors. The WSD design criteria has been met.

Violation of Provisions of Chapter 343 and Hawaii Environmental Review Laws

Based on all of the above, this Board believes the impacts from this proposed development are significant Under significance criteria as outlined in HRS Chapter 343 a FONSI cannot be issued and the preparation of an EIS is required.

The Project in relation to the significance criteria does not represent a significant project in relation to the environmental review process and is similar, but smaller in scope and impact than previously filed and completed environmental assessments.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

Mr. & Mrs. Kim Jorgensen
225 Kaiulani Ave #1604
Honolulu, HI 96815

February 17, 2016

Joette Yago
Department of Planning and Permitting
Urban Design Branch
850 South King St. 7th fl
Honolulu, HI 96813

Re: Park Kalia-Waikiki Condo-Hotel

Dear Ms. Yago,

This project proposal is an affront to the residents of Waikiki who respect the Waikiki Special District Design Guidelines and know they were put in place to protect our neighborhood's open air space from being filled in with towers.

It makes one wonder why Best Hospitality paid so much money for the properties knowing in advance that it had a 25-foot height limit unless they also knew in advance that they could somehow convince decision makers to approve the project. It seems suspicious; especially when they say they considered other alternatives for the property. After paying so much money for it, it is highly unlikely any business people would really consider leaving it as is. Who do they think is foolish enough to believe that?

Look at any coffee table book of old Waikiki and you'll see lovely photographs of the beautiful Moana Surfrider and Royal Hawaiian hotels "towering" over the residential bungalows on the tree-lined roads - - just those two buildings, the coastline and the open sky. Now developers want to fill in every parcel with a tower.

The draft EA says that the *only* Waikiki Special District Design Guideline that is not met is the 25-foot height limit. 325 feet is a gigantic difference, yet they make it sound like a simple trivial change.

1) The proposed design does not promote a sense of a Hawaiian tropical paradise; it promotes a sense of Tokyo, Hong Kong, New York City, and Chicago.
2) The design is hostile to the neighborhood; especially to the owners of units of the Luana Waikiki and other mid-rise neighbors.
3) Waikiki residents do not need another condo-hotel; very few real residents of Waikiki will benefit from it, yet they are the ones who will bear the brunt of the additional noise for 18+ months during construction and traffic during

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

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FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Kim Jorgensen
225 Kaiulani Avenue, Apt. 1604
Honolulu, Hawaii 96815

Dear Mr. Jorgensen:

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Thank you for your letter dated February 17, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your email).

The Applicant understood the process that must be followed and the criteria that must be met for the Project to be considered for a 350-foot height limit and was willing to go through the process in the hopes of achieving the 350-foot height limit.

1) The proposed design, as described in Sections 7.5.1.1 and 7.6.1 of the DEA, does promote a Hawaiian Sense of Place as required in the Waikiki Special District (WSD).

2) The design through the additional height is a relatively slender tower following a mauka –makai orientation. The Applicant hopes to provide an iconic tower that will grace the entry to Wakiki and on the pedestrian, ground level provide a park like setting with an open lobby offering views through and across the property to Fort DeRussy not available with the existing development. The Applicant proposes to develop Park Kalia on the property to provide a physical and visual connection to Fort DeRussy.

3) The need for additional hotels in Waikiki is supported by the loss of hundreds of hotel rooms since 2003. The Applicant's staff and some of its consultants work in Waikiki and understand that redevelopment is necessary to upgrade the plant in Waikiki to continue to complete in the market for national and international visitors. Waikiki is the primary financial generator in the State and as our tourist industry goes, so goes our economy. There are a limited number of legal transient vacation units operating outside of the resort mixed use precinct and non-conforming hotels, also operating outside of the resort mixed use precinct. These are considered in the demand for and loss of hotel units.

4) The current growth of luxury condominiums has helped drive the demand for construction workers on the island, however, as this market has seemed to run its course this market has cooled to the point of some projects falling by the wayside.

5) At higher end hotels, the staffing is greater and it's important to understand that it is anticipated that many of the units in a condo hotel will operate like a standard hotel with guests expecting all of the services and amenities of a hotel.

6) Although the Applicant is describing the Project as having 144 condo hotel units, this is expected to be the worst case scenario and the Applicant is hoping for a larger number of hotel units based on the ratio found in other Waikiki condo hotels. Legal transient vacation units and nonconforming hotels serve to meet some of the demand for hotel units, but the significant loss of hotel rooms since 2003 has created a need for the newly developed condo hotels similar to the one that the Applicant is pursuing.

7) Soils studies have been done and will continue to be done to ensure that the Project can be safely constructed and supported.

8) Water use is considered at the time of building permit approval and is under the review and control of the Board of Water Supply (BWS). Water has not been a limiting factor in developments in Waikiki. BWS has created an island wide network that allows redirecting supply to and from different areas to free up supply in growth areas.

The increase in height does not require a variance, but does require legislative action, in the form of a resolution approved by the City Council provided certain criteria are met. The Applicant understood that a resolution approved by the City Council would be required and had been granted in the past to certain property owners.

The proposed increase in height is being processed in accordance with LUO Sec. 9.80-4(g)(3) as follows:

"(3) The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet."

The Project as proposed does not affect any of these protected view cones and the building will not exceed a height of 350 feet. Therefore the City Council may approve this building height by resolution.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

HONOLULU FIRE DEPARTMENT

CITY AND COUNTY OF HONOLULU

636 South Street
Honolulu, Hawaii 96813-5007
Phone: 808-723-7139 Fax: 808-723-7111 Internet: www.honolulu.gov/hfd

KIRK CALDWELL
MAYOR

MANUEL P. NEVES
FIRE CHIEF

LIONEL CAMARA JR.
DEPUTY FIRE CHIEF

February 19, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

Subject: Draft Environmental Assessment
Park Kalia
2055 and 2057 Kalakaua Avenue - Waikiki
Tax Map Keys: 2-6-006: 001 and 004

In response to a letter from Mr. George Atta, Director of the City and County of Honolulu's Department of Planning and Permitting (DPP), dated January 12, 2016, regarding the above-mentioned subject, the Honolulu Fire Department (HFD) requires that the following be complied with:

1. Fire department access roads shall be provided such that any portion of the facility or any portion of an exterior wall of the first story of the building is located not more than 150 feet (46 m) from fire department access roads as measured by an approved route around the exterior of the building or facility. (National Fire Protection Association [NFPA] 1; Uniform Fire Code [FC]™, 2012 Edition, Section 18.2.3.2.2.)

   A fire department access road shall extend to within 50 feet (15 m) of at least one exterior door that can be opened from the outside and that provides access to the interior of the building. (NFPA1; FC™, 2012 Edition, Section 18.2.3.2.1.)

2. A water supply approved by the county, capable of supplying the required fire flow for fire protection, shall be provided to all premises upon which facilities or buildings, or portions thereof, are hereafter

constructed, or moved into or within the county. When any portion of the facility or building is in excess of 150 feet (45 720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the AHJ [Authority Having Jurisdiction]. (NFPA 1; FC™, 2012 Edition, Section 18.3.1, as amended.)

3. Submit civil drawings to the HFD for review and approval.

Should you have questions, please contact Battalion Chief Terry Seelig of our Fire Prevention Bureau at 723-7151 or tseelig@honolulu.gov.

Sincerely,

SOCRATES D. BRATAKOS
Assistant Chief

SDB/DB:bh

cc: DPP, Urban Design Branch

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

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E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Socrates D. Bratakos, Assistant Chief
Fire Department
City and County of Honolulu
636 South Street
Honolulu, Hawaii 96813

Attention: Battalion Chief Terry Seelig
Fire Prevention Bureau

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project: Park Kalia-Waikiki Condo Hotel
Applicant: Best Hospitality LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2055 and 2057 Kalakaua Avenue
Tax Map Key: 2-6-6: 1 and 4

Dear Assistant Chief Bratakos:

Thank you for your letter dated February 19, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The applicant will provide the necessary, fire department access roads in accordance with the National Fire Protection Association 1, Uniform Fire Code, 2006 Edition, Section 18.2.3.2.2. and Section 18.2.3.2.1., as you have noted.

2. The applicant will provide a water supply, approved by the County, capable of supplying the required fire flow for fire protection of all facilities and buildings on the premises. When any portion of a facility or building is in excess of 150 feet (45,720 mm) from a water supply on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains capable of supplying the required fire flow shall be provided when required by the Authority Having Jurisdiction.

3. Civil drawings will be submitted to the Honolulu Fire Department for review and approval.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DAVID Y. IGE
GOVERNOR OF HAWAII

CARTY S. CHANG
INTERIM CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

February 19, 2016

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, HI 96822

via email: kkurahashi@hawaii.rr.com

Dear Mr. Keith Kurahashi:

SUBJECT: Draft Environmental Assessment (DEA) for Park Kalia at 2055 and 2057 Kalakaua Avenue – Waikiki; TMK: (1) 2-6-006:001 and 004

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from the (i) Engineering Division and the (ii) Oahu District Land Office on the subject matter. Should you have any questions, please feel free to call Kevin Moore at 587-0426. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

DAVID Y. IGE
GOVERNOR OF HAWAII

'16 JAN 26 AM 11:45 ENGINEERING

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 25, 2016

MEMORANDUM

RECEIVED
LAND DIVISION
2016 JAN 29 PM 3:01
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

TO: PR

DLNR Agencies:
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
X Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
X Commission on Water Resource Management
X Office of Conservation & Coastal Lands
X Land Division – Oahu District
X Historic Preservation

TO:

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for Park Kalia
LOCATION: Waikiki; Island of Oahu; TMK: (1) 2-6-6:001 & 004
APPLICANT: Best Hospitality,LLC

Transmitted for your review and comment is information on the above-referenced project. Please submit any comments by **February 19, 2016.**

The DEA can be found on-line at: http://health.hawaii.gov/oeqc/ (Click on the Current Environmental Notice under Quick Links on the right.)

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Lydia Morikawa at 587-0410. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(✓) Comments are attached.

Signed: _____

Print Name: Carty S. Chang, Chief Engineer
Date: 1/28/16

cc: Central Files

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/Russell Y. Tsuji
Ref.: Draft EA for Park Kalia, Waikiki, Oahu, Hawaii
Oahu.005

COMMENTS

( ) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zone ___.

(X) Please take note that the project site according to the Flood Insurance Rate Map (FIRM), is located in Zones AO. The National Flood Insurance Program regulates developments within these zones as indicated in bold letters below.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

(X) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

(X) Mr. Mario Siu Li at (808) 768-8098 of the City and County of Honolulu, Department of Planning and Permitting.

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.

( ) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.

( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.

( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.

( ) Additional Comments: _____

_____

( ) Other: _____

_____

Should you have any questions, please call Mr. Rodney Shiraishi of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 1/22/14

Flood Hazard Assessment Report

www.hawaiinfip.org

Park Kalia

Property Information

COUNTY:	HONOLULU
TMK NO:	(1) 2-6-006:001
WATERSHED:	ALA WAI
PARCEL ADDRESS:	2057 KALAKAUA AVE HONOLULU, HI 96815

Notes:

Flood Hazard Information

FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL:	15003C0366G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

THIS PROPERTY IS WITHIN A TSUNAMI EVACUTION ZONE: NO
FOR MORE INFO, VISIT: http://www.scd.hawaii.gov/

THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO
FOR MORE INFO, VISIT: http://dlnreng.hawaii.gov/dam/

0 40 80 ft

Disclaimer: The Hawaii Department of Land and Natural Resources (DLNR) assumes no responsibility arising from the use, accuracy, completeness, and timeliness of any information contained in this report. Viewers/Users are responsible for verifying the accuracy of the information and agree to indemnify the DLNR, its officers, and employees from any liability which may arise from its use of its data or information.

If this map has been identified as 'PRELIMINARY', please note that it is being provided for informational purposes and is not to be used for flood insurance rating. Contact your county floodplain manager for flood zone determinations to be used for compliance with local floodplain management regulations.

FLOOD HAZARD ASSESSMENT TOOL LAYER LEGEND

(Note: Legend does not correspond with Area)

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - The 1% annual chance flood (100-year), also know as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. SFHAs include Zone A, AE, AH, AO, V, and VE. The Base Flood Elevation (BFE) is the water surface elevation of the 1% annual chance flood. Mandatory flood insurance purchase applies in these zones:

	Zone A: No BFE determined.
	Zone AE: BFE determined.
	Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); BFE determined.
	Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined.
	Zone V: Coastal flood zone with velocity hazard (wave action); no BFE determined.
	Zone VE: Coastal flood zone with velocity hazard (wave action); BFE determined.
	Zone AEF: Floodway areas in Zone AE. The floodway is the channel of stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without increasing the BFE.

NON-SPECIAL FLOOD HAZARD AREA - An area in a low-to-moderate risk flood zone. No mandatory flood insurance purchase requirements apply, but coverage is available in participating communities.

	Zone XS (X shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.
	Zone X: Areas determined to be outside the 0.2% annual chance floodplain.

OTHER FLOOD AREAS

	Zone D: Unstudied areas where flood hazards are undetermined, but flooding is possible. No mandatory flood insurance purchase apply, but coverage is available in participating communities.

Flood Hazard Assessment Report

www.hawaiinfip.org

Park Kalia 2

Property Information

COUNTY:	HONOLULU
TMK NO:	(1) 2-6-006:004
WATERSHED:	ALA WAI
PARCEL ADDRESS:	2051 KALAKAUA AVE HONOLULU, HI 96815

Notes:

Flood Hazard Information

FIRM INDEX DATE:	NOVEMBER 05, 2014
LETTER OF MAP CHANGE(S):	NONE
FEMA FIRM PANEL:	15003C0366G
PANEL EFFECTIVE DATE:	JANUARY 19, 2011

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THIS PROPERTY IS WITHIN A DAM EVACUATION ZONE: NO
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0 40 80 ft

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OTHER FLOOD AREAS

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DAVID Y. IGE
GOVERNOR OF HAWAII

SUZANNE D. CASE
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

January 25, 2016

RECEIVED
LAND DIVISION
2016 JAN 27 AM 6:05
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
_X_ Historic Preservation

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment (DEA) for Park Kalia
LOCATION: Waikiki; Island of Oahu; TMK: (1) 2-6-6:001 & 004
APPLICANT: Best Hospitality,LLC

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Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: _____

Print Name: Tiffany Chee
Date: 1/26/2016

cc: Central Files

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Russell Y. Tsuji, Land Administrator
Department of Land and Natural Resources
Land Division
P.O. Box 621
Honolulu, Hawaii 96809

Dear Mr. Tsuji:

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Thank you for your letter dated February 19, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

In response to your Engineering Division we offer the following response (in the order set forth in their memorandum).

1. The Applicant appreciates your confirmation that the Project Site is located in Zone AO, according to the Flood Insurance Rate Map (FIRM), an area regulated by the National Flood Insurance Program (NFIP). The project site is located in the Zone AO (Depth 2')

2. The Project will comply with the rules and regulations of the NFIP presented in Title 44 of the Code of Federal Regulations (44CFR). The Applicant will work with Mr. Mario Siu-Li at the City and County of Honolulu Department of Planning and Permitting to ensure compliance with local flood ordinances.

   Due to the project site being within the AO (Depth 2') flood zone, the lowest ground floor finished floor elevation for any proposed building should be established at a minimum of 2-feet above the highest existing grades on-site to satisfy the flood zone requirements as well as provide positive drainage away from proposed structures to avoid flooding of the building interior.

We appreciate that the Land Division has no comments on the DEA.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

LAW OFFICES
PETER J. MASSUCCI
SUITE 205, MANOR HOUSE
975 MILL ROAD
BRYN MAWR, PA 19010
Tel: 610-527-8818
MASSUCCI-LAW.COM

MEMBER OF THE PA AND NJ BARS

EMAIL: PJM_ATLAW@MSN.COM

February 21, 2016

Keith Kurahashi
Kusao & Kurahashi, Inc.
Planning & Zoning Consultants
2752 Woodlawn Drive, Suite 5-217
Honolulu, Hawai`i 96822

Department of Planning and Permitting
City and County of Honolulu
650 South King Street, 7th Floor
Honolulu, HI 96813
ATTN: Joette Yago

RESPONSE AND COMMENT

Re: Park Kalia - Best Hospitality LLC Draft Environmental Assessment

To Mr. Kurahashi and the DPP:

I am submitting this response and comment in reference to the Draft EA (hereinafter the "EA") submission of Best Hospitality for the Park-Kalia Project, to be located on the Kyo-ya property at 2055-57 Kalakaua Avenue, Honolulu, HI, 96815. I am the owner of Unit #110 Luana Waikiki, located at 2045 Kalakaua Avenue, directly Ewa of the two parcels. I have owned the Unit since 2005. To be exceedingly clear, and in an abundance of caution, I am submitting this as the legal representative for myself and my wife. I do not represent the Luana AOAO or any of the other property owners at the Luana, and this is not intended to be regarded as such. I previously submitted testimony on the prior submission to the Waikiki Neighborhood Board, which is noted in the EA Submission from Best, in Section 15, Page 141.

I. BACKGROUND:

When we first purchased the Unit, I was very careful to take the time to study the zoning ordinances in reference to height, use and bulk area restrictions. I was comfortable that we would always maintain our privacy, views, light, air, aesthetics, and consequently, our property value, as the height restriction was 25 feet. The Luana is a uniquely traditional building in a unique setting on Ft. De Russy Park, without any immediate obstructions from other buildings. It was redeveloped from the Waikiki Terrace hotel and remains architecturally significant. It is historically and culturally relevant to Waikiki and the neighborhood. It was on this basis that I purchased the property.

With the advent of Best Hospitality, LLC's intention to build a 350 foot tower on the parcel, I have serious concerns about the current and future value of our unit and that of the Luana, in general, which viability directly affects our investment. Our unit, in particular, will suffer an almost 100% reduction in our view toward Diamond Head, leaving us with a 20-40 foot wall, less than 20 feet from our lanai. We presently have a long view of treetops, peaks of

Diamond Head and city lights. There is no landscaping planned for the area directly affected and no set back. In the event Best is permitted to go ahead with its plans to submit to City Council a request to increase the height limitation from 25 feet to 350 feet, and to be granted an exclusion from the area requirements for the lots, our unit, and possibly the entire building, will be devalued and will significantly lose its value as a hotel rental unit. Other than the permanent destruction of or our privacy, light, air, aesthetics and view, there is the also the very real matter that there will be a serious decrease in income, during the construction period, and thereafter. These are real and quantifiable losses to me personally. I note these adverse impacts are not addressed in the EA.

The City Zoning Ordinance emanates from a grant of the police power from the State of Hawaii. It grants the right for the separate governmental entities or agencies, here the City, to develop ordinances for the protection of the health, safety and general welfare of the public and residents. This power also includes the broader obligation to maintain the property values, the view corridors, expectations of stability in resident mix and the expectations of individual purchasers for investment in Waikiki, by maintaining the historical and cultural zoning, height, setback and bulk requirements for the districts as a whole and relied upon by adjacent properties. This serves to promote a consistent tax base, consistent resident mix, consistent cultural and financial diversity and quiet use and enjoyment. This should be balanced with the reasonable use and development of the aina, by zoning ordinances intended to mutually benefit all property owners. This does not mean that development should be halted, as the City and Waikiki must progress, but the City cannot allow the Applicant to develop the property in a fashion that is not permitted under the current zoning (as to height and lot size), by allowing them to maximize their density, orientation, footprint and height, in order to maximize profits, while not considering and/or balancing the devastating effect on the adjacent property owner most directly affected, like us. The current lot area of less than one acre and a height restriction of 25 feet, places the developer in a position that they must request a variance, or relief from, the established ordinances. Consequently, the Applicant must prove that the need for the variance was not of their own creation, including that fact that they purchased the property with knowledge of the need for the variance, which should negate its approval. The intent of the Applicant is clearly to persuade the City to accede to their request to allow the most units, and therefore, the most profit, on the property. They must prove that there are no other current profitable uses approved for the property, which is not possible, since they could make a significant profit from a smaller footprint at a reduced height and density.

II. DEFECTS IN THE DRAFT EA SUBMISSION

The most troublesome and fatal defect with the submission, is that it is incomplete and flawed, since the original notice to the affected property owners was for a different plan than is submitted in this EA. Originally, the Applicant sent a letter to Kevin Showe, a member of the Board of Directors of the Luana AOAO, for the One Waikiki Project, with a brief summary of the proposed project. Mr. Showe distributed it with no further explanation or analysis of the benefits or detriments of the Project. Mr. Showe, as recipient, may be a member of the Luana AOAO, but does not represent my interests and may have a conflict as a member of the investment group that sold the Kyo-ya property to the Applicant, in September 2015. The fact that there was not a new notice provided to the property owners, individually, including the new revised plan, is a serious violation of the DPP and approval process. In addition, the original notice for One Waikiki may be defective, as it was not sent to each individual property owner by the Applicant.

Notwithstanding the referenced defective notice, and as a supplement thereto, the EA is defective as follows:

(i). The Applicant does not provide any financial analysis indicating the type of return possible by lesser uses or density in order for the City or DPP to make a reasoned decision as to the validity of the Applicants claims for other development options;

(ii). The proposed plan does not comply with WSD Section 21-9.80-1(a) and (c), because it does not promote a Hawaiian sense of place (a) "at every opportunity; " or (c) support the retention of a residential sector in order to provide stability to the neighborhoods of Waikiki", since the Applicant presents only general and positive aspects to the DPP and City Council, that the proposed structure is in keeping with the "Hawaii Sense of Place"; but ignores most of the negatives effects that would deter the Hawaii Sense of Place. The proposed plan does not comply with WSD Section 21-9.80-1(c), since it does not support the retention of a residential sector (our aesthetics, views, financial investment, our residential and cultural interests at the Luana) or provide stability to the neighborhoods of Waikiki. Relevant to both Sections (a) and (c), the Applicant also fails to address or suggest mitigation of the negative effects on the residential neighborhood, being my unit specifically, and the Luana property generally, in decreasing or totally obscuring views, reducing property values, decreasing financial diversity, creating instability of values and decreasing residents use and enjoyment and possibly resulting in longtime residents selling their units at a loss;

(iii). The proposed plan does not comply with WSD Section 21-9.80-1(j), since it does not "maintain and improve where possible: mauka views from public viewing areas in Waikiki from public streets and a visual relationship with the ocean, as experienced from Kalia Road to the view of the mountains" over Kyo-ya and over Gateway Park and down Namahana Street;

(iv). The Applicant neglects to state, in the Adverse Effects, Part 12, Page 131, the specific negative aesthetic, view, value, financial, investment and use and enjoyment effects on the specific Luana property owners, like myself, who will end up with an almost 100% blockage of our view by an un-landscaped parking structure;

(v). The Applicant is in violation of WSD 21-9.80-4(f)(4) and (5), since the plan fails to provide for landscaping the parking structure facing our unit, which is required to be screened "to prevent undesirable vistas and sight lines, and to reduce the visual impact of blank walls and parked vehicles". The proposed parking structure wall or stairwell will project 20-40 feet high less than 20 feet from out lanai, and will serve to totally obstruct all views, light and privacy;

(vi). The Project is in violation of WSD 21-9.80-4 (d)(1)(B) which requires the minimum PD-R project size shall be one acre.

(vii). The Applicant minimizes the effects of placing a "club" and restaurant directly on the side of the Luana, which will contribute to noise and obnoxious odors that we do not currently experience, with no specifics on the location or relocation of the venting and fans away from the Luana;

(viii). The Applicant has failed to meet with the affected individual property owners, or to send a revised notice including the revised Plan as required by the regulations;

(ix). The Plan does not comply with the side yard setbacks or landscaping requirements for parking structures as set forth in 21-4.70 (c)(1)(2)(3), since the project abuts a condominium residential area.

(x) The prior submission for One Waikiki located the structure on the Diamond Head side of the parcel, which allowed for approximately 50-75 feet between the buildings and provided for landscaped park areas between the Luana and the new structure. In the section of the EA on the Park Creation, the Applicant claims to create a park on the Diamond Head side of the Project. There is already an existing park at the entrance to Ft. De Russy at Olohana Street on the Diamond Head boundry. The Plan does not create a new park or view corridor, since it only expands the existing view corridor area. The originally submitted plan for One Waikiki, locating a park between the buildings, would seem to be better planning and the best and most logical location for maintaining mauka views, creating connectivity and an actual "new" park. Relocation of the building would create a new view corridor from Ft. De Russy to Gateway Park; and, in the process, more fully comply with the Waikiki Special District guidelines to maintain, augment or create new view planes, mauka and Makai (looking toward Ft. De Russy, through the new park makai from Gateway and mauka from Hale Koa Chapel to the center of Gateway Park and the mountain ridgeline. The view of the mountains down Namahana Street is beautiful, and would be enhanced and preserved for the public walking past the De Russy Chapel and through to Gateway Park. If you look closely at the view pictures in the EA, they were taken on a day that there were so many clouds, you could not possibly see the mountains over the overlay of the proposed building. Accordingly, they should be disregarded. There is a traffic light right at the Luana across from Gateway Park and Namahana Street, which pedestrians would naturally use to cross from Gateway and proceed directly through a new landscaped corridor next to the Luana, increasing connectivity. The proposed plan by the Applicant creates nothing new and is actually worse, in respects to planning and connectivity, than the original One Waikiki plan submitted to the Waikiki Neighborhood Board.

Consequently, as a result of the planning issues and violations of the WSD Sections cited in (i)-(x) above, and Section 21-9.80-1(a) and (c), the Plan is not consistent with the goals and objectives of the Waikiki Special District, as required; and, as a result, the PD-R standard relied upon by the Applicant in Section 21-9.80-4(g)(3) for increasing the height limitation, would not be available to the Applicant. The application of this section should not be automatic or unconditional, and includes constraints on the Director's ability to approve the height increase, because, as stated in the General Design Standards provisions,

> Sec. 21-9.80-4(d) states, "Flexibility may be provided for project density, height, precinct transitional height setbacks, yards, open space and landscaping when timely, demonstrable contributions benefiting the community and the stability, function, and overall ambiance and appearance of Waikiki are produced."
>
> Sec. 21-9.80-4(d)(3) states, " When, in the paragraphs below, the standards are stated to be subject to modification or reduction, such modification or reduction shall be for the purpose of accomplishing a project design consistent with the goals and objectives of the Waikiki special district and this subsection (d)."

As used in this circumstance, the word "Flexibility" could not possibly be interpreted to equate with the total "disregard" of the historical height restriction of 25 feet by a 97% increase and a 45% increase in lot requirements, while disregarding the devastating effects on the adjacent property owner. That does not benefit the community, only the Applicant. There must be some balance given to the rights of the affected property owners.

Since the Applicant is not in compliance with the WSD as set forth and Sec. 21-9.80-1 (a) and (c) as it does not promote a Hawaiian sense of place (a) "at every opportunity" or (c) support the retention of a residential sector in order to provide stability to the neighborhoods of Waikiki",

as it does not address or mitigate the negative effects on the residential neighborhood, being our unit specifically, and the Luana generally, the project must not be approved.

In addition, the ability to make PD-R modifications, including increasing the height limitation from 25 feet to 350 feet, is optional and conditioned on the ability to "provide opportunities for creative redevelopment not possible under a strict adherence to the development standards of the special district." In the present case, the Applicant has chosen to disregard other possible redevelopment possibilities due to its inability to maximize profit and for no other reason. This action by Applicant in discounting the other less dense and profitable options for development would not merit relief under the regulations.

III. ADVERSE IMPACT, ADDITIONAL REQUIREMENTS AND CONCLUSIONS:

1. It should be imperative that the City require an additional notice to all affected property owners, since the originally submitted Plan has been changed. It should be resubmitted to the Neighborhood Board and a new notice sent to all affected property owners, individually. I managed be made aware of the EA only last week, when I asked Mr. Showe the status of the Applicant, who directed me to the EA; but essentially, the original notice is invalid, because the Applicant did not resubmit notice of the new plan or summary to the affected property owners. As a result, there has been no notice on this Revised Plan, in contravention of the DPP and ROH ordinances and Regulations.

2. The DPP should require a further report on the financial impact to the Applicant's profit by reducing the height, density and footprint and/or increasing the setbacks between the Luana and the new structure, by moving the building to the DH side and placing the park areas between the buildings. The view planes in the EA are incomplete and misleading, as they do not show the view planes from my unit lanai, which will be almost completely blocked.

3. The DPP and City should not approve the relief from the height limitation or the lot area requirements. WSD Section 21-9.80-4(g)(3), referenced by in EA in support of the lifting of the restriction, allowing for City Council to approve up to 350 feet, did not contemplate the devastating effects of increasing the restriction from 25 to 350, some 97%. The ordinance speaks in terms of "flexibility". If, for example, the request was to increase from 250 feet, or even 160 feet, the height of the Luana, as a non-conforming use, that might be a more reasonable application of the exception. This exception could not have been intended to negate or replace any longstanding height restriction under the ordinance, but to allow the City Council some latitude to permit a redevelopment, if the Applicant could not profitably redevelop the lot under the strict construction of the ordinance. That is not the situation here where Applicant has not provided any evidence that the property cannot be developed at a lesser density and profit. Such a severe change of the height restriction from 25 feet on the zoning map would require a legislative act. The situation here is that the Applicant paid $30,000,000.00 for the property and wants to place the burden on the City, and the negatively affected adjacent property owners, so they can maximize their profit, arguing that it is necessary for the City to ignore a height restriction, in order to allow them to add enough hotel rooms to support the most profit from the highest density and use. The Applicant cannot purchase a property, knowing of (i) the 25 foot height restriction, (ii) the history of the property and area restrictions, (iii) the reasons that the City instituted the restriction and (iv) that they will need a variance from the restrictions; and thereafter, claim a "hardship" because they cannot develop the property to 350 feet. The entire problem from which they want relief is of their own creation. This is not the proper application or intent of the zoning regulation or the possible exceptions referenced. If the height limitations on the zoning districts are not followed in this drastic case, then the City is declaring that the zoning ordinances are

irrelevant. What then, is the use of having any zoning height restrictions to protect the individual property rights or the aina. Relief from the height restriction also requires that the Applicant prove that their building will not negatively affect the health, safety and general welfare of the public, including the Luana and surrounding property owners. But that is not possible, as designed, since it most certainly will negatively affect our unit and property value. The Applicant misleadingly states that the project will "increase the property values in the area", but neglects to indicate that they will decrease the property values of my unit and the Luana in general.

An investor has no paramount right to have its property rights elevated over those of any long term adjacent property owners in the same zoning district. There is no difference in stature. The affected persons have equal rights and protection under the ordinances and regulations, and the City has the obligation to balance the property rights of both the Applicant and the surrounding property owners, in order to protect the individual property rights of the developer and those of the affected community and adjacent properties.

4. Respecting the spirit of community and cooperation stated in the Environmental Council Recommended Protocol, the Applicant has not "identified and consulted with individuals, with knowledge of the area potentially affected by the proposed action". There has been no effort to meet with me to discuss the location of the building or, in any way, to work with me to minimize the negative effects on my property or to arrive at a mutually acceptable design

Consequently, the reality is that the relief from the height restriction or approval of the revised plan by the City, will seriously affect the value of our property, and the Luana, as a condo hotel. Under the circumstances outlined herein, an approval would serve as a choice to elevate the rights of the developer over the current Luana property owners. It effectively increases the property value of the Applicant (Best) and decreases the property value of the Launa generally, and our unit, specifically. This is in direct contradiction to the claims of the Applicant, on page 30, that the project will increase property values. The approval of the height increase would be discriminatory to the affected residents and, most likely, if approved by the City under these circumstances, without a legitimate and honest balancing of the rights of the affected property owners, could amount to a partial taking without "just compensation", prohibited under the 5th Amendment.

IV. SUGGESTED SOLUTIONS:

In order to mitigate the negative effects, if any building is approved on the property, the following should be submitted to the adjacent property owners for approval:

1. The structure should be substantially lower than 350 feet or at such a height and design to completely offset the negative effects to certain property owners.

2. The building should be designed to be fully located on the Diamond Head side of the parcel. A "new" park should be located between the Luana and the proposed structure, to allow for a different view corridor from Gateway, as set forth above. This may also mitigate some of the negative aspects stated. As designed, we will have an un-landscaped parking structure wall right at the property line, less than 20 feet from our lanai, which in in violation of the WSD and PD-R regulations.

3. Even though the setback between the Kyo-ya and the Luana is zero, Section 21-4.70 (c)(1)(3) requires a five foot wide strip on all parking structures. When the Kyo-ya was built, the height was 25-35 feet and the zero side yard had no negative effect on the view of the residential units,

since our unit was at a 30 foot height. Demolishing the entire building, the Applicant should be required to comply, since this is an entirely different situation and the effects are devastating. Section 21-9.80-4(d)(3)(D) states "Minimum yards shall be 15 feet, but this standard can be modified". I assume this means either increased or decreased. We would request that the Director increase the setback for the reasons set forth. Based upon the request by the Applicant for a 97 % increase in height and a 45% increase in lot area, the side yard setbacks should be increased to compensate for the negative effects. The side yard can be decreased to zero on the Diamond Head side, as it is already adjacent to park area. Under the circumstances, the parking lot area is the least desirable area on the Plan to disregard the setback for the Luana, and should be denied by Planning. What is more, there are no plans to landscape the stairway and parking structure on the Luana property line, in accordance with Section 21-9.80-4(f)(4) and (5), even though an un-landscaped 20-40 foot parking garage wall will be located less than 20 feet above our lanai. There should be gardens at our level to mitigate the negative effects to our unit.

4. If Best chooses to develop, as submitted, the City should mandate that they be obligated to compensate us for (i) any loss of value, (ii) any loss of income and/or (iii) expenses to maintain the value of the rental marketability of our unit, by landscaping our lanai, to prevent the view being entirely removed and to maintain our privacy.

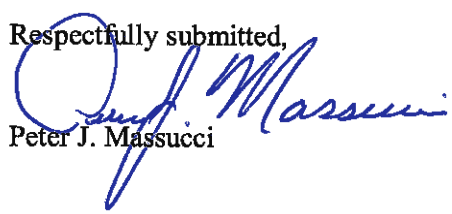
5. When assessing the financials of the Project for viable less dense development options, the City should consider the statement by the Applicant in the EA, that they plan to spend $116,000,000. on the development of the site. A conservative estimate (without the benefit of exact numbers) of an average of 700 square feet per unit for 167 studio and one bedroom units with lanai and an average of 2300 sq. feet for 3 penthouse units with lanai, would total about 116,900 and 6,900 square feet respectively, not including the top floor and restaurant commercial spaces. A conservative bended per square foot sale price of $1,300 for the 167 units and $1,800 per square foot for the 3 penthouses, would net total sales of $151,970,000 + $12,420,000. = $164,390.000. Deducting the stated investment of $116,000,000, the Applicant would net a conservative profit of $48,000,000 - $50,000,000. That is significant, when compared to the net loss to us, as one of the most affected Luana property owner, which would be negative for loss of view, value, aesthetics, privacy, noise, odor and rental marketability, moving forward. Recall the balancing of interests. To result would be unfair and unbalanced, since the Applicant could modify the density and footprint and still make a substantial profit.

I would be happy to meet with the Applicant or the DPP to review the Plan. I will be in Town until March 15, 2016. My cell is 610-574-2255.

Since the Plan and EA is deficient and does not comply with all the WSD requirements and the WSD and PD-R guidelines, the DPP and City Council should make a determination that the EA merits a finding of "Significant Adverse Impact" and should deny the request for relief, until such time as the Applicant complies with the regulations and mitigates the effects on our unit.

Accordingly, for all the above reasons, we respectfully request that the revised plan, height increase and variance from the regulations, be denied by the DPP and/or City Council.

Respectfully submitted,



Peter J. Massucci

PJM/gm

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April 13, 2015

Mr. Peter J. Massucci
Suite 205, Manor House
975 Mill Road
Bryn Mawr, PA 19010

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Massucci:

Thank you for your letter dated February 21, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

I. BACKGROUND

As you have noted, the Land Use Ordinance of the City and County of Honolulu (LUO) regulates the development and use of land within the City and County of Honolulu, and its purpose is "*to regulate land use in a manner that will encourage orderly development in accordance with adopted land use policies, including the Oahu general plan and development plans, and to promote and protect the public health, safety and welfare by, more particularly:*

> "*(1) Minimizing adverse effects resulting from the inappropriate location, use or design of sites and structures;*
> *(2) Conserving the city's natural, historic and scenic resources and encouraging design which enhances the physical form of the city; and*
> *(3) Assisting the public in identifying and understanding regulations affecting the development and use of land.*"

LUO Section 21-1.20(a). The express purpose of the LUO, however, does not include the protection of individual private views, property values, aesthetics, economic income or investment expectations that may be affected by the development of surrounding properties. Rather, the express intention of the Honolulu City Council in enacting the LUO is "*that the provisions of the LUO provide reasonable development and design standards for the location, height, bulk and size of structures, yard areas, off-street parking facilities, and open spaces, and*

the use of structures and land for agriculture, industry, business, residences or other purposes." LUO Section 21-1.20(b).

One of the provisions of the LUO to encourage a property owner's right to develop their own property in an orderly manner in accordance with reasonable development and design standards is LUO Section 21-9.80-4(g)(3), which expressly authorizes the City Council to approve a change in the height limitation with respect to the Applicant's property:

> "*(3) The council by resolution may approve a building that exceeds the building height limits established in Exhibit 21-9.15 and on the zoning map, provided that the council determines that the building with the added height would not be visible within the view cones from the Punchbowl lookouts towards Diamond Head and the horizon line of the ocean or from the Kalakaua Avenue frontage of Fort DeRussy towards the slopes and ridgeline of the Koolau Range, and the building does not exceed a height of 350 feet.*"

Therefore, the Applicant is not seeking a variance, but is in reality following a process expressly permitted under the LUO to request additional height to 350 feet for its Project if certain public views are not affected. Accordingly, LUO's protection of view corridors is directed to important public view corridors, but not private views from individual hotel units or residences. The photographic renderings in the DEA show that these public view corridors are not affected by the Project. In fact, the increased height allows the Project to be designed with a slender profile that can be located on the site which not only meets the LUO requirements for setback and bulk as provided for in transitional height setbacks, but also reduces the overall impact on views from surrounding properties. It also provides an opportunity to raise the building to enhance the experience of residents and visitors at the street level by creating a park on the Project grounds that will serve as a visual, as well as physical, connection joining the City's Kalakaua Park at the juncture of Kalakaua Avenue and Kuhio Avenue to the Fort DeRussy Park. The historical and cultural elements and activities that will be incorporated into the Project park and the Project is discussed in the DEA as follows:

- *Lastly, to illustrate that Celebrating, Stewarding and Sustaining the Cultural and Historical Legacy of Kalia is the basis of which The Project has been developed, The Project will make a commitment to the creation, operations and coordination of programing for Parks in Kalia, Waikiki.*

    - *The creation of a new park in Waikiki to be called Park Kalia. Improvements to include native landscaping, water features and culturally based interpretive art and signage.*
    - *Coordinated off-site improvements to neighboring parks and open spaces, King Kalakaua Park (formerly Waikiki Gateway Park) and Fort DeRussy, to create greater connectivity.*
    - *Commitment to providing an on-site cultural historian to provide insight and educate park users.*
    - *Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kalia, Waikiki.*

- *Work with the management groups of King Kalakaua Park and Fort DeRussy Park to coordinate activities and programing.*

This may benefit the value of the surrounding properties to the public and private sectors.

II. NO DEFECTS IN THE DRAFT EA SUBMISSION

The Applicant has adhered to the process prescribed in the LUO regarding the submission of the DEA. The project summary included with the letter to Mr. Kevin Showe that you received along with the other Luana Waikiki owners described the Project as presented to the Waikiki Neighborhood Board, which served to notify the Waikiki Neighborhood Board of the general description of the Project, as required by the Department of Planning and Permitting (DPP). As part of the general public presentation process, the Project was modified in response to concerns presented and heard at the Waikiki Neighborhood Board meeting.

Accordingly, the notice to adjoining neighbors was not defective, and no second notice is necessary.

(i) The four alternatives discussed in the DEA include the following, along with an explanation of each alternative's feasibility and ability to finance the Project:

a. Alternative I: The improvements on the property has not been operated as a restaurant since 2007. Redeveloping and operating the property as the restaurant will not support the existing and additional investment in the property.

b. Alternative II: The development of luxury condominiums, with a 350-foot height, that would need to compete with the increasing supply of such products in the Kakaako area, increases the economic risk to the owner. More importantly, the development of a condominium hotel addresses the shortage of hotel rooms in Waikiki and provides more diverse opportunities for the property.

c. Alternative III: Developing the Project within the Waikiki Special District (WSD) development standards, with a 25-foot height limit and open space bonuses, would not enable the property to fully utilize the allowable 3.5 FAR, even with a bulkier building profile that would have more impacts on surrounding views, that would justify the cost of development or support the financing of such a development.

d. Alternative IV: Developing the Project within the WSD development standards, with a request for increased height is the preferred alternative.

(ii) The Applicant has devoted substantial resources to incorporate a Hawaiian Sense of Place, from a physical, cultural, historical and spiritual perspective, into its design of the Project for the benefit of the entire Waikiki community, in accordance with WSD Section 21-9.80-1(a), as described in the DEA:

"Sec. 21-9.80-1(a) - Promote a Hawaiian Sense of Place

The Project design includes landscaped yards and public open space, and water features. The building facade will be varied with a high degree of articulation. From an aerial view, the high level of articulation will include a curved building face. BH will also provide lanais on each of the condo hotel units and open stairs on the makai side of the building to provide articulation and contrast. These architectural elements, including a high level of articulation, are intended to promote a Hawaiian sense of place. The use of reflective materials will be limited. Exterior colors will contribute to the tropical resort ambiance and complement the added landscaping. Generally neutral tones are being considered for the development with more vibrant and pronounced colors being used for accenting."

The Project site is not currently improved for residential use that can be retained. However, as provided in the DEA, the Applicant estimates that approximately 15% of the units in the Project may be occupied by its owners as their residences, similar to other condominium hotels in the area, such as the Luana Waikiki Hotel (that was converted from a hotel into a condominium hotel), which the Applicant understands operates over 90% of its units as hotel units or short term vacation units.

Typically, a great majority of the 15% of the units will be used as part-time residences or long-term, personal vacation homes. It is anticipated that less than 2% of the units will be used as typical permanent, primary residences. Many part-time residences will still utilize typical hotel services (maid service, valet, room service, etc.). The above percentages are based on the Trump International Hotel Waikiki Beach Walk (Trump Hotel), where 90% of its studios and 80% of its one-bedroom units are in the hotel program. At the Luana Waikiki Hotel and Suites (Luana Hotel), which is comprised of mostly studio and one-bedroom units, the percentage of units placed in the hotel program is 90% to 95%. The Applicant understands that very few units are used as permanent residences at either of these hotels.

Based on the records of the Real Property Assessment Division of the City and County of Honolulu, the assessed real property values of a sampling of properties surrounding the Trump International Hotel and Tower have increased at the compounded average annual rate of nearly 5% between 2009 and the present, and the assessed real property values of a sampling of properties surrounding The Ritz-Carlton Residences, Waikiki Beach increased by more than 7% in 2016.

As described above, the increased height of the Project permits a slender building profile and strategic building location to protect the important public view corridors identified in the LUO.

(iii) Note that LUO Sec. 21-9.80-1(j), which you have quoted, it actually states as follows and does not include the phrase "as experienced from Kalia Road to the view of the mountains":

"(j) Maintain, and improve where possible: mauka views from public viewing areas in Waikiki, especially from public streets; and a visual relationship with the ocean, as experienced from Kalakaua Avenue, Kalia Road and Ala Moana Boulevard. In addition, improve pedestrian access, both perpendicular and lateral, to the beach and the Ala Wai Canal."

As such, there is no current visual relationship with the ocean, as experienced from Kalakaua Avenue, from this property. However, an increased height to 350 feet would enable the Applicant to nonetheless design a raised building to create a visual experience from Kalakaua Avenue through its grounds toward the ocean.

LUO Sec. 21-9.80-3 provides the specific protection for prominent view corridors including those described in Sec. 21-9.80-1(j) as follows:

"Sec. 21-9.80-3 Prominent view corridors and historic properties.

(a) The following streets and locations identify significant public views of Waikiki landmarks, the ocean, and the mountains from public vantage points:

(1) Intermittent ocean views from Kalia Road across Fort DeRussy Park and from the Ala Wai Bridge on Ala Moana Boulevard;
(2) Continuous ocean views along Kalakaua Avenue, from Kuhio Beach to Kapahulu Avenue;
(3) Ocean views from Ala Wai Yacht Harbor;
(4) Ocean views from Kuhio Beach Park;
(5) Views of Ala Wai Yacht Harbor from Ala Moana Park (Magic Island Park);
(6) Mauka views from the portions of the following streets mauka of Kuhio Avenue:
(A) Nohonani Street;
(B) Nahua Street;
(C) Kanekapolei Street;
(D) Kaiolu Street;
(E) Lewers Street;
(F) Walina Street; and
(G) Seaside Avenue;
and
(7) View of Diamond Head from Ala Wai Boulevard between McCully Street and Kapahulu Avenue.

None of these significant public views are affected by the Project.

(b) Development should preserve, maintain and enhance these views whenever possible. Additional yard area and spacing between buildings may be required by the director, in connection with the issuance of special district permits, and the council and/or the director, in connection with planned development-resort and planned development-commercial approvals pursuant to Section 21-2.110-2, to protect these significant views.

As noted in this section "Development should preserve, maintain and enhance these views whenever possible." and specific to Kalia Road, "Intermittent ocean views from Kalia Road across Fort DeRussy Park...". As mentioned earlier, none of these significant public views are affected by the Project.

(c) Development should preserve, maintain and enhance historic properties whenever possible. Special district permit applications involving buildings over 50 years old shall be submitted to the state department of land and natural resources for review and comments."

The Kyo-ya Restaurant and parking garage were built in 1990 and both structures are only about 26 years old.

(iv) The Applicant has provided the required contents of an environmental assessment, including a general description of the Project's technical, economic, social, and environmental characteristics, related to the Project's impact and an identification and summary of impacts and alternatives considered. The site plan and elevations provide a graphic presentation of the Project's impact on the Luana Waikiki, but a specific analysis of the impact to individual Luana property owners such as yourself, is not required.

(v) In accordance with the LUO provisions that you have mentioned:
"(4) Parking structures shall be landscaped. Rooftop parking areas shall also be landscaped wherever they are visible to the public.
(5) Landscaped screening shall be required to prevent undesirable vistas and sight lines, and to reduce the visual impact of blank walls and parked vehicles. Spacing and other design elements shall be determined by species, plant size and mix of plant material."

The parking structure and the ground floor service yard of the Project has been designed to be partially screened by landscaping along Kalakaua Avenue and on the property, and additional surrounding and within the auto court. There will be no rooftop parking area since the area above the parking garage will be improved by a pool deck, including landscaping and other aesthetic improvements.

Landscaped screening will be used to prevent undesirable vistas and sight lines and to reduce the visual impact of blank walls and parked vehicles, from public viewing areas.

(vi) Since the Project is not being processed as a Planned Development-Resort project, the minimum one-acre lot size is not applicable.

(vii) The bar on the pool deck is screened by the Spa, Back of House structure and men's and women's restrooms and should have minimal impact on the neighboring Luana hotel guests. The restaurant on the next level will be screened by the Kitchen and a wall. The only opening to the Luana will be for the outdoor dining lanai. The location of vents and fans will take into account the neighboring Luana property, however tradewinds blow the majority of the time in a south westerly direction and odors will be blown out toward the sea and with the large Fort DeRussy Park, should dissipate prior to affecting any residents or hotel guests.

The Noise Study in the DEA noted that:

> "... Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.
>
> *"The applicant will provide sound attenuation for ventilation openings, exhaust fans, and/or mechanical equipment, as needed to not exceed the State Department of Health noise limits at the project's property boundaries.*
>
> "The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge.
> *"The applicant will follow these recommendations in determining the appropriate glazing to be used for noise mitigation."*

(viii) The Applicant has provided the required notice to adjoining property owners of the initial presentation to the Waikiki Neighborhood Board. Upon acceptance of the WSD Major permit for processing, the Applicant will be required to notify property owners within 300 feet of the Project site that DPP is processing the application. DPP will notify these property owners of the public hearing on the WSD permit. There is no requirement for the Applicant to meet with individual property owners or to send revised notices as plans may change during the review process in response to concerns raised about the Project or to meet conditions of approval. The Applicant has presented the Project as described in the DEA, to the Board of Directors of the Luana Waikiki at its January meeting, which we understand was open to and attended by Luana Waikiki unit owners.

(ix) The Resort Mixed Use Precinct within which the Luana and the Project site are located does not require a side or rear yard, except for zoning lots adjoining an Apartment Precinct. Since neither property is in the Apartment Precinct, this LUO Sec. 21-4.70(c)(1)(2)(3) relating to screening is not applicable.

(x) The previous application looked to provide the requirements of yard setbacks and open space and did not present any park that would allow public access. While an open space at ground level would create a visual separation at ground level between the two properties, there was no public thoroughfare and the alignment with such an access would be to the cul-de-sac on the Fort DeRussy side.

This proposal looks to open up a view corridor at the largest angle feasible due to needed functions at ground level, from the Ewa-Mauka property line, through the entry drive,

with a vista through the lobby and the newly created Park Kalia. Additionally, the vista will be approximately 40 feet high. The existing shuttered restaurant is a 25' block from property line to property line, with views of Fort. DeRussy only allowed once beyond the Diamond Head-Mauka corner, some 100' later.

The proposal also looks to activate Park Kalia through cultural programming supplemented by the Property. As a setback or yard only provides a passive relief, this space would provide further public access and use, creating a visual and functional connection between King Kalakaua Park and Fort DeRussy. Cultural programming will be an asset to Waikiki guests, and the surrounding community whether residents, workers or local visitors. Cultural programming at this location can enrich and activate this area that serves as the gateway to Waikiki and hopefully spur other such improvements on this side of Waikiki.

Regarding Sec 21-9.80-1(c) Hawaiian Sense of Place, the applicant has taken careful measures to research historical data and occurrences at this and surrounding sites. The information has provided both guidance for planning and inspiration for the design. Please reference **Sections 7.5.1.1 and 7.6.1** of the DEA. The applicant also has formed a cultural focus group of residents and stakeholders of the area, and has interfaced with cultural descendants of Kalia to seek further guidance and understanding in regards to the proposal. In addition to these cultural influences informing the project design in planning and in building elevation design, the proposal looks to maximize open space, use landscaping to provide visual relief, propose re-introduction of water that was historically prevalent in the area, and use native species specific to the Kalia area for landscaping. The building design uses elements to soften the massing by creating different surfaces and breaks, a combination of glass, solids and relief through use of deep lanais, and a building top that blends with the tower lines and forms, instead of an abrupt straight building top of a parapet and mechanical equipment and screen.

Further misstated, a PD-R is not applicable, nor required for this project.

The building is designed to meet the requirements of the WSD, including the increase in height to 350 feet and is not in violation of the WSD or the PD-R, which are not applicable to this Project.

PLANNED DEVELOPMENT-RESORT

As mentioned earlier, since the Project is not being processed under a Planned Development-Resort (PD-R) permit application, LUO Sec. 9.80-4(d) and the criteria cited is not applicable.

III. ADVERSE IMPACT, ADDITIONAL REQUIREMENTS AND CONCLUSIONS

1. The Applicant has met the notification requirements of the City and will continue to meet those notification requirements in the future.

2. The financial impact of the Project is documented in the DEA. Financial impact to individual property owners is not a content requirement in the DEA. As mentioned above, the LUO focuses on certain public views, but not private views.

3. The Project is not being processed under the PD-R process so many of the references in this section are not applicable. The increase in height does require legislative action, in the form of a resolution approved by the City Council provided criteria describe above are met. The Applicant in purchasing the property was aware that a variance would not be required and that a PD-R permit would also not be required. The Applicant understood that a resolution approved by the City Council would be required and had been previously approved for other projects.

   As mentioned earlier, based on the records of the Real Property Assessment Division of the City and County of Honolulu, the assessed real property values of a sampling of properties surrounding the Trump International Hotel and Tower have increased at the compounded average annual rate of nearly 5% between 2009 and the present, and the assessed real property values of a sampling of properties surrounding The Ritz-Carlton Residences, Waikiki Beach increased by more than 7% in 2016.

   The LUO was established to provide the same opportunity for any property owner in Waikiki, in accordance with the zoning precinct regulations. Should the Luana property seek redevelopment in the future, they would have the same opportunity to process an application in accordance with the LUO in place at the time. Individual property owners do not have rights over others and as they have developed in accordance with the zoning rules in place at the time, new investors have the opportunity to develop their property in accordance with current zoning rules.

4. An internet search was not successful in identifying the source of your statement on the Environmental Council Recommended Protocol. In the event that you were referencing the requirement that the Cultural Impact Statement include contact with local practitioners or elders with knowledge of the area to determine impacts to current and past local practices in the area, we have made such contact and continue to do so. This was not intended to require contact and discussions with all persons owning adjoining or surrounding properties.

   We are not aware that the City will balance property values in its review of permit applications submitted in accordance with the LUO. The City will process the application, and the City Council will decide by resolution to determine if the Applicant has met the requirement for the height increase and if the City Council chooses to grant the height increase.

IV. SUGGESTED SOLUTIONS

1. The Applicant has determined that its design of the Project with a 350 foot height is in accordance with a process available under the LUO and provides substantial benefits to the Waikiki community.

2. The building is designed to meet the requirements of the WSD, including an increase in height to 350 feet and is not in violation of the WSD or the PD-R, which are not applicable to this Project.

   In addition, the location of the park on the Diamond Head side of the property provides greater physical access and visual experience for pedestrians and users of Kalakaua Park, the Project and Fort DeRussy Park.

   See item II.x. which provided additional reasons for providing the park area on the eastern portion of the Project Site.

3. As mentioned earlier, Section 21-4.70(c)(1)(3) of the LUO pertains to properties with side and rear yard requirements, and in the case of the Luana and the Project, no side or rear yard is required. The minimum yard standard that you have quoted is part of the PD-R standards which are not applicable with this Project. There is no request for a 45% increase in lot area since the Applicant is not processing a PD-R application, which would require a minimum one acre lot.

4. We are not aware of any instances in which the City has required compensation to private property owners for a development that meets the LUO requirements and process. In any event, such a valuation would be speculative and would factor possible increases in income and property value to surrounding property owners.

5. The Applicant disagrees with your economic calculations and methodology, and economic benefit to the Applicant is not a criteria in the DEA.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
Best Hospitality LLC

UNITE HERE!
LOCAL 5 HAWAII

Eric Gill, Financial Secretary-Treasurer *Hernando Ramos Tan, President* *Godfrey Maeshiro, Secretary-Vice President*

2016 FEB 22 PM 2 38
DEPT OF PLANNING
AND PERMITTING
CITY & COUNTY OF HONOLULU

February 22, 2016

Via email to kkurahashi@hawaii.rr.com

Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-217
Honolulu, HI 96822

Subject: Response to Draft Environmental Assessment - Park Kalia Condo Hotel Project

Dear Mr. Kurahashi:

I request that UNITE HERE Local 5 be made a consulted party in the development of this Environmental Assessment. After reviewing the company's Draft Environmental Assessment ("Draft EA"), Local 5 has the following questions and comments:

1. If one of the project's goals is to address market demand for new hotel units, why is the applicant building condotel units rather than hotel units?

2. What, if anything, does the developer intend to do to ensure that condotel units are used for transient accommodations rather than residences? How well will any such plans or programs ensure, rather than encourage, that units are used for transient accommodations?

3. Please include full analysis of the impact on employment, tax revenues, parking, schools, etc. if more units are used for residential purposes by permanent residents than what is currently projected.

4. Will the developer guarantee that the project will be built to LEED certified standards? If not, how soon will the developer be able announce whether they will make such a guarantee?

5. Will low-flow plumbing fixtures be utilized in all rooms?

6. With regard to parking:

    a. Given that the developer estimates that between 5% and 20% of the units will be used as residential, and given that more, and as many as all of the units could be used as residential, why is the developer building parking stalls to the standard of a pure hotel?

    b. Why wouldn't the developer minimally use the same assumptions regarding residential usage in the project for parking as it does in other areas of this Draft EA?

    c. The developer should consider building more parking.

d. What is the maximum impact this project could have on parking resources in the area (and traffic related to such parking) if the 67 stalls the developer intends to build are not sufficient for hotel guests, residents, restaurant patrons, wedding parties and employees at the project? What, if anything, will the developer do to mitigate this impact?

7. Are the structures existing at the project currently being used for parking (or have they recently been used for parking)? How many stalls were there? Who was using stalls at the project, and how many did they use, if any?

8. Regarding the park proposed in Section 2.2 (pg. 15):

   a. Where will the park be located?

   b. Will it include fish ponds or references to historic fishponds that were once in the area?

   c. What Native Hawaiian cultural connections will it contain?

9. What will be the noise impact to users of Fort DeRussy Park:

   a. in the construction phase?

   b. in the operational phase?

10. The "No Action" alternative should be considered independent of its economic feasibility for the developer. It is not the City's responsibility to ensure that the developer makes money on its investment.

11. The developer should consider and describe a full hotel alternative instead of a condotel.

12. The developer should include a more extensive, inclusive discussion of each of the non-preferred alternatives. The discussion provided is too cursory for the public to have a sense of the feasibility and relative impacts of each potential alternative, and it does not constitute serious consideration of those alternatives.

13. Given concerns raised by residents and board members at the Waikiki Neighborhood Board, the developer should include discussion of an alternative that would fit within the existing height limit for the property.

14. The developer claims that rooftop landscaping will provide visual relief for the overlooking taller buildings nearby. Are there any buildings in Waikiki taller than 350 feet? At what height will those in said taller buildings be able to clearly see the rooftop landscaping?

15. How will the developer mitigate the loss of a Hawaiian sense of place in Fort DeRussy Park and the sidewalk along Kalakaua fronting both this project and the park due to the height and proximity of this project to both and its impact on view planes?

16. What articulation will there be on the mauka side of the building?

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17. Since the developer has identified a threatened species on the property (namely, the white tern), what mitigation measures will the developer take to preserve it?

18. Who will operate the condo-hotel?

19. What level of service will the condo-hotel operate at? What lodging properties will be in this project's competitive set?

20. What portion of the units will be sold as affordable units? If none will be sold as affordable, why is the developer not intending to construct affordable housing proportional to the amount of market housing to potentially be created, given both that the developer projects that a certain number of owners may live at the property and that there may not be anything limiting substantially all of the owners from living at the property?

21. Regarding electricity usage:

    a. How much electricity will the project use?

    b. Will each condo-hotel unit have its own air conditioner?

    c. Will electricity be separately metered in each unit?

22. The developer discusses the width of the front yard as being 20 feet on <u>average</u>; however, the WSD development standard requires a 20-foot <u>minimum</u>. Will the project meet this requirement?

23. How much will the amount of solid waste to be generated by the development impact existing systems (e.g., the H-Power facility and Waimanalo Gulch) in relation to their capacity?

24. Assuming the sewer connection to the Fort DeRussy pumping station is approved, how much will this development impact the capacity of that station and of the wastewater treatment plant(s) it relays to?

25. The text description of the "Shadow Analysis" presented in section 8.7.6 (pg. 114) appears to be for a different project. This should be fixed. The developer should re-release the Draft EA with this information to allow the public the ability to comment on the actual shadow analysis.

26. Based on the visual representations of the shadow analysis, it is clear that the shadows cast by this project will have a significant impact on Fort DeRussy Park, casting shadows on the park throughout almost the entire day during the summer. How might this curtail the range of beneficial uses of the environment? To the extent the developer feels it would not curtail such uses, please explain why it would not.

27. Regarding the basement area:

    a. What will be in the project's basement area?

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b. Who will have access to this area or be required to be in this area?

c. What measures will the developer take to protect visitors, employees and residents at the property, especially those using the basement area, from dangers related to flooding, given that the project site is located in Zone AO, the Special Flood Hazard Area defined as Flood depths of 1 to 3 feet?

28. What, if anything, will the developer do to stimulate public awareness, education and participation in coastal management among guests, residents and employees at the project?

29. The developer states: "The condo-hotel operator will promote the protection, use, and development of marine and coastal resources, assuring their sustainability, by providing access for their guests to use the beach at Fort DeRussy." - Draft EA, section 8.8.1.10, pg. 117. Please explain:

    a. What is meant by the phrase "providing access for their guests to use the beach at Fort DeRussy."? What access will the condo-hotel operator provide?

    b. How will providing access for guests to use the beach at Fort DeRussy promote the protection, use and development of marine and coastal resources, assuring their sustainability?

    c. Has the "condo-hotel operator" agreed to provide said access? Has a condo-hotel operator been chosen?

    d. Please describe specifically what the developer and/or condo-hotel operator will do that will achieve the goal to "Promote the protection, use, and development of marine and coastal resources to as- sure their sustainability"?

    e. Is it possible that some of the units in the project could be operated by someone other than the "condo-hotel operator", i.e., if unit owners choose not to enter their units into a rental agreement with the condo-hotel operator? If so, what will the developer do to ensure that operators of units not in the condo-hotel operator's rental program and residents who do not rent out their units will meet the aforementioned goal?

30. Regarding the cumulative impact of this project together with others in the area, the developer appears in Section 8.9 (pg. 125) to have limited the discussion to impacts during the construction process. Please discuss cumulative impacts of this development together with other developments in Waikiki once operational, especially with regard to:
    a. Parking;
    b. Traffic;
    c. Water use;
    d. Electricity use;
    e. Sewage;
    f. Solid waste generation; and
    g. Other impacts.

    Please include in this discussion the other planned developments in Waikiki, such as: the Waikiki Trade Center conversion project, the Moana Surfrider and Princess Kaiulani projects, the International Marketplace project, the King's Village project, the Outrigger

Reef expansion project, etc.

31. What is the timeline for this development? Will it begin after the completion of both timeshare towers being constructed at Hilton Hawaiian Village and renovations to the retail space and pool? Will it begin after completion of the Outrigger Reef expansion project? How might those projects together with the Park Kalia condo hotel project cumulatively impact the environment during construction if they do run concurrently?

32. Could the project negatively impact the property values of the neighboring condo-hotel, the Luana Waikiki? If so, how would such an impact affect the net property taxes generated by this project?

33. Will the development affect views of Diamond Head from other locations along the Punchbowl lookout than the single location used in the Draft EA?

34. The illustrations provided in Appendix A labeled "Building Section," "Elevation from Kalia Road," "Elevation from Kalakaua," "Elevation from Diamondhead" and "Elevation from 'Ewa Along Kalakaua" appear to have several problems:

    a. Several of the surrounding buildings in these illustrations are in the wrong locations and are displayed in the wrong proportions, making them look larger and more dense than they actually would appear from those viewing angles compared to the proposed structures. Please fix this.

    b. The Ko'olau mountain range appears to be completely omitted from these pictures, making it impossible to visualize how the project could interfere with views of the mountains. Please fix this.

    c. The illustrations appear to have been selected specifically to include views with existing buildings already in the background, and to specifically exclude views with fewer obstructions. Please include illustrations which take additional views into account, specifically those with fewer existing obstructions.

35. The photographs provided in Appendix A labeled "Site Photos" are problematic for several reasons:

    a. The photos depict the proposed project with a blue dashed line representing the outline. This makes it very difficult to get an understanding of how and where the building will obstruct and change views and how it will interact with the surrounding landscape.

    b. Most of the pictures appear to have been taken on a cloudy day, or from locations where the area behind the proposed tower is filled with clouds. This makes it very difficult for the viewer to have an understanding of how and where the building will obstruct and change views in sunny conditions.

    c. The use of the blue dashed line against a blue or white background makes it difficult to even see the line.

d. Please address these issues with revised photographs that avoid these problems and instead provide a better depiction of how the building might actually look in each one.

36. Will the developer take steps to ensure that the entire project will not be converted to a residential condominium? If not:

    a. How will this affect long-term employment at the project?

    b. What other impacts would this have on the surrounding community?

37. There are a number of new lodging developments being proposed or constructed throughout Oahu. The developer should study the cumulative impact this project will have on lodging demand and other socioeconomic and environmental matters when considered along with all other new hotel, condotel, timeshare and luxury residential product on the entire island of Oahu. In this study, the developer should discuss how new lodging product outside of Waikiki could have an impact on projections for the need for new inventory in Waikiki.

38. Is the company relying on condotel sales to finance the construction? What funding or financing is currently dedicated to this project? How will the construction be financed?

39. Considering the number of burials that have been discovered during other archaeological studies in the vicinity of the project, the developer should conduct more test excavations on site. The single excavation conducted at the edge of the site may be insufficient, especially since, as the Draft EA states, "Based on cultural and historic background detailed in this CIA report, however, the proposed project may potentially impact Native Hawaiian burials and subsurface cultural layers." - Draft EA, Appendix E, Section 6.2, pg. 76.

Thank you in advance for your consideration of these matters.

Sincerely,

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April 13, 2016

Mr. Benjamin Sadoski
UNITE HERE, Local 5
1516 South King Street
Honolulu, Hawaii 96826

Dear Mr. Sadoski:

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Thank you for your letter dated February 22, 2016 regarding the Draft Environmental Assessment ("DEA") for the Park Kalia-Waikiki Condo Hotel Project ("Project").

We appreciate your comments and offer the following responses (in the order set forth in your letter):

1. Condo hotel describes the form of ownership for hotel developments that are prevalent in Waikiki, as the costs of financing new hotel projects are not conducive to single ownership of the entire hotel development. Most new hotels in Waikiki are financed through individual ownership of hotel units that are placed in a hotel operation under a hotel operator. These units are able to address the hotel demand in Waikiki and elsewhere, with only a small percentage of units ending up as residences (part time or permanent).

2. The developer (Applicant) projects that about 85% of the proposed condo-hotel units will be placed in a hotel program. This factor is based on statistics of similar properties in Waikiki. Typically, a great majority of the remaining 15% of the units will be used as part-time residences or long-term, personal vacation homes. It is anticipated that less than 2% of the units will be used as typical permanent, primary residences. Many part-time residences will still utilize typical hotel services (maid service, valet, room service, etc.). The above percentages are based on the Trump International Hotel Waikiki Beach Walk (Trump Hotel), where 90% of its studios and 80% of its one-bedroom units are in the hotel program. At the Luana Waikiki Hotel and Suites (Luana Hotel), which is comprised of mostly studio and one-bedroom units, the percentage of units placed in the hotel program is 90% to 95%. The Applicant's condo hotel unit count is 170 (based on

some lock-off units). We will continue to use 170 as our condo hotel unit count for discussion purposes in the Final Environmental Assessment (FEA), since the actual number of units placed with the hotel operator will not be known until actual sale of the units. As you have requested in your letter, we have provided a comparison of impacts based on 26 units in residential use and 144 units as condo hotel units. The Applicant does not plan to force transient accommodations use by individual owners. Having an upper end hotel operator should serve as encouragement for individual owners to place their units with the hotel operator.

3. Based on the projected 26 units (15%) that may not be placed in a hotel operation (this is a very high number of units, as the Applicant expects that only about 2% of the 170 units will be used as permanent residences and the balance would more closely resemble a hotel type use):

   a. Please note that at the present time there are no significant jobs at the Project site, just a parking attendant. Future full-time employment projected in the DEA may go down from 110 full time employees to 107 employees with 26 less units being in the hotel program.
   b. Parking requirements for any permanent residents, 19 ½ additional stalls would be required for 26 units, are easily accommodated since the Applicant is providing 24 parking stalls more than required.
   c. For purely full-time residences, property tax revenues may decrease slightly due to use of a homeowner's exemption. It is anticipated that few if any of the units will be used as primary residences, which is required for a homeowner's exemption.
   d. General Excise tax revenues estimated in the DEA may go down slightly, but off-set somewhat by the purchases made by the full time residents in the 26 unit reduction in hotel units.
   e. Transient accommodation tax revenues would also decrease from $2,141,000 to $1,780,000 based on 26 less units being in the hotel program.
   f. The difference in trip generation with about 26 units not placed in a hotel operation is shown below:

Condo/Townhouse	AM Peak	11.5
	PM Peak	13.5
Hotel	AM Peak	13.8
	PM Peak	16.4

   As you can see, there will be about 1.8 less trips during the AM (morning peak hour) and 2.9 less trips during the PM (afternoon peak hour), with 26 more condo units versus 26 hotel units. This is not a significant difference.
   g. There will be minimal impact on schools. Based on the Department of Education (DOE) standards for Waikiki, the increase in residential units on the property would result in about 4 additional students in grades K to 12. The DOE has

indicated that the schools in the area have sufficient space to accommodate any increase in students generated by the project.

h. The difference in impact on water usage is 1,300 gallons per day (gpd) less for residential use rather than hotel use.
i. There is no difference in wastewater generated per hotel unit or residential unit.
j. With regard to solid waste, the 26 residential units could potentially generate 1-2 cubic yards 5 times a week, which is double the hotel use if it's assumed residents would eat at home.
k. The project will not generate any affordable housing requirements.
l. The difference in energy usage would be nominal, if any, for any full-time residential units. Statistics state that a residential condo versus a hotel unit is about a 7% to 9% increase in energy use. Using this statistic, the increase in energy usage between a 170-unit hotel versus a 144-unit hotel with 26 residential condominium units would be about 1.4%.
m. The impact to the Honolulu Fire Department and the Honolulu Police Department is not expected to change with the change in a portion of the units from hotel to residential use.
n. The impact to the City's park system will not change with the change in usage of a portion of the units from hotel to residential use.
o. The Applicant does not believe there would be any other potential impacts with a portion of the units becoming dwelling units.

4. The Project will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. The Applicant will not guarantee that the project will be built to LEED (Leadership in Energy and Environmental Design).

5. Low-flow plumbing fixtures will be utilized in all rooms.

6. Parking

   a. The Applicant has provided 24 more parking stalls than would be required if all units were used as hotel units. This would accommodate 26 permanent residences.
   b. The Applicant has provided surplus parking to accommodate 26 permanent residences.
   c. The Applicant has provided ample parking to accommodate potential permanent residences.
   d. The Applicant is confident that the parking provided will accommodate the proposed uses on the Project site and has provided surplus parking to accommodate those uses.

7. The existing parking structure at the Project site is used for parking and there are 42 parking stalls in the structure.

8. Park

   a. The park will be located on the southeast side of the Project site.

b. It will include water features inspired by the fishponds and reference historic use of the area for fishponds.
c. The creation of a new park in Waikīkī to be called Park Kālia. Improvements to include native landscaping, water features and culturally based interpretive art and signage. Commitment to providing an on-site cultural historian to provide insight and educate park users. Commitment to provide cultural programing, open to the public, to honor and perpetuate the history and cultural significance of Kālia, Waikīkī.

9. Noise impact.

a. Construction Phase

The DEA Acoustical Study noted that:

"Noise sensitive receptors who are predicted to experience the highest noise levels during construction activities, are located at the neighboring Aqua Luana Waikiki Hotel and at the Fort DeRussy Chapel. Predicted construction noise levels during demolition and site preparation phase of the work on the project site ranged from 53 to 95 dBA (plus or minus 5 dBA). The highest noise levels during construction are expected to occur at the Aqua Luana Waikiki Hotel west of the project site during the demolition and site preparation work, where buffer distances are relatively small (in the order of 15 to 50 feet). On the makai (south) side of the project site where the Fort DeRussy Chapel is located, construction noise levels during demolition and site preparation are predicted to range from 56 to 86 dBA. Adverse impacts from construction noise are not expected to be in the 'public health and welfare' category due to the temporary nature of the work, and due to the administrative controls available for regulation of construction noise. Instead, these impacts will probably be limited to the temporary degradation of the quality of the acoustic environment in the immediate vicinity of the project site."

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures, includes a discussion of short-term noise impacts and mitigation measures for the Project that is stated in part as follows:

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

Most structures are well over 70 feet from the construction site and most resort units are air conditioned. The Fort DeRussy Chapel and the Luana Waikīkī Hotel are the two exceptions. The Fort DeRussy Chapel is located about 55 feet away, however, their scheduled of events noted Protestant Services on Sunday morning at 9:00 am; Catholic Services on Saturday evening at 5:00 pm and "Chapel On the Beach" beach side of the Hale Koa Hotel at 6:00 pm. These services except for the

5:00 pm Catholic Services on Saturday fall outside of the typical construction hours allowed by the State. The Applicant will instruct contractors to voluntarily stop noise creating activity at 5:00 pm on Saturdays so as not to adversely impact the Fort DeRussy Chapel Saturday operations.

The Luana Waikīkī Hotel and Suites ("Luana Waikīkī") is air conditioned which should help to mitigate construction noise impacts, but its guests, due to their proximity, will still be the most affected by construction noise impacts.

b. Operational phase

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts from the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible.

...

"Mechanical equipment, such as air conditioning chillers or cooling towers, and garage and kitchen ventilation fans are the primary on-site noise sources expected to be located on the project site. These equipment, singly or together, have the potential of exceeding the allowable property line noise limits of the State DOH noise regulation (Reference 4). The State DOH noise limits which apply along the property lines of resort districts are 60 dBA and 50 dBA during the daytime and nighttime periods, respectively, where the daytime period is from 7:00 am to 10:00 pm, and the night time period is from 10:00 pm to 7:00 am. Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations.

...

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls."

Chapter VII. Discussion of Project-Related Noise Impacts and Possible Mitigation Measures", includes a discussion of potential long-term noise impacts and mitigation measures for the Project which states in part as follows:

"Noise impacts from project related traffic along the roadways which are expected to service the project are not expected due to the relatively low levels of project related traffic when compared to the noise levels of non-project related traffic and other noise sources. In addition, the existing resort units which are located in the immediate vicinity of the project are currently provided with air conditioning.

...

"Parking Garage and Other On-Site Sources. The underground parking area's ventilation openings and/or exhaust fans may require sound attenuation treatments so as to not exceed State Department of Health noise limits at the project's property boundaries. Audible tire squeal noise from the circulation and parking areas of the project are possible. Tire squeal noise can usually be controlled through the use of a brushed or other coarse finish on the circulation driveways, and this type of treatment is recommended as a noise mitigation measure."

...

"... Typical noise levels of untreated mechanical equipment are significantly higher (by at least 10 dBA) than the allowable DOH noise limits, such that sound attenuation treatment of the mechanical equipment will probably be required for compliance with DOH regulations. The Applicant will provide sound attenuation for ventilation openings, exhaust fans, and/or mechanical equipment, as needed to not exceed the State Department of Health noise limits at the project's property boundaries.

"The Club Lounge may be a source of low frequency music sounds which can propagate outdoors if exterior windows or open lanai doors are used at the exterior walls. If very loud music with high bass content occurs within the Club Lounge, and if exterior glazing is planned to be used, the use of thick laminated glazing with very large air space between double panes of glazing will be required to provide the necessary sound attenuation. If very loud music with high bass content is not anticipated to occur at the Club Lounge, the use of insulated glazing similar to that required for traffic noise attenuation in the living units would be acceptable for use at the Club Lounge."

The Applicant will follow these recommendations in determining the appropriate glazing to be used for noise mitigation.

10. The "No Action" and other alternatives are provided as alternatives that were considered. Although it is not the City's responsibility to ensure that the Applicant receives a return on its investment, it is the Applicant's responsibility to select an alternative that is fiscally feasible, unless said Applicant is a philanthropist that is willing to lose money on alternatives that are not expected to be profitable.

11. Hotel development has changed significantly over the years and especially in Hawaii, very few new hotel developments involve single ownership of entire hotel projects. This is possible only in instances where there is sufficient revenue generated by surrounding development to off-set the long rate of return for the hotel portion of the development. For this reason, most new hotel development is through the condo hotel model or

timeshare model in which individuals own each hotel unit and turn them over to an operator to run the hotel.

12. The Applicant has provided the greatest detail for the preferred alternative, because in other potential alternatives it was intuitively discovered that they would not work.

13. Alternative III would fit within the existing height limit for the property, but was not financially feasible.

14. The rooftop landscaping was referencing landscaping on the Pool Deck Level and 4th floor plans.

15. Pedestrians generally view the first thirty to forty feet of buildings and would not notice above that level unless they specifically look up at some tower structure. And since podiums are usually closer to the sidewalk, the podiums are the portions of developments that get noticed. The existing structures on the project site are between 20 and 34 feet tall and cover the width of the lot. There is no opportunity to see through the existing structures. The Applicant proposes an open lobby and an open area on the southeast side of the Project site that will open views toward Fort DeRussy and beyond. This will enhance the Hawaiian Sense of Place.

16. The mauka building elevation viewed from Kalakaua Avenue will be well articulated with curved building sides, a step in at the pool deck and fourth floor and with lanais on each floor. There will be open stairs and another step in at the chapel level and an articulated roof element.

17. The Applicant will work with State of Hawaii, Department of Natural Resources, Division of Forestry and Wildlife to determine appropriate safeguards to protect the white terns, should they be nesting at the time of heavy construction activity.

18. A hotel operator has not been selected at this time, but discussions are ongoing.

19. The Applicant hopes to have the condo hotel operate at a four or five star hotel level. The Applicant hopes to be competitive at the Trump Tower, Ritz Carleton and Halekulani level.

20. None of the condo hotel units will be sold as affordable units. The intent is for most of the units to be used as hotel units. Since this action does not involve rezoning and typical residential development, there is no affordable housing requirement.

21. Electricity.

    a. The Project is expected to use 1,726,802 kilowatt hours per year.
    b. The condo hotel will have central air conditioning.
    c. Electricity will not be separately metered for each unit.

22. The WSD allows yard averaging.

23. The condo hotel is expected to generate 85.5 tons of solid waste per year.

24. The hotel is expected to generate 49,360 gallons per day of wastewater. This represents 0.65% of the capacity of the Fort DeRussy Wastewater Pump Station and about 4% of the planned additional capacity in the Kalakaua Avenue/Ala Moana Boulevard wastewater line improvement to service new projects over and above existing and known developments.

25. The shadow analysis narrative will be corrected in the Final EA. The visual shadow study does depict the Project impacts. The visual images of the shadow study show that there will be limited impact to Fort DeRussy only during the period prior to 10:00 am and also limited impact to the Luana Waikiki swimming pool only during the period prior to 10:00 am. A re-release of the DEA should not be required.

26. Between 10 am and 4 pm and on into the evening, during the summer solstice, equinox and winter solstice, the Project will cast very limited shadows on Fort DeRussy. Prior to 10 am the tower will cast a long skinny shadow over a small portion of Fort DeRussy.

27. Basement area.

    a. The basement area will include a mechanical area, lower level auto lift and elevator areas and back of house.
    b. Access will be for staff and most spaces will be unmanned.
    c. Staff will be warned not to venture into the basement during flooding events.

28. The Applicant does not plan educational programs on coastal management for their guests, residents and employees.

29.

    a. The condo-hotel operator will be encouraged to provide maps directing their guests to the beach at Fort DeRussy for their use and enjoyment.
    b. The hotel operator will be encouraged in their television hotel guide and guide for activities in Waikiki to provide a video on the importance of respecting the ocean and not feeding the fish, discarding trash in the ocean or on the beach and provide caution on using the beach when a lifeguard is not available.
    c. A condo-hotel operator has not been selected and in our agreement, the Applicant will strongly recommend compliance with these recommendations related to coastal management.
    d. See item b.
    e. This possibility has not been considered, although it may be possible. It is hoped that the ease of listing their units with the hotel operator, the potential income stream from a four to five star hotel and the convenience of not having to self-operate a transient vacation unit will encourage owners to list their units with the hotel operator.

30. The cumulative impact of the Project with other developments in the area in relation to the following is described below:

    a. Parking – each development is responsible for providing for the parking needs of their project. The parking provided in our development will not affect parking at

other developments in Waikiki. The Applicant is aware, however, that certain developments plan or will result in more parking than required, including 133 Kaiulani (King's Village), International Market Place, Waikiki Trade Center, and Waikiki Parc Hotel. These developments will result in hundreds of excess parking stalls.

b. Traffic – traffic from previously planned developments and future developments are considered in traffic studies through annual ambient traffic increases in traffic projected by the traffic engineers.
c. Water use – water use is considered at the time of building permit approval and is under the review and control of the Board of Water Supply (BWS). Water has not been a limiting factor in developments in Waikiki. BWS has created an island wide network that allows redirecting supply to and from different areas to free up supply in growth areas.
d. Electricity use – the Applicant will work with HECO to ensure adequate electrical service. HECO is the agency that would plan for and accommodate development in Waikiki and elsewhere. To date, HECO has not raised concerns about accommodating new development in Waikiki.
e. Sewage – DPP has developed a Sewer Connection Permit process to determine the adequacy of wastewater systems in the area. The Applicant has filed a sewer connection permit application and is awaiting response to determine if the wastewater system is adequate to support this and other developments in Waikiki that have received approvals or are also pending review and approval.
f. Solid waste generated will be handled by private haulers and will not impact the municipal system. H-Power has capacity to handle the increase in solid waste generated and can handle spikes in demand with additional shifts.
g. Other impacts – impacts to schools are minimal and cumulative impacts are not expected to be significant in Waikiki; parks – most hotel and residential condo developments provide on-site opportunities, primarily swimming pools and decks and spas (this particular Project is well served by Fort DeRussy); police and fire protection services have been discussed in the DEA and the idea of concerns about cumulative impacts have not arisen with either agency; and flora and fauna impacts in an urban environment are generally fairly limited and cumulative impacts are not a major concern

31. The Project is expected to begin construction in September of 2017. The Hilton Hawaiian Village has a time share tower (Grand Islander) that is under construction now and is expected to be completed by the end of this year, before construction on the Project is expected to begin. The Applicant is not aware of the schedule for other improvements at the Hilton. The Applicant is not aware of the schedule for the Outrigger Reef expansion project. A draft environmental assessment or environmental impact statement was not available in the Office of Environmental Quality Control website. Since we are not aware that the Outrigger Reef Hotel has begun their environmental review process, it appears that their development's construction schedule will lag behind the Project development schedule. If the Outrigger catches up with the Project construction, the primary shared road access would be Saratoga/Kalaimoku Road to access Ala Wai Boulevard and from there the freeway or Kapiolani Boulevard heading in

the east or west direction. Short of a steady caravan of construction vehicles from both properties, the surrounding roadways should be able to accommodate the additional construction traffic.

32. The Project is not expected to negatively impact the property values of the neighboring Luana Waikiki property. Based on the records of the Real Property Assessment Division of the City and County of Honolulu, the assessed real property values of a sampling of properties surrounding the Trump International Hotel and Tower have increased at the compounded average annual rate of nearly 5% between 2009 and the present, and the assessed real property values of a sampling of properties surrounding The Ritz-Carlton Residences, Waikiki Beach increased by more than 7% in 2016.

33. The Project view from Punchbowl look out was taken at the most makai viewing location at the look out. From this view the Project does not affect the view of Diamond Head at all and is hidden for the most part behind the Allure Waikiki, profiled against the ocean and below the horizon line. Views taken from further mauka of the subject view point would angle the view further away from Diamond Head.

34. Appendix A. "Building Section", "Elevation from Kalia Road", "Elevation from Kalakaua", "Elevation from Diamond Head", and "Elevation from 'Ewa Along Kalakaua".

a. The surrounding buildings in these elevations are properly sized and oriented. These plans are elevations and not a visual perspective and need to be thought of as a two dimensional image of the elevation and not a perspective image taken from a fixed viewing point.
b. The Ko'olau mountain range will not be rendered into these plans, since it would require rendering in all the structures between the Project and the Ko'olaus in order to be viewed in the proper context. The photographic images with the Project outline superimposed provides the visual impact to the Ko'olaus.
c. The Elevations cover the principal elevations that would be expected, looking makai from Kalakaua Avenue, looking mauka from Fort DeRussy Park, looking Diamond Head along Kalakaua Avenue and looking Ewa along Kalakaua Avenue. No other elevations are planned.

35. Appendix A. "Site Photos"

a. The blue dashed line provides the outline of the building so that a viewer can see that the area within the blue dashed lines will be the area of view being blocked. Placing a solid building would not provide this view and a viewer would not know if the building is just blocking other buildings.
b. The pictures were taken at different times of the day and clouds may have affected some of the views, but did not block buildings on the ground or views of the mountains. We have added three new site photos, requested by DPP.
c. The blue dashed lines are visible against the white background and because of the shade of blue was also visible against the sky.

d. The Applicant is comfortable that the photo simulations provide adequate depiction of the location and visual impact of the proposed development.

36. The Applicant will not take steps to ensure that the entire project will not be converted to a residential condominium. Having an upper end hotel operator should serve as encouragement for individual owners to place their units with the hotel operator.

a. The Applicant expects that as in other condo hotel operations in Waikiki 85% to 95% of the units will be placed with the hotel operator, and some of the units not placed with the hotel operator may opt for hotel services when the owners are in town.
b. The impacts on the surrounding community have been addressed in item 3 for the projected number of residential condominium units. A full conversion has not happened in the past for the recent condo hotels and none are expected in the future.

37. This Project is expected to help replace lodging units lost in Waikiki. Even with the Project the net result will be less hotel units in Waikiki. The limited potential for residential condominiums will not have a significant impact on the luxury condominium market and if this market is saturated at the time this Project is constructed it will still proceed as a condo hotel development.

There are different hotel markets that cater to differing resort experiences. The demand for country type resorts is not affected by the demand for the urban resort experience offered in Waikiki. The supply of hotel units in each would not affect the demand in the other. Persons looking to enjoy an urban resort would not seek out a unit in Ko Olina or Turtle Bay and similarly someone looking to stay at Ko Olina or Turtle Bay would not as an alternative stay in Waikiki as it presents a completely different experience.

38. Condo hotel sales will play a role in financing this Project, as well as some owner financing and financial institution financing. Construction will not go forward without a certain minimum percentage of the units with purchase commitments.

39. An archaeological inventory survey has been done, based on the results the Applicant's archaeological consultant has been working with the State Historic Preservation Division at the Department of Land and Natural Resources to determine if additional trenches would be required.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

2016 FEB 23 PM 2 57

DEPT OF PLANNING
and PERMITTING
CITY & COUNTY OF HONOLULU

February 23, 2016

From: Mark Harpenau
2140 Kuhio Ave, #2202
Honolulu, HI 96815
(808) 782-5054 / markh@harp1.com

To: George Atta - Director, Department of Planning and Permitting
650 So. King Street, 7th Floor / Honolulu, Hawaii 96813
Attn: Joette Yago
(gatta@honolulu.gov, jyago@honolulu.gov)

CC: Ikaika Anderson / Gail Myers, Trevor Ozawa, OEQC
(ianderson@honolulu.gov, gmyers@honolulu.gov, ccidistrict4@honolulu.gov, tozawa@Honolulu.gov, oeqchawaii@doh.hawaii.gov)

Re: Waikiki – Park Kalia project – DEA permit application

Dear Mr. George Atta,

I live in the Four Paddle condominium in Waikiki, which will not be affected directly by the project. However, I wish to convey my thoughts on why this project **should Not be granted** a permit which exceeds the current height limit of 25 feet in the LUO.

My reasons are:

1) This project directly goes against the WSD Development Guidelines which clearly define the importance of preserving Mauka views from the Kalia Ave / Fort Derussy park view points.
2) The Waikiki Neighborhood Board voted unanimously against this project. It's time the DPP started listening to the community and the volunteers who work countless hours to serve this community.
3) This project would add to, and increase the current momentum of walls being built around Fort Derussy, adding to the closing-in and view blockage of this valuable green belt in Waikiki.
4) Most importantly, if the DPP continues to grant permits for properties that exceed zoning height restrictions, then other land owners with properties zoned for low-rise commercial / retail development will continue to be under-developed or vacant, while the landowner holds out for top-dollar. Since, in granting permits for high-rises that exceed the LUO, the DPP is clearly telling all land owners to hold out for top dollar from developers who are willing to challenge the current LUO. Meanwhile many existing low-rise properties will sit vacant and un-improved while landowners hold out for high-rise developers willing to challenge the LUO height restrictions, as the DPP continues on this path of ignoring current zoning restrictions.

Thank you for your consideration.

Mark Harpenau
(Waikiki Resident)

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

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E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Mark Harpenau
2140 Kuhio Avenue, #2202
Honolulu, Hawaii 96815

Subject:	**Chapter 343 Hawaii Revised Statutes** **Draft Environmental Assessment**
Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Harpenau:

Thank you for your letter dated February 23, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The Waikiki Special District Design Guidelines (WSDDG) under District Objectives includes the following:

   "Maintain and enhance significant public views to the mountains and ocean from public viewing areas, and maintain a substantial view of Diamond Head from Punchbowl lookouts. Improve pedestrian access, both perpendicular and parallel, to the beach and Ala Wai Canal."

   The WSDDG Section that provides details on the "Significant Public Views" includes the following:

   "Intermittent ocean views from Kalia Road across Fort DeRussy Park, Ala Wai Yacht Harbor, and the Ala Wai Bridge on Ala Moana Boulevard."

   The WSDDG does not specifically state nor "clearly define the importance of preserving mauka views from the Kalia Ave./Fort DeRussy park view points.".

   The Land Use Ordinance (LUO), Waikiki Special District Urban Design Controls, Exhibit 21-9.15, mapped an area intended to provide for the "Fort DeRussy Mauka-Makai View Corridor". This area is bounded by Kalakaua Avenue, Kuhio Avenue, Kuamoo Street, Ala Wai Boulevard, and McCully Street. This area has height limits of

65 feet to 130 feet, to provide for the view corridor. The Project Site is not within this view corridor intended to protect mauka views from Fort DeRussy.

The Project Site on the other hand sits across Kalakaua Avenue from an area with a 25-foot height limit, the King Kalakaua Park and a 300-foot height limit beyond that, mauka of Kuhio Avenue, and a small section of 300-foot height limit across Kalakaua Avenue on the eastern portion of the Project Site. Development in the 300-foot height limit area, in accordance with the LUO and Waikiki Special District will result in blockage of mauka views from Fort DeRussy. Maintaining a 25-foot height limit for this property will not serve to protect mauka views from Fort DeRussy over time, as new 300-foot towers are developed mauka of the Project Site. The view of the Koolau Mountains from Kuroda Field will not be a protected view based on the 300-foot height limit for a large area mauka of the Project Site.

An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet.

The Applicant believes, based on the earlier park designation for the properties, that the City had intended to acquire the Project Site and two neighboring lots for park use and the 25-foot height limit was placed on the properties with this in mind. However, it would seem that given the 300-foot height limit across Kalakaua Avenue and mauka of Kuhio Avenue, these properties should be allowed a taller height limit.

2. The Waikiki Neighborhood Board did vote unanimously against this Project. However, Waikiki Neighborhood Board No. 9 opposed the One Waikiki Project (now Park Kalia-Waikiki) "because the project violates the Land Use Ordinance (LUO) zoning regulations and the Waikiki Special District design criteria." The Applicant disagrees with the statement that the Project violates the LUO and the Waikiki Special District design criteria. The Project does not violate the LUO, but is requesting an increase in the Project height limit to 350 feet, in accordance with Section 21-9.80-4(g) of the LUO. The Applicant further feels, as described in the DEA that the project has been designed to meet the design criteria of the Waikiki Special District.

3. As mentioned in item 1, the City through the Waikiki Special District Urban Design Controls has established a restricted height area to protect mauka views from Fort DeRussy. The Project Site is not within this mauka-makai view corridor that protects mauka views from Fort DeRussy in perpetuity.

   The same view protection has not been provided through height restriction on parcels located mauka of this Project Site.

4. An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary

School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet. Most of the properties in Waikiki have a height limit of at least 220 feet. The Project Site, the Luana Waikiki (about 200 feet in height) and a service station are the only privately owned properties with a low-rise height limit, all other properties in Waikiki with a 25-foot height limit are government owned.

Your letter and this response will be included in the Final Environmental Assessment.

Very truly yours,

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

DEPARTMENT OF PLANNING AND PERMITTING
CITY AND COUNTY OF HONOLULU
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KIRK CALDWELL
MAYOR

GEORGE I. ATTA, FAICP
DIRECTOR

ARTHUR D. CHALLACOMBE
DEPUTY DIRECTOR

2015/ED-16 (JY)

February 23, 2016

Mr. Keith Kurahashi
Kusao & Kurahashi, Inc.
2752 Woodlawn Drive, Suite 5-202
Honolulu, Hawaii 96822

Dear Mr. Kurahashi:

SUBJECT: Chapter 343, Hawaii Revised Statues
Draft Environmental Assessment
Park Kalia
2055 and 2057 Kalakaua Avenue - Waikiki
Tax Map Key 2-6-6: 1 & 4

We have reviewed the above Draft Environmental Assessment (DEA), received November 25, 2015, for the above-mentioned project, and have the following comments:

A. Site Development Division:

1. Civil Engineering Branch:

a. Section 2.5 (Unresolved Issues): Section 8.6.4 (Drainage and Storm Water Quality) made no mention of a proposed drain connection into the City's MS4 (drainage system). Explain why this section states that a "Drain Connection Permit will be submitted for review and approval by DPP at a later date."

b. Section 7.5.3.2 (Curb Cuts): Driveway aprons shall comply with the Department of Planning and Permitting (DPP) "Standard Details for Public Works Construction".

c. Section 7.6.2.11 (Sidewalk & Paving): The upgraded sidewalk paving shall be approved by DPP, Land Use Permits Division, as part of the Waikiki Special District Permit process.

d. Section 8.6.4 (Drainage and Storm Water Quality): The project shall comply with the prevailing storm water quality standards at the time the construction/grading plans are submitted for review and approval.

2. Wastewater Branch: A new Sewer Connection Application for the 170 hotel-condo units and the 20,353 square feet of commercial space will be required. 2014/SCA-0298 is for only 100 hotel-condo units and 15,000 square feet of retail space and is currently being reviewed by Department of Environmental Services (ENV). Sewer adequacy for 2014/SCA-0298 can be determined once ENV completes their review.

3. Traffic Review Branch:

   a. A time line or phasing plan of the anticipated date to obtain major building permit(s) for construction work, including the projected date of occupancy, shall be prepared by the Applicant in a format acceptable to the Department. The time line should identify when the construction management plan (CMP), the traffic management plan (TMP) and updates and/or validation to the findings of the initial traffic impact analysis report (TIAR) dated November 2015 will be submitted for review and approval. Typically, the CMP should be submitted for review and approval prior to the issuance of building permits for major construction work. The TMP or subsequent updates should be submitted and approved prior to the issuance of the (temporary) certificate of occupancy (CO). The TIAR, including supplemental studies or subsequent updates, should be submitted and approved approximately one year after the issuance of the CO. A new TIAR will be required if there is a significant change to the scope.

   b. The CMP shall identify the type, frequency and routing of heavy trucks and construction related vehicles. Every effort shall be made to minimize impacts from these vehicles and related construction activities. The CMP should identify and limit vehicular activity related to construction to periods outside of the peak periods of traffic, utilizing alternate routes for heavy trucks, provisions for either on-site or off-site staging areas for construction related workers and vehicles to limit the use of on-street parking around the project site and other mitigation measures related to traffic and potential neighborhood impacts. Preliminary or conceptual traffic control plans should also be included in the CMP. The Applicant shall document the condition of roadways prior to the start of construction activities and provide remedial measures, as necessary, such as restriping, road resurfacing and/or reconstruction if the condition of the roadways has deteriorated as a result of the related construction activities.

   c. A TMP shall include traffic demand management (TDM) strategies to minimize the amount of vehicular trips for daily activities and large events. TDM strategies could include car pooling or ride sharing programs, transit, bicycle and pedestrian incentives, primarily directed at employees of the project, and other similar TDM measures. A post TMP will be

required approximately one year after the issuance of the certificate of occupancy to validate the relative effectiveness of the various TDM strategies identified in the initial report.

d. The TIAR should be expanded to include the analysis of the auto lifts/mechanical parking garage once the technology is chosen. Analysis should include the operational aspects, dwell time, and the potential for queuing in the porte-cochere area and Kalakaua Avenue.

e. A post TIAR will be required approximately one year after the issuance of the CO to validate the traffic projections, distribution and assignment contained in the initial TIAR. If additional traffic mitigation measures or modifications are necessary to support related traffic impacts directly attributable to this development, the Applicant will be required to implement these measures.

f. Construction plans for all work within or affecting public streets should be submitted for review and approval. Traffic control plans during construction should also be submitted for review and approval, as required. Adequate vehicular sight distance shall be provided and maintained at all driveways to pedestrians and other vehicles. Driveway grades shall not exceed five percent (5%) for a minimum distance of 25-feet from the back of the designated pedestrian walkway.

B. Policy Planning Branch:

1. The Primary Urban Center Development Plan (PUCDP) land use map identifies the area as commercial and the DEA references Ordinance No. 96-13 as such in Section 2.1. Conversely, Sections 2.6 and 7.4 of the DEA incorrectly state that the PUCDP designates the land as resort.

2. The project is located along the Kalakaua Avenue and designated commercial by the PUCDP. Commercial uses in the PUCDP should seek to engage and stimulate pedestrians by developing along street frontages. Most of the proposed pedestrian improvements are isolated from the building through the placement of its water features. The building itself is setback from the street and located behind an auto court. The DEA should include a discussion on the City's vision for complete streets and the comment in Section 15 of the project being an example of "non-smart development."

3. Section 3.1.1.2 and Figure 3.1 View Corridors identifies mauka view from Fort DeRussy as a view corridor. The proposed Project, situated mauka of Fort DeRussy, should respect the current 25-foot height limit to preserve and enhance this mauka view channel.

4. The EA should include an analysis of the possible impacts of sea level rise on the Project. If it is likely that sea level rise will increase the risk of flooding during the life of the Project structures, the Final EA should discuss how the design of the Project and proposed operations at the Project site will address that risk and provide resilience in recovering from any flooding.

   The national standard for making such project assessments has been developed by the U. S. Army Corps of Engineers (USACE). The USACE issued an Engineering Regulation (ER 1100-2-8162) on December 13, 2013, which provides "guidance for incorporating the direct and indirect physical effects of projected future sea level change across the Project life cycle in managing, planning, engineering, designing, constructing, operating, and maintaining USACE projects." The guidance in the regulation can be used as the basis for assessing the "potential relative sea level change" that might be experienced by projects in shoreline areas, and is required to be used for all USACE civil works. See http://www.corpsclimate.us/rccslca.cfm for more details, including use of an online sea-level calculator which can be used to produce Oahu specific projections of sea level rise through 2100.

C. Urban Design Branch:

Although the proposed project meets most of the development standards for the Resort Mixed Use Precinct, it far exceeds the 25-foot height limit. The proposed condo-hotel high-rise tower of 350 feet exceeds the maximum building height by 325 feet or 14 times the allowable height of 25 feet. The site is located adjacent to Fort DeRussy, the largest open space in Waikiki. The Luana Waikiki Hotel located adjacent to the site is an existing nonconforming structure that was constructed prior to the adoption of the LUO. Its 160-foot building height should not be considered as an appropriate development pattern around Fort DeRussy. The existing 25-foot height limit should be respected to reinforce the Fort DeRussy mauka-makai view corridor with maximum building heights of 65 feet and 180 feet for those areas located mauka of Kalakaua Avenue and between McCully Street and Kuamoo Street. The proposed 350-foot high-rise tower will increase view blockage of the Koolau Mountains from Kuroda Field, which is a significant view point for Fort DeRussy. The requested 325-foot building height increase is excessive and should not be allowed.

The view analysis should include views from Fort DeRussy's Kuroda Field looking in the mauka direction. In order to understand the mauka-makai view corridors, include views from the rooftop of the Hale Koa Hotel in the mauka direction.

Even though there is ample open space along Kalakaua Avenue and around the high-rise tower, there should be a better connection with Kalakaua Avenue that enhances the pedestrian experience. More streetscape improvements should be provided that promotes a strong Hawaiian sense of place. The proposed exterior lighting should be evaluated for light and glare impacts to the surrounding areas.

We have enclosed the receipts for the application fees and comment letters received for your response. Should you have any further questions, please contact Joette Yago of our Urban Design Branch at 768-8034 or jyago@honolulu.gov.

Very truly yours,

FOR George I. Atta, FAICP
Director

Enclosures: Various agency and community comments
Receipt Nos. 105433 and 105935

Doc 1328444

KUSAO & KURAHASHI, INC.
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April 13, 2016

Mr. George I. Atta, FAICP, Director
Department of Planning and Permitting
City and County of Honolulu
650 So. King Street, 7th Floor
Honolulu, Hawaii 96813

Attention: Joette Yago, Staff Planner
Urban Design Branch

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project: Park Kalia-Waikiki Condo Hotel
Applicant: Best Hospitality LLC
Agent: Kusao & Kurahashi, Inc.
Location: 2055 and 2057 Kalakaua Avenue
Tax Map Key: 2-6-6: 1 and 4

Dear Mr. Atta:

Thank you for your letter dated February 23, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

A. SITE DEVELOPMENT DIVISION

1. Civil Engineering Branch:
   a. The Final Environmental Assessment (FEA) Sections 2.5 Unresolved Issues and Section 8.6.4 Drainage and Storm Water Quality will include a proposed drain connection into the City's MS4 (drainage system). The "drain connection permit" will be prepared and submitted for review and approval after final determination of the Project layout and landscaping in an approval from DPP.
   b. Driveway aprons will comply with the Department of Planning and Permitting (DPP) "Standard Details for Public Works Construction".
   c. The upgraded sidewalk paving will be submitted for review and approval by DPP Land Use Permits Division, as part of the Waikiki Special District (WSD) Permit process.
   d. The project will comply with the prevailing storm water quality standards at the time the construction/grading plans are submitted for review and approval.

2. Wastewater Branch:
The Applicant will submit a new Sewer Connection Application for the 170 condo-hotel units and the 20,353 square feet of commercial space.

3. Traffic Review Branch:
   a. A time line or phasing plan of the anticipated date to obtain major building permits for construction work, including the projected date of occupancy will be prepared by the Applicant in a format acceptable to DPP. The time line will identify when the construction management plan (CMP) and traffic management plan (TMP) will be submitted for review and approval following your recommendations and requirements. The Applicant understands that a new traffic impact assessment report (TIAR) will be required if there is a significant change to the scope of the Project.
   b. The CMP will be prepared in accordance with your recommendations and requirements.
   c. The TMP will be prepared in accordance with your recommendations and requirements.
   d. The TIAR will be expanded to include the analysis of the auto lifts/mechanical parking garage, including the operational aspects, dwell time and potential for queuing in the porte cochere area and Kalakaua Avenue, once the technology is chosen.
   e. The Applicant understands that a post TIAR will be required and that additional traffic mitigation measures by the Applicant may be required.
   f. Construction plans for all work within or affecting public streets and traffic control plans during construction will be submitted to DPP, Traffic Review Branch, for review and approval. Adequate vehicular sight distance shall be provided and maintained at all driveways to pedestrians and other vehicles. Driveway grades shall not exceed 5% for a minimum distance of 25 feet from the back of the designated pedestrian way.

B. Policy Planning Branch:

1. Sections 2.6 and 7.4 which incorrectly stated that the Primary Urban Center Development Plan (PUCDP) land use map designates the land as resort, will be corrected in the FEA.

2. The Applicant will design the sidewalk to include four distinct zones as described in the complete streets draft manual: the frontage zone, the pedestrian (aka walking) zone, the furniture zone, and the curb zone in accordance with complete street principles. The frontage zone except for the entry drive to the porte cochere will include landscaping including water features and seat walls. In deference to complete street principals, the Applicant will work with DPP to possibly move the water features further into the property and create an 8-foot frontage zone with landscaping and seat walls.

3. The Land Use Ordinance (LUO), Waikiki Special District Urban Design Controls, Exhibit 21-9.15, mapped an area intended to provide for the "Fort DeRussy

Mauka-Makai View Corridor". This area is bounded by Kalakaua Avenue, Kuhio Avenue, Kuamoo Street, Ala Wai Boulevard, and McCully Street. This area has height limits of 65 feet to 130 feet, to provide for the view corridor. The Project Site is not within this mauka-makai view corridor that protects mauka views from Fort DeRussy.

The Project Site on the other hand sits across Kalakaua Avenue from an area with a 25-foot height limit, the King Kalakaua Park and a 300-foot height limit beyond that, mauka of Kuhio Avenue, and a small section of 300-foot height limit across Kalakaua Avenue on the eastern portion of the Project Site. Development in the 300-foot height limit area, in accordance with the LUO and Waikiki Special District will result in blockage of mauka views from Fort DeRussy. Maintaining a 25-foot height limit for this property will not serve to protect mauka views from Fort DeRussy over time, as new 300-foot towers are developed mauka of the Project Site.

An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet.

The Applicant believes, based on the earlier park designation for the properties, that the City had intended to acquire the Project Site and two neighboring lots for park use and the 25-foot height limit was placed on the properties with this in mind. However, it would seem that given the 300-foot height limit across Kalakaua Avenue and mauka of Kuhio Avenue, these properties should be allowed a taller height limit.

4. The change in climate has been triggered by greenhouse gas emissions, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, which are key contributors to the unprecedented increases in global atmospheric warming over the past century. Although attempts are being made to reduce these emissions, these trends are projected to continue and increase in the future creating significant challenges for island communities such as Hawai'i.

   The effects of climate change in Hawai'i is increasingly evident with the rise in air temperature; an increase in the sea's surface temperatures; an increase in sea levels; an increase in rain intensity, while there has been a decrease in rainfall; and a decrease in stream flows.

   It is unlikely that sea level rise will increase the risk of flooding during the life of the structure, since the Project was designed to accommodate any rising sea levels by raising the Project finish grade to approximately 9 feet MSL (mean sea level).

Based on the Army Corp of Engineering on-line information, it appears that the sea level rising rate would reach the building's lobby floor anywhere between 2141 and 2285 (see Sea Level Rise chart and graph, enclosed). Taking the more recent event 2141 and opening of the hotel in 2019, the 122 years far exceeds the life of the structure. Say the building had a 60 year life, the mean sea level would rise anywhere 0.42 – 3.10 feet. Waikīkī would be functional with a 2 foot sea level rise. The new structure sited at approximately 9 feet MSL will be safe from rising sea level for the life of the structure.

In order to minimize this Project's impact on climate change, BH will support sustainability and energy conservation on-site as follows:

- The existing buildings on the Project that are proposed to be demolished were built in the 1970s and do not incorporate the latest energy savings measures that will be introduced in the newly developed structures.
- BH intends to design, maintain, and operate the Project employing best practices for energy efficiency and environmental sustainability for projects of its kind. The new buildings will meet or exceed the energy efficiency code requirements.
- BH will review all applicable LEED rating systems, use the certification standards as guidelines, and pursue certification when financially feasible. LEED (Leadership in Energy and Design) is an internationally recognized building certification system intended to provide building owners and operators a concise framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions.
- BH will implement low-flow plumbing fixtures and incorporate efficient landscape irrigation systems.
- BH will reduce the Project's material waste through effective construction and operational recycling programs.

C. Urban Design Branch:

As mentioned earlier, the Land Use Ordinance (LUO), Waikiki Special District Urban Design Controls, Exhibit 21-9.15, mapped an area intended to provide for the "Fort DeRussy Mauka-Makai View Corridor". This area is bounded by Kalakaua Avenue, Kuhio Avenue, Kuamoo Street, Ala Wai Boulevard, and McCully Street. This area has height limits of 65 feet to 130 feet, to provide for the view corridor. The Project Site is not within this mauka-makai view corridor that protects mauka views from Fort DeRussy.

The Project Site on the other hand sits across Kalakaua Avenue from an area with a 25-foot height limit, the King Kalakaua Park and a 300-foot height limit beyond that, mauka of Kuhio Avenue, and a small section of 300-foot height limit across Kalakaua Avenue

on the eastern portion of the Project Site. Development in the 300-foot height limit area, in accordance with the LUO and Waikiki Special District will result in blockage of mauka views from Fort DeRussy. Maintaining a 25-foot height limit for this property will not serve to protect mauka views from Fort DeRussy over time, as new 300-foot towers are developed mauka of the Project Site. The view of the Koolau Mountains from Kuroda Field will not be a protected view based on the 300-foot height limit for a large area mauka of the Project Site.

The FEA will include views from Kuroda Field looking in the mauka direction and views from the rooftop of the Hale Koa Hotel in the mauka direction.

An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet.

The Applicant believes, based on the earlier park designation for the properties, that the City had intended to acquire the Project Site and two neighboring lots for park use and the 25-foot height limit was placed on the properties with this in mind. However, it would seem that given the 300-foot height limit across Kalakaua Avenue and mauka of Kuhio Avenue, these properties should be allowed a taller height limit.

The Applicant will work with your office in creating a better connection with Kalakaua Avenue that enhances the pedestrian experience. One of the goals of the large open space and waterway on the east portion of the Project Site and the visually open lobby was to provide a better view through and across the property to enhance the pedestrian experience on Kalakaua Avenue. More streetscape improvements will be provided, including seat walls, around trees to promote a strong Hawaiian sense of place. The proposed exterior lighting will be sensitive to light and glare impacts to surrounding areas.

Your letter and this response will be included in the FEA.

Very truly yours,

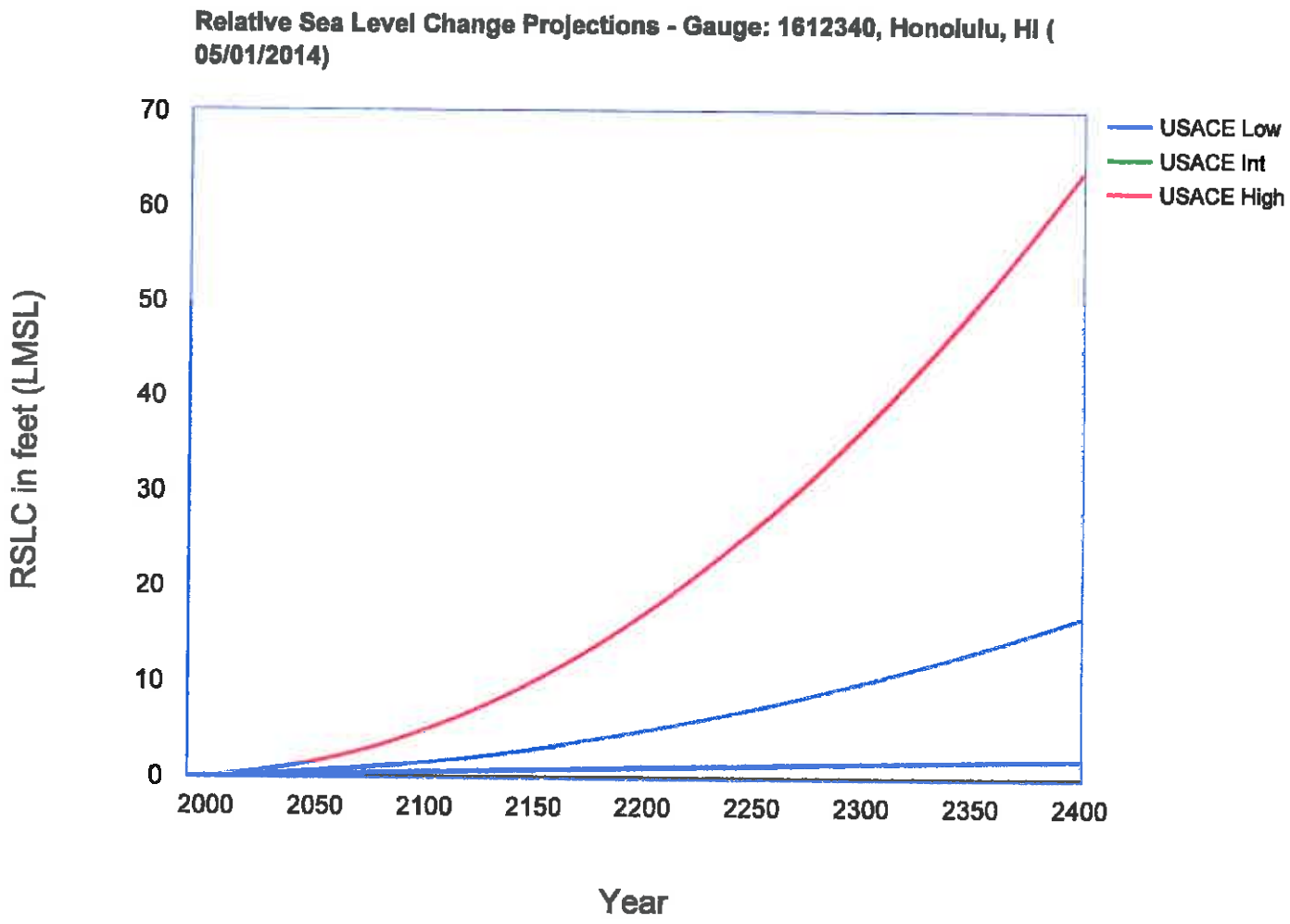
Keith Kurahashi

Encls.

cc: Department of Planning and Permitting
Mr. Trevor Ozawa, Honolulu City Council
Best Hospitality LLC

1612340, Honolulu, HI
NOAA's Published Rate: 0.00492 feet/yr
All values are expressed in feet relative to LMSL

Year	USACE Low	USACE Int	USACE High
1992	0.00	0.00	0.00
1995	0.02	0.02	0.02
2000	0.04	0.05	0.06
2005	0.06	0.08	0.13
2010	0.09	0.12	0.21
2015	0.11	0.16	0.31
2020	0.14	0.21	0.43
2025	0.16	0.26	0.57
2030	0.19	0.32	0.72
2035	0.21	0.38	0.90
2040	0.24	0.44	1.09
2045	0.26	0.51	1.30
2050	0.28	0.59	1.53
2055	0.31	0.66	1.78
2060	0.34	0.75	2.05
2065	0.36	0.83	2.34
2070	0.38	0.93	2.64
2075	0.41	1.02	2.96
2080	0.43	1.12	3.30
2085	0.46	1.23	3.66
2090	0.48	1.34	4.04
2095	0.51	1.45	4.44
2100	0.53	1.57	4.86
2105	0.56	1.69	5.29
2110	0.58	1.82	5.74
2115	0.61	1.95	6.21
2120	0.63	2.09	6.70
2125	0.66	2.23	7.21
2130	0.68	2.37	7.74
2135	0.70	2.52	8.29
2140	0.73	2.68	8.85
2145	0.75	2.83	9.43
2150	0.78	3.00	10.03
2155	0.80	3.16	10.65
2160	0.83	3.34	11.29
2165	0.85	3.51	11.95
2170	0.88	3.69	12.62
2175	0.90	3.88	13.32
2180	0.93	4.07	14.03
2185	0.95	4.26	14.76
2190	0.97	4.46	15.51
2195	1.00	4.66	16.28
2200	1.02	4.87	17.06
2205	1.05	5.08	17.87
2210	1.07	5.30	18.69
2215	1.10	5.52	19.53
2220	1.12	5.74	20.39
2225	1.15	5.97	21.27
2230	1.17	6.21	22.17
2235	1.20	6.45	23.09
2240	1.22	6.69	24.02
2245	1.25	6.94	24.98
2250	1.27	7.19	25.95
2255	1.29	7.44	26.94
2260	1.32	7.71	27.95
2265	1.34	7.97	28.97
2270	1.37	8.24	30.02
2275	1.39	8.51	31.08
2280	1.42	8.79	32.17
2285	1.44	9.07	33.27
2290	1.47	9.36	34.39
2295	1.49	9.65	35.53
2300	1.52	9.95	36.69
2305	1.54	10.25	37.86
2310	1.57	10.56	39.06
2315	1.59	10.87	40.27
2320	1.61	11.18	41.50
2325	1.64	11.50	42.75
2330	1.66	11.82	44.02
2335	1.69	12.15	45.30
2340	1.71	12.48	46.61
2345	1.74	12.82	47.93
2350	1.76	13.16	49.28
2355	1.79	13.50	50.64
2360	1.81	13.85	52.02
2365	1.84	14.21	53.42
2370	1.86	14.56	54.83
2375	1.89	14.93	56.27
2380	1.91	15.29	57.72
2385	1.93	15.67	59.19
2390	1.96	16.04	60.68
2395	1.98	16.42	62.19
2400	2.01	16.81	63.72


Relative Sea Level Change Projections - Gauge: 1612340, Honolulu, HI (05/01/2014)
RSLC in feet (LMSL)
70
60
50
40
30
20
10
0
2000
2050
2100
2150
2200
2250
2300
2350
2400
Year
USACE Low
USACE Int
USACE High

Department of Planning and Permitting
650 So. King Street, 7th Floor
Honolulu, Hawai'i 96813

2016 FEB 23 PM 3 40

DEPT. OF PLANNING
AND PERMITTING
CITY & COUNTY OF HONOLULU

Attention: George Atta (by email to gatta@honolulu.gov) and Joette Yago (by email to: jyago@honolulu.gov)

Copied to: Councilmembers Ikaika Anderson, Trevor Ozawa

February 23, 2016

Dear Sir/Madam

Re: Public Comments on Park Kalia-Waikiki Condo Hotel Draft Environmental Assessment

I am urging that the Department of Planning and Permitting (DPP) reject the application of Best Hospitality LLC to develop a 350 feet structure known as "Park Kalia" at 2055-2057 Kalakaua Avenue. The site has a 25 feet height limit for very sound reasons and this limit should be upheld.

In supporting this position, please see the major arguments set out below:

1. The DPP has already correctly identified the damage of this project to the public

In a letter dated October 13, 2015, the DPP commented that

> *"that the project site is bordered by Fort DeRussy, an important landmark in Waikīkī, noted as the largest open space in Waikīkī. DPP is concerned that the height will neither enhance or complement Fort DeRussy, which provides an important view corridor toward the ocean from those areas mauka of Kalākaua Avenue. DPP also feels it is essential to maintain the mauka views of the Ko'olau Mountains from Fort DeRussy. The proposed tower height could adversely impact these views, as well. DPP indicated that it will be difficult for them to support the project at the proposed 350-foot height limit. DPP did note that the will, of course, process the request regardless should the client choose to move forward with the project."*

In my view as a local resident, the DPP has identified the key issues. Additionally, this development is completely inconsistent with the strategic thrust of the Waikiki Special District Design Guidelines, which have the clear goal of protecting, where possible, mauka views across Waikiki.

2. The Community has provided its input via the Waikiki Neighborhood Board and the DPP should take account of this

In its review of the project, the Waikiki Neighborhood Board, voted unanimously against the project:

> *"Chair Finley noted that he cannot support the project, as it is above the zoning limit of 25 feet. Vice Chair Erteschik relinquished the gavel to Chair Finley.*

Erteschik moved and Merz seconded the motion that the Waikīkī Neighborhood Board No. 9 oppose the One Waikīkī project. Merz made an amendment to the motion to add: "because the project violates the Land Use Ordinance (LUO) zoning regulations and the Waikīkī Special District design criteria."

The amendment to the motion was APPROVED by UNIANIMOUS CONSENT. 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; Nay: None; Abstain: None). The motion PASSED by UNANIMOUS CONSENT 15-0-0 (Aye: Anderson, Apaka, Benson, Carroll, Ciliano, Erteschik, Finley, Flood, Geck, Lofquist, Merz, Nigro, Poole, Shields, and Smith; Nay: None; Abstain: None).

Merz also noted that the project is in non-compliance with the WSD criteria and referenced testimony from Peter J. Massucci. Erteschik noted he did not agree with the rationality for increasing the height limit from 25 feet to 350 feet, and noted that City Council should oppose the height exemption."

The WNB represents the primary forum where the views of the local community can be expressed and aggregated in a single vote. I hope that the DPP and City Council will factor the WNB's comments and vote into their review of the DEA.

3. The fact that the Developer appears to have overpaid to acquire the site is no basis for arguing that they can now go on to damage public views or ignore their LUO obligations

In their evaluation of alternatives, the Developer states the following:

"5.1 ALTERNATIVE I: NO ACTION
*This alternative was considered and rejected since the potential rents from continuing a restaurant **on the property does not provide a return that covers the financing of the purchase price of the property.***

5.3 ALTERNATIVE III: DEVELOP WITHIN THE WSD STANDARDS

Developing within the WSD Standard for height will create a project that cannot be financed."

The value that the Developer placed on the site during its acquisition was a matter solely for that company. The Developer knew about the height constraints on the site when they decided to acquire it.

It would have been the height of reckless corporate management decision making to ignore these facts, but apparently, it was a risk that they decided to take on.

If they did not establish a purchase price contract that was contingent on securing regulatory approval to breaching the 25 feet limit, then the financial loss that they will suffer by the Authorities staying true to the site limits, should be 100% for their account.

Furthermore, the excessive value that they placed on this site should <u>not</u> now be used as an economic rationale, or justification to ignore the height limits or as an excuse to fail to explore alternative solutions for this site, as they are trying to assert. They have made no serious

attempt to review other options, as demonstrated by the fact they have devoted just one page in the DEA to consideration of the alternatives.

4. The Developer, by basing its arguments on hypothetical future development scenarios, is nothing but distraction from the ACTUAL view impacts of their project

The Developer asserts:

> *"The mauka view of the Ko'olau Mountains from Fort DeRussy is at risk simply because the areas mauka of the Project Site are designated with a 300-foot height limit and as development occurs on those mauka parcels (which are currently underutilized), the view of the Ko'olaus will eventually be blocked*
>
> *A large area, including the properties immediately across Kalakaua Avenue, has a 300-foot height limit (area bounded by Kuamoo Street, Ala Wai Boulevard, Kaiolu Street and its extension connecting to Kalakaua Avenue and Kalakaua Avenue).*
>
> *"With this 300-foot height limit immediately across the street, restricting the Project Site to a 25-foot height limit does not seem to serve any meaningful purpose, such as protection of public views."*

These comments demonstrate a "cavalier" and irresponsible attitude of the Developer, a company based over 2,500 miles away with little interest in the consequences for people that actually live in the area and who are impacted by the development.

The regulations are set up to establish "maximum criteria" – that does not mean that use of those maximums is appropriate in all cases. If there was a presumption of use of maximums in every case, there would be no reason to have a DPP agency to review proposals.

Instead, developments require careful and responsible consideration of a range of interacting factors, and those include the cumulative effects on a neighborhood. There are NO current proposals to develop 350 feet towers directly mauka of this site and NO permit approvals from the DPP to do so. Indeed, it is ironic that the Developer's proposal will damage values mauka of Kalakaua Avenue and reduce the likelihood of development in those areas.

The review of the DEA should be based on the impact on actual public views of this project, not on public views based on assumptions of hypothetical developments in the future.

5. The Developer fails to quantify the huge revenues it will secure from this project

The developer states:

> *"The Project will provide an increase in property values for the City and County of Honolulu (the "City") resulting in an estimated increase in annual property taxes (from $132,000 to $1,049,000, an increase of $917,000), a portion of the General Excise Taxes ("GET") for rail estimated at $142,000, and estimated hotel room tax (portion of $2,141,000) and generates additional estimated tax revenue to the State in terms of collections from GET taxes estimated at $1,190,000 and hotel room tax (major portion of $2,141,000). Total taxes generated annually estimated at $4,390,000."*

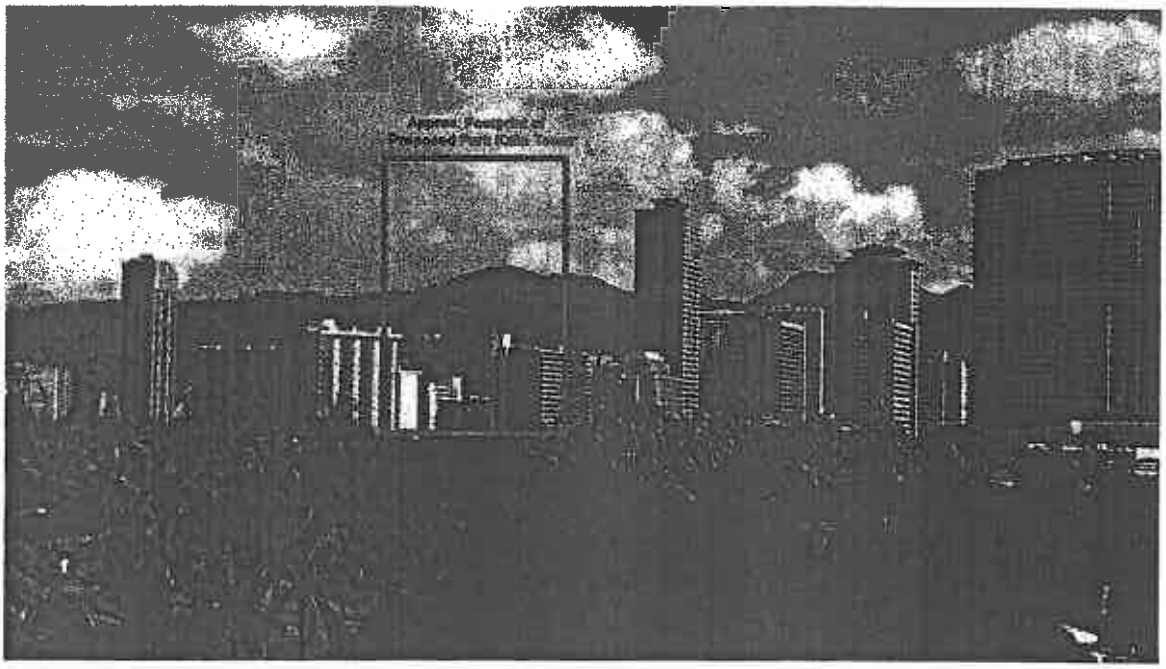
The developer has quantified the property taxes revenues, yet fails to set out the gross revenues it will secure from this project. Is their concern that revealing this data would place a public spotlight on the huge profits that will accrue to their company, in contrast to the loss suffered by the public through the damage to view planes?

6. Conclusion

The recently approved new Ritz-Carlton towers will appear as a single structure when viewed from Fort DeRussy Park and have already damaged mauka views from many areas of Fort DeRussy park, beach, Saratoga and Kalia Roads.

The proposed Park Kalia project would complete the most significant mauka view destruction in this area of Waikiki in living memory.

While this Developer seems to have an indifferent attitude to this outcome, the unanimous "no" vote of the Waikiki Neighborhood Board demonstrates that the local community feels otherwise.



Fort DeRussy Park and Kapiolani Park are the only two remaining greenbelts in Waikiki and that is why prior Authorities have been so careful to set out "sensible" limits on development in those areas.

I hope that the DPP and City Council will undertake careful due diligence in their decision making on this matter.

Sincerely yours,

Craig Stevens

KUSAO & KURAHASHI, INC.
Planning and Zoning Consultants

MANOA MARKET PLACE
2752 WOODLAWN DRIVE, SUITE 5-217
HONOLULU, HAWAII 96822

BUS. (808) 988-2231
FAX. (808) 988-1140
E-mail: kkurahashi@hawaii.rr.com

April 13, 2016

Mr. Craig Stevens
2140 Kuhio Avenue, #2404
Honolulu, Hawaii 96815

Subject: **Chapter 343 Hawaii Revised Statutes**
Draft Environmental Assessment

Project:	Park Kalia-Waikiki Condo Hotel
Applicant:	Best Hospitality LLC
Agent:	Kusao & Kurahashi, Inc.
Location:	2055 and 2057 Kalakaua Avenue
Tax Map Key:	2-6-6: 1 and 4

Dear Mr. Stevens:

Thank you for your letter dated February 23, 2016 on the Park Kalia-Waikiki Condo Hotel (Project) Draft Environmental Assessment (DEA).

We appreciate your comments and offer the following response (in the order set forth in your letter).

1. The Land Use Ordinance (LUO), Waikiki Special District Urban Design Controls, Exhibit 21-9.15, mapped an area intended to provide for the "Fort DeRussy Mauka-Makai View Corridor". This area is bounded by Kalakaua Avenue, Kuhio Avenue, Kuamoo Street, Ala Wai Boulevard, and McCully Street. This area has height limits of 65 feet to 130 feet, to provide for the view corridor. The Project Site is not within this mauka-makai view corridor that protects mauka views from Fort DeRussy.

   The Project Site on the other hand sits across Kalakaua Avenue from an area with a 25-foot height limit, the King Kalakaua Park and a 300-foot height limit beyond that, mauka of Kuhio Avenue, and a small section of 300-foot height limit across Kalakaua Avenue on the eastern portion of the Project Site. Development in the 300-foot height limit area, in accordance with the LUO and Waikiki Special District will result in blockage of mauka views from Fort DeRussy. Maintaining a 25-foot height limit for this property will not serve to protect mauka views from Fort DeRussy over time, as new 300-foot towers are developed mauka of the Project Site. The view of the Koolau Mountains from Kuroda Field will not be a protected view based on the 300-foot height limit for a large area mauka of the Project Site.

   An interesting point is that the only properties in Waikiki with a 25-foot height limit are Fort DeRussy, King Kalakaua Park, Ala Wai Yacht Harbor and Jefferson Elementary School, all government owned properties and the Project Site and two neighboring parcels. Except for the Fort DeRussy Mauka-Makai View Corridor

Properties with a height limit of 65 feet to 130 feet, all other privately owned properties in Waikiki have height limits ranging from 220 feet to 350 feet.

The Applicant believes, based on the earlier park designation for the properties, that the City had intended to acquire the Project Site and two neighboring lots for park use and the 25-foot height limit was placed on the properties with this in mind. However, it would seem that given the 300-foot height limit across Kalakaua Avenue and mauka of Kuhio Avenue, these properties should be allowed a taller height limit.

2. The Applicant accepts that the Waikiki Neighborhood Board No. 9 opposed the One Waikiki Project (now Park Kalia-Waikiki) "because the project violates the Land Use Ordinance (LUO) zoning regulations and the Waikiki Special District design criteria." But the Applicant disagrees with the statement that the Project violates the LUO and the Waikiki Special District design criteria. The Project does not violate the LUO, but is requesting an increase in the Project height limit to 350 feet, in accordance with Section 21-9.80-4(g) of the LUO. The Applicant further feels, as described in the DEA that the project has been designed to meet the design criteria of the Waikiki Special District.

3. The Project will not impact "Significant Public Views" as described in the Waikiki Special District Design Guidelines or the Waikiki Special District. The Applicant is not ignoring their obligations under the LUO, but is following the process prescribed by the LUO and Waikiki Special District which allows an increase in height provided certain views are not impacted. The Project meets those criteria and the Applicant is requesting that the City Council consider approving the increase in height limit.

4. The Applicant is stating a fact that the area mauka of the site has a 300-foot height limit and that if properties in this area are developed to their highest and best use, there is a strong possibility that some of the properties will be developed with a 300-foot height that will affect views from Fort DeRussy.

5. Projects such as this have a certain amount of risk, including project approval, market acceptance at time of sales, market at time of completion and ability of the project to perform as forecast. The Applicant and most other Applicant's for development permits do not share their profit analysis.

6. As mentioned in item 1, the City through the Waikiki Special District Urban Design Controls has established a restricted height area to protect mauka views from Fort DeRussy. The Project Site is not within this mauka-makai view corridor that protects mauka views from Fort DeRussy in perpetuity.

   The same view protection has not been provided through height restriction on parcels located mauka of this Project Site.

Your letter and this response will be included in the FEA.

Very truly yours,

Keith Kurahashi

Keith Kurahashi

cc: Department of Planning and Permitting
Best Hospitality LLC

Keith Kurahashi

From: Keith Kurahashi <kkurahashi@hawaii.rr.com>
Sent: Friday, March 11, 2016 11:28 AM
To: 'Bliss, Kate M POH'; 'jyago@honolulu.gov'
Subject: RE: [EXTERNAL] RE: POH-2016-00044 (Best Hospitality LLC - New Construction, Kalakaua Avenue, Waikiki, Oahu, HI)

Aloha Ms. Bliss,

Thank you for your response on the Park Kalia-Waikiki Draft Environmental Assessment (DEA), emailed on March 7, 2016. The applicant appreciates your explanation Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act and your responsibilities therein. The applicant further appreciates your determination that based on the Project description in the DEA, the proposed activity does not occur within the jurisdictional limits of a Navigable Water of the U.S. as defined by Section 10 of the Rivers and Harbors Act of 1899 and/or within the jurisdictional limits of a Water of the U.S. as defined by Section 404 of the Clean Water Act, therefore, a DA permit will not be required.

This response email with your our comment email below and other emails further below will be included in the Final Environmental Assessment.

Thanks,
Keith Kurahashi

-----Original Message-----
From: Bliss, Kate M POH [mailto:Kate.M.Bliss@usace.army.mil]
Sent: Monday, March 07, 2016 3:50 PM
To: Keith Kurahashi; jyago@honolulu.gov
Cc: Bliss, Kate M POH
Subject: RE: [EXTERNAL] RE: POH-2016-00044 (Best Hospitality LLC - New Construction, Kalakaua Avenue, Waikiki, Oahu, HI)

Aloha Mr. Kurahashi,

I've reviewed the draft environmental assessment for the Best Hospitality Project and have provided the following information for your consideration.

Under Section 10 of the Rivers and Harbors Act, structures and/or work in, over or under or affecting the course, location, condition, or capacity of navigable waters of the U.S. require DA authorization. Navigable waters of the U.S. are waters subject to the ebb and flow of the tide. Under Section 404 of the Clean Water Act, DA authorization is required for discharges of dredged or fill material into waters of the U.S., including wetlands. Generally, discharges of fill material include materials that change the bottom elevation of a water of the U.S. and includes rock, sand, soil, debris, overburden, etc. Waters of the U.S. include navigable waters of the U.S. and other waters including wetlands, rivers, streams, lakes, and ponds.

Based on our review of the information you furnished, and assuming your project is conducted only as set forth in the information provided, this office has determined the proposed activity does not occur within the jurisdictional limits of a Navigable Water of the U.S. as defined by Section 10 of the Rivers and Harbors Act of

1899 and/or within the jurisdictional limits of a Water of the U.S. as defined by Section 404 of the Clean Water Act, therefore, a DA permit will not be required.

Thank you for your cooperation with the DA Regulatory Program. Please contact this office if you have any questions.

Mahalo,

Kate M. Bliss
Senior Project Manager
U.S. Army Corps of Engineers
Honolulu District Regulatory Office
Building 230
Fort Shafter, HI 96858-5440
Phone: 808-835-4306

-----Original Message-----
From: Keith Kurahashi [mailto:kkurahashi@hawaii.rr.com]
Sent: Monday, March 07, 2016 1:10 PM
To: Hunt, Carol L POH <Carol.L.Hunt@usace.army.mil>; jyago@honolulu.gov
Cc: Bliss, Kate M POH <Kate.M.Bliss@usace.army.mil>
Subject: [EXTERNAL] RE: POH-2016-00044 (Best Hospitality LLC - New Construction, Kalakaua Avenue, Waikiki, Oahu, HI)

Aloha Kate,

I was wondering if you had an opportunity to provide comment on POH-2016-00044, new Construction on Kalakaua Avenue by Best Hospitality LLC.
We are preparing our final environmental assessment and would like to respond to any comments or concerns you may have.

Thanks,
Keith

-----Original Message-----
From: Hunt, Carol L POH [mailto:Carol.L.Hunt@usace.army.mil]
Sent: Friday, February 12, 2016 10:06 AM
To: kkurahashi@hawaii.rr.com; jyago@honolulu.gov
Cc: Bliss, Kate M POH
Subject: POH-2016-00044 (Best Hospitality LLC - New Construction, Kalakaua Avenue, Waikiki, Oahu, HI)

Aloha,

Thank you for submitting your request to the Honolulu District Regulatory Office. We have received your correspondence and it has been assigned file number POH-2016-00044. Please reference this number in all future correspondence. Kate Bliss has been assigned to your project. If you have not heard from our office within 30 days, please contact us at (808)
835-4303 or by e-mail at CEPOH-RO@usace.army.mil. Thank you for contacting the Honolulu District Regulatory Office.

Respectfully,

Carol "Lynn" Hunt
Administrative Assistant, Regulatory Office USACE-Honolulu District Bldg 252 Fort Shafter, HI 96858-5440
Phone: (808)-835-4303
Fax: (808)-835-4126